

Wharf Bravo Recapitalization at Naval Station Mayport

Marine Mammal Observer Report

Covering the Period of 13 March 2017 to 12 January 2018

The recapitalization of Wharf Bravo at Naval Station Mayport (NS Mayport) entails the installation of 880 single sheet piles, divided between two phases; Phase I consists of 590 steel sheet piles installed by vibratory hammer over 73 days and Phase II consists of 290 sheet piles installed over 37 days. The incidental harassment authorization (IHA; 81 FR 52637) authorized the take of 219 bottlenose dolphins during Phase I and 111 dolphins during Phase II. During the current reporting period, Phase II was completed in 34 days, but delays have caused the commencement of Phase I to be delayed until March 2018. This report is therefore exclusive to Phase II¹.

In-water pile driving for Phase II began on 21 June 2017 and concluded on 14 August 2017. Marine mammal observers were provided by Orion Marine Group. They were given the IHA and marine mammal observer plan for this project. They also received marine mammal observer training from NAVFAC Southeast on 18 May 2017 and 21 June 2017.

Two marine mammal observers (MMOs) were present for all in-water pile driving. One was stationed at the actual pile driving site on Wharf Bravo to ensure no Level A takes of regulated marine animals and to enumerate all marine mammals visible in the vicinity. The other observer was stationed in a tower near the mouth of the Turning Basin to enumerate all dolphins that entered the behavioral zone of influence (ZOI) during pile driving activities (Figure 1). This allowed for observations of as large a portion of the behavioral ZOI as possible.

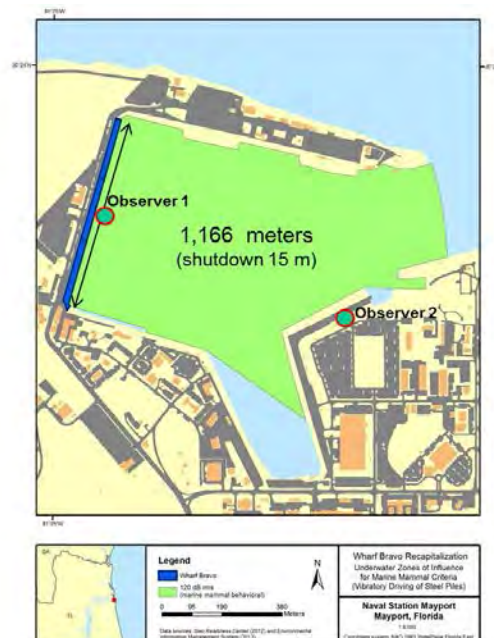


Figure 1. Positions of the observers at the barge and tower.

OBSERVATIONS

¹ It should be noted that the NS Mayport construction team switched the nomenclature of the two phases, referring to Phase II as Phase I since it was accomplished first. For the purpose of this report, though, the nomenclature is consistent with the IHA issued in 81 FR 52637.

The maximum numbers of bottlenose dolphins observed from the Tower during pile driving activities each day are presented in **Table 1**. The Tower observer was able to view a much larger area than the Wharf Wall observer, so that observer's records were used to sum the total number of Level B bottlenose dolphin takes during Phase II of the Wharf Bravo recapitalization.

A summary of the observer dataset is presented in **Appendix A** and scans of the individual data sheets are provided in **Appendices B through II** (double letter "I", not a Roman numeral two).

A total of 60 bottlenose dolphins were incidentally harassed by vibratory pile driving. No impact pile driving was performed during this reporting period.

Phase II pile driving took place over 34 days and at least one bottlenose dolphin was harassed on 15 (44%) of those days. Although zero takes occurred on the other 19 days, it is noted that bottlenose dolphins were observed in the area on 11 of those days (denoted by asterisks in Table 1), but they were not within the zone of influence during pile driving activities. Had they been present during pile driving, the total number of takes would have been 115 bottlenose dolphins, so it appears the number of takes requested for Phase II (n=111) was appropriate.

Vibratory pile driving shut down on four days (July 5, July 6, July 13, and July 26). The July 13 shutdown was due to a bottlenose dolphin approaching the shutdown zone. The other three shutdown events were due to manatees approaching their designated shutdown zone.

Table 1. The maximum number of bottlenose dolphins observed by a single observer stationed at the TOWER on each day of in-water pile driving

Date	Max #	Date	Max #	Date	Max #
6/21/2017	3	7/12/2017	0*	7/28/2017	0*
6/22/2017	5	7/13/2017	1	8/1/2017	0*
6/23/2017	0	7/14/2017	0*	8/2/2017	0*
6/26/2017	0	7/17/2017	8	8/3/2017	0*
6/28/2017	4	7/18/2017	0*	8/4/2017	0*
6/29/2017	3	7/19/2017	3	8/5/2017	0
6/30/2017	0*	7/20/2017	3	8/7/2017	0
7/5/2017	0	7/21/2017	1	8/8/2017	0
7/6/2017	10	7/24/2017	0	8/10/2017	0*
7/7/2017	3	7/25/2017	0*	8/14/2017	0
7/10/2017	3	7/26/2017	1		
7/11/2017	7	7/27/2017	5	TOTAL	60

*= Dolphins were observed on these days, but they were not in the zone of influence during pile driving activities.

Prepared by:
Jered Jackson (jered.jackson@navy.mil)

Appendix A. Marine mammal observer data collected between 21 June and 14 August 2017.

Date	Obs	Observer Location	Bottlenose Dolphin			Shutdown	Nearest Distance (yards)	Other Species Observed
			Max #	# of Calves	Behaviors			
6/21/2017	CP	Tower	3	0	SW		800	
6/21/2017	SW	Dock	.	.	.		.
6/22/2017	SW	Tower	5	0	N/R		1275	
6/22/2017	BR	Dock	0	0	.		30	1 Sea Turtle
6/23/2017	SW	Dock	.	.	.		.
6/23/2017	BR	Tower	.	.	.		60	5 Manatees
6/26/2017	BR	Tower	.	.	.		45	1 Manatee
6/26/2017	SW	Dock	.	.	.		.
6/28/2017	BR	Tower	4	0	DI		85	1 Manatee
6/28/2017	DR	Dock	4	0	SW/PO		100	1 Manatee
6/29/2017	DR	Dock	3	0	PO/SW		100	
6/29/2017	BR	Tower	3	0	CD		100	
6/30/2017	BR	Dock	.	.	.		.
6/30/2017	SW	Tower	.	.	.		.
7/5/2017	ED	Tower	.	.	.	Yes	0	7 Manatees
7/5/2017	DR	Dock	.	.	.	Yes	0	6 Manatees
7/6/2017	DR	Dock	.	.	.	Yes	10	1 Manatee
7/6/2017	ED	Tower	10	1	SW/FO/PL	Yes	1000	1 Manatee
7/7/2017	BR	Dock	.	.	.		48	1 Sea Turtle
7/7/2017	ED	Tower	3	0	SW/PL		900	1 Manatee
7/10/2017	DR	Dock	.	.	.		50	1 Sea Turtle
7/10/2017	ED	Tower	3	0	SW/PO		700	1 Manatee
7/11/2017	DR	Dock	3	0	SW/PO		800	
7/11/2017	ED	Tower	7	0	N/R		800	1 Manatee
7/12/2017	BR	Dock	.	.	.		50	2 Sea Turtles
7/12/2017	ED	Tower	.	.	.		1000	2 Manatees
7/13/2017	ED	Tower	1	0	SW/PO	Yes	15	
7/13/2017	BR	Dock	1	0	SW	Yes	15	
7/14/2017	BR	Dock	.	.	.		.
7/14/2017	ED	Tower	.	.	.		.
7/17/2017	ED	Dock	5	0	FO/SW		700	1 Sea Turtle
7/17/2017	DR	Tower	8	1	PO/FO		900	1 Manatee
7/18/2017	DR	Tower	.	.	.		.
7/18/2017	ED	Dock	.	.	.		.
7/19/2017	DR	Tower	3	.	PO		800	1 Manatee
7/19/2017	ED	Dock	2	.	N/R		25	
7/20/2017	ED	Dock	.	.	.		.

Date	Obs	Observer Location	Bottlenose Dolphin			Shutdown	Nearest Distance (yards)	Other Species Observed
			Max #	# of Calves	Behaviors			
7/20/2017	BR	Tower	3	.	.		106	
7/21/2017	BR	Dock	.	.	.		.
7/21/2017	ED	Tower	1	.	.		900	1 Manatee
7/24/2017	BR	Tower	.	.	.		.
7/24/2017	ED	Dock	.	.	.		.
7/25/2017	BR	Dock	.	.	.		.
7/25/2017	ED	Tower	.	.	.		.
7/26/2017	ED	Dock	.	.	.	Yes	17	1 Manatee
7/26/2017	BR	Tower	1	0	SP		550	
7/27/2017	BR	Dock	.	.	.		.
7/27/2017	ED	Tower	5	1	SW/PL/PO		700	
7/28/2017	ED	Dock	.	.	.		.
7/28/2017	JC	Tower	.	.	.		.
8/1/2017	JC	Tower	.	.	.		.
8/1/2017	ED	Dock	.	.	.		.
8/2/2017	BR	Dock	.	.	.		.
8/2/2017	ED	Tower	.	.	.		.
8/3/2017	ED	Dock	.	.	.		.
8/3/2017	BR	Tower	.	.	.		.
8/4/2017	ED	Tower	.	.	.		.
8/4/2017	BR	Dock	.	.	.		.
8/5/2017	BR	Tower	.	.	.		.	1 Manatee
8/5/2017	ED	Dock	.	.	.		.
8/7/2017	ED	Dock	.	.	.		.
8/7/2017	BR	Tower	.	.	.		.
8/8/2017	BR	Dock	.	.	.		.
8/8/2017	ED	Tower	.	.	.		.
8/10/2017	ED	Dock	.	.	.		.
8/10/2017	BR	Tower	.	.	.		.
8/14/2017	ED	Dock	.	.	.		.
8/14/2017	JC	Tower	.	.	.		.

Observer Codes: BR= Bernardo Real, CP=Chris Phillips,
DR=Deland Rodriguez, ED= Eric Denova, JC=Jacob
Crews, SW=Steven Watts.

Behavior Codes: CD=Change Direction, DI=Diving,
FO=Foraging, N/R=Not Recorded, PL=Play, PO=Porpoising,
SP=Spyhopping, SW=Swimming.

Appendix B. Marine Mammal Observer data sheets for 21 June 2015.

Project name: WHARF BRAVO

Lead observer: Chris Phillips

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Project location: MAYPORT / BRAVO TOWER

Lead observer contact info: COMPANY RADIO

Date: 6-21-17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	4 : 45 : :	Chris	glare	Dolphins	800 yds	3 / / calves	toward or away parallel none Behavior Code: SW	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	5 : 10 : :				yds	/ / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	5 : 40 : :				yds	/ / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: : :				yds	/ / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: : :				yds	/ / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: : :				yds	/ / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: : :				yds	/ / calves	toward or away parallel none Behavior Code:	

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Project name: Wharf Bravo
 Project location: mainport / Wharf Bravo 1
Dock

Lead observer: Steven Watts
 Lead observer contact info: 904 760-1167 / company Radio

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 Date: 6/20/17
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Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	4 : 45 :				yds	/ / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - <u>Vibratory</u> - Impact Sighting - Delay - Shutdown	5 : 10 :				yds	/ / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	5 : 40 :				yds	/ / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	/ / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	/ / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	/ / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	/ / calves	toward or away parallel none Behavior Code:	

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Appendix C. Marine Mammal Observer data sheets for 22 June 2017.

Project name: Wharf Bravo Lead observer: Steven Watts Page of
 Project location: Mayport / Bravo-1 tower Lead observer contact info: 904-760-1671 Date: 6-22-17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	8:35 : :	Steven	clear		yds	/ / — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	8:53 3:30 5:15	Steven	clear	Dolphin	1275 yds	5 / / — calves	toward or away parallel none Behavior Code:	3-5 more Dolphins At 1:30pm 900 yds out
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	5:45 : :				yds	/ / — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: : :				yds	/ / — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: : :				yds	/ / — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: : :				yds	/ / — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: : :				yds	/ / — calves	toward or away parallel none Behavior Code:	

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Project name: Wharf BravoLead observer: Bernardo RealPage 2 of 2Project location: on the Dock

Lead observer contact info: _____

Date: 0-22-1711/22/17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	2:00 3:30 5:15	Bernardo Real	Wind	sea Turtle	30 yds	1 / 1 1 Turtle calves	toward or away parallel none Behavior Code: CD	changed directions
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	5:45 : :				yds	1 / 1 — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: : :				yds	1 / 1 — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: : :				yds	1 / 1 — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: : :				yds	1 / 1 — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: : :				yds	1 / 1 — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: : :				yds	1 / 1 — calves	toward or away parallel none Behavior Code:	

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Appendix D. Marine Mammal Observer data sheets for 23 June 2017.

Project name: Wharf Bravo 1 Lead observer: Steven Watts Page of
 Project location: Wharf Mayport/Wharf Bravo Dock Lead observer contact info: 904 769-1671 Date: 6-23-17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	8:33 8:48 :	Steven	glare		yds	/ / — calves	toward or away parallel none Behavior Code:	no sighting
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	1:40 : :	Steven	clear		yds	/ / — calves	toward or away parallel none Behavior Code:	no sighting
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	3:00 3:15 :	Steven	clear		yds	/ / — calves	toward or away parallel none Behavior Code:	no sighting
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	4:05 : :	Steven	clear		yds	/ / — calves	toward or away parallel none Behavior Code:	no sighting
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	4:35 : :				yds	/ / — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: : :				yds	/ / — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: : :				yds	/ / — calves	toward or away parallel none Behavior Code:	

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Project name: Wharf BravoLead observer: Bernardo Real

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Project location: Moupin Bravo 1 / TowerLead observer contact info: 386-717-1574Date: 6-23-17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	8:30 8:48	Bernardo Real	Clear		yds	/ / calves	toward or away parallel none Behavior Code:	no sighting
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	10:25	Bernardo Real	Clear	manatee	60 yards from tower around 400 ft from dock	/ / 1 manatee	toward or away parallel none Behavior Code: SP	looking above water stayed in the same spot for about 5 minutes
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	12:20	Bernardo Real	Clear		yds	/ / calves	toward or away parallel none Behavior Code:	no sighting
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	1:00 1:30	Bernardo Real	Wind	manatee	60 yds from tower	/ / 3 manatee calves	toward or away parallel none Behavior Code: SP	3 manatees by boat ramp just looking above water
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	3:00 4:05	Bernardo Real	mostly cloudy wind	manatee	90 yards to rock wall	/ / 1 manatee calves	toward or away parallel none Behavior Code: CD	changing directions towards rock wall/slip
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	4:35				yds	/ / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown					yds	/ / calves	toward or away parallel none Behavior Code:	

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Appendix E. Marine Mammal Observer data sheets for 26 June 2017.

Project name: Wharf Bravo

Lead observer: Stefen Watts

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Project location: Mayport Wharf Bravo 1 tower

Lead observer contact info: B. ~~Stefen~~ 904-760-1671

Date: 6-26-17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - <u>Vibratory</u> - Impact Sighting - Delay - Shutdown	9:45 10:40 11:12	Bernardo Real	Clear	manatee	460 yds	/ / 1 manatee calves	toward or away parallel none Behavior Code: SP	hanging off the end of the boat ramp (not vibratory) (no take)
Start Monitoring - <u>END MONITORING</u> Soft Start - Vibratory - Impact Sighting - Delay - <u>Shutdown</u>	12:17 : :	Bernardo Real	Clear		yds	/ / calves	toward or away parallel none Behavior Code:	no sighting
Start Monitoring - End Monitoring Soft Start - <u>Vibratory</u> - Impact Sighting - Delay - Shutdown	12:57 : :	Bernardo Real	Clear		yds	/ / calves	toward or away parallel none Behavior Code:	no sighting
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - <u>Shutdown</u>	3:20 : :	Bernardo Real	cloudy/rain thunder		yds	/ / calves	toward or away parallel none Behavior Code:	no sighting
Start Monitoring - <u>End Monitoring</u> Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	3:50 : :	Bernardo			yds	/ / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: : :				yds	/ / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: : :				yds	/ / calves	toward or away parallel none Behavior Code:	

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NAVFAC SOUTHEAST POC: Jered Jackson, Email at jered.jackson@navy.mil or Phone at 904-542-6308

Project name: Wharf Bravo
 Project location: Margart / Wharf Bravo
Dock

Lead observer: Steven Watts
 Lead observer contact info: 904-760-1671

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 Date: 6-26-17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	9:45 :	Steven	glare		yds	/ / — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	10:10 :	Steven	glare		yds	/ / — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	12:17 :	Steven	clear		yds	/ / — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	12:57 :	Steven	clear		yds	/ / — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	3:20 :	Steven	cloudy		yds	/ / — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	3:50 :				yds	/ / — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	/ / — calves	toward or away parallel none Behavior Code:	

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Appendix F. Marine Mammal Observer data sheets for 28 June 2017.

Project name: Wharf Drive

Lead observer: Declaro Rodriguez

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Project location: mouth wharf drive 2 / Tower

Lead observer contact info: 954-296-1504

Date: 6-28-17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	7:55 : :	Bernardo Real	cloudy		yds	/ / calves	toward or away parallel none Behavior Code:	no sighting
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	8:28 : :	Bernardo Real	cloudy		yds	/ / calves	toward or away parallel none Behavior Code:	no sighting
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	10:44 : :	Bernardo Real	wind	manatee	46 yds	/ / 1 manatee calves	toward or away parallel none Behavior Code: SP	manatee at boat ramp just looking above water (no take)
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	11:34 : :	Bernardo Real	wind		yds	/ / calves	toward or away parallel none Behavior Code:	no sighting
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	1:16 : :	Bernardo Real	wind	Dolphins	85 yds	/ / 4 dolphins calves	toward or away parallel none Behavior Code: Di	when i saw them they were headed towards break swimming in same spot
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	2:30 : :	Bernardo Real	cloudy		yds	/ / calves	toward or away parallel none Behavior Code:	no sighting
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	3:00 : :	Bernardo Real			yds	/ / calves	toward or away parallel none Behavior Code:	

dolphins left the spot

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Project name: Whale 10Lead observer: JB

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Project location: 10' south of 100' lineLead observer contact info: 904-542-6308

Date: _____

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	7:00 :	Dark JB	cloudy wind		yds	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	7:15 :	Dark JB	cloudy wind		yds	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	11:00 :	Dark JB	cloudy wind	Manatee Crotchet	650 yds	1 / 1 / 1 calves	toward or away parallel none Behavior Code:	SW no take
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	11:35 :	Dark JB	cloudy wind		yds	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	12:00 :	Dark JB	cloudy wind		yds	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	1:18 :	Dark JB	cloudy wind	dolphin no take	700+ yds (by tower)	1 / 1 calves	toward or away parallel none Behavior Code:	SW no take
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	1:30 :	Dark JB	cloudy wind	dolphin same pod	100 yds	2 / 3 / 1 calves	toward or away parallel none Behavior Code:	SW PO

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Project name: other side

Lead observer: _____

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Project location: _____

Lead observer contact info: _____

Date: _____

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	2 : 29 :	Dock Dolphin 2001-15	wind		yds	/ / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	2 : 55 :	Dock Dolphin 2001-15	wind		yds	/ / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	/ / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	/ / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	/ / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	/ / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	/ / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	/ / calves	toward or away parallel none Behavior Code:	

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Appendix G. Marine Mammal Observer data sheets for 29 June 2017.

Project name: Wharf Bravo Lead observer: Dr. Jackson Page: of
 Project location: Mayport / Wharf Bravo Lead observer contact info: 904.296.0164 Date: 6/29/17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	1:15 :	Deane Baker	glare		yds	1 / 1 — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	10:40 :	Cock Baker	glare	dolphin	700 yds	21313 — calves	toward or away parallel none Behavior Code:	po sw
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	5:15 :	Deane Baker	wind		yds	1 / 1 — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	5:50 :	Deane Baker	wind		yds	1 / 1 — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	1 / 1 — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	1 / 1 — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	1 / 1 — calves	toward or away parallel none Behavior Code:	

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Project name: Wharf BravoLead observer: Declaro RodriguezPage 1 of 2Project location: maxPort wharf bravo 2 / Tower

Lead observer contact info: _____

Date: 6-29-17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	8:15 : :	Bernardo Real	clear		yds	/ / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	10:38 : :	Bernardo Real	cloudy	Dolphins	100 yds	/ / 3 dolphins calves	toward or away parallel none Behavior Code: CD	bow then heading towards between the dock and tower (middle) 4 minutes later bow then dropping towards the dock
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	11:30 : :	Bernardo Real	clear		yds	/ / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	5:00 : :	Bernardo Real			yds	/ / calves	toward or away parallel none Behavior Code:	30 minutes after shutdown
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: : :				yds	/ / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: : :				yds	/ / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: : :				yds	/ / calves	toward or away parallel none Behavior Code:	

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Appendix H. Marine Mammal Observer data sheets for 30 June 2017.

Project name: Wharf Bravo

Lead observer: Bernardo Real

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Project location: Marport Wharf Bravo I/tower

Lead observer contact info: 386-748-1874

Date: 6-30-17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	8:05	Bernardo Real	Glare		yds	/ / calves	toward or away parallel none Behavior Code:	no sighting
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	9:30	Bernardo Real	Glare	Dolphin	600 yds	/ / 1 dolphin calves	toward or away parallel none Behavior Code: CD	changed directions towards main gate (no take)
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	10:30	Bernardo Real	clear		yds	/ / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	10:46	Bernardo Real	clear	Dolphin	600 yds	/ / 1 dolphin calves	toward or away parallel none Behavior Code: CD	heading towards the ship (no take)
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	11:00	Bernardo Real	clear		yds	/ / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	11:30 1:45	Steven Watts	clear		yds	/ / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	2:03	Steven Watts	clear		yds	/ / calves	toward or away parallel none Behavior Code:	

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Project name: Wharf BravoLead observer: Bernardo Real

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Project location: Marina Wharf Bravo 1/ TowerLead observer contact info: 362-248-1574Date: 6-30-17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	2:02	Bernardo Real	Clear		yds	/ / — calves	toward or away parallel none Behavior Code:	no sighting
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	2:26	Bernardo Real	Clear	SEA TURTLE	60 yds	/ / 1 sea turtle	toward or away parallel none Behavior Code: SP	swimming by divers Lao take)
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	6:00	Bernardo Real	Clear		yds	/ / — calves	toward or away parallel none Behavior Code:	30 minutes after end monitoring
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	*				yds	/ / — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	*				yds	/ / — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	*				yds	/ / — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	*				yds	/ / — calves	toward or away parallel none Behavior Code:	

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Project name: Wharf BravoLead observer: Bernardo RealPage 1 of 2Project location: Mayport/TowerLead observer contact info: 386 748 1574Date: 6/30/17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	8 :05 :	Eric Denora Tower	clear		yds	1 1 — calves	toward or away parallel none Behavior Code:	watched for 15 min
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	9 :30 :	Eric Denora Tower	clear	Dolphin	1000 yds	1 1 1 1 — calves	toward or away parallel none Behavior Code: SW	Swimming away from Basin (NO Vibratory)
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	10 :44 :	Tower	clear	Dolphin	600 yds	1 1 1 1 — calves	toward or away parallel none Behavior Code: SW	Swimming in the mid of Basin (NO Takes)
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	10 :50 :	Tower	clear	Dolphins	1000 yds	3 1 4 1 4 1 calves	toward or away parallel none Behavior Code: SW	Just stay around the Basin exit. (last 30 min watch)
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	11 :00 ^{Am} :	Tower	clear		yds	1 1 — calves	toward or away parallel none Behavior Code:	watched for 30 min
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	1 1 — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	1 1 — calves	toward or away parallel none Behavior Code:	

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Project name: Wharf BravoLead observer: StevenPage 2 of 2Project location: Mayport/TowerLead observer contact info: RodriguezDate: 6/30/17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	2:02 :	Tower	clear		yds	1 1 — calves	toward or away parallel none Behavior Code:	15 min watch
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	2:17 :	Tower	clear		yds	1 1 — calves	toward or away parallel none Behavior Code:	start of vibratory
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	3:25 :	Tower	clear	Dolphin	900 yds	1 1 1 — calves	toward or away parallel none Behavior Code: SW	Swimming not sure if it left (NO take)
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	3:45 :	Tower	clear	Dolphin	1100 yds	1 1 1 — calves	toward or away parallel none Behavior Code:	same one from 3:25 (no take)
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	5:00 :	Tower	clear		yds	1 1 — calves	toward or away parallel none Behavior Code:	30 min. watch
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	1 1 — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	1 1 — calves	toward or away parallel none Behavior Code:	

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Appendix I. Marine Mammal Observer data sheets for 5 July 2017.

Project name: Wharf Bravo

Lead observer: Declan

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Project location: Mayport / Tower

Lead observer contact info: Radio

Date: 7/5/17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	7:55 :	Eric Denora Tower	clear		yds	/ / — calves	toward or away parallel none Behavior Code:	15 min watch
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	10:08 :	Tower	clear	Manatee	900 yds	1 / 1 / 1 — calves	toward or away parallel <u>none</u> Behavior Code: <u>UN/SW</u>	Staying within the Control Dock near Tower. (No vibratory)
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	11:20 :	Tower	clear	Manatee	1000 yds	1 / 1 / 1 — calves	toward or away parallel <u>none</u> Behavior Code: <u>UN</u>	might be the same one from 10:08 (No vibratory)
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	12:10 :	Tower	clear		yds	/ / — calves	toward or away parallel none Behavior Code:	30 min watch
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	12:50 :	Tower	clear		yds	/ / — calves	toward or away parallel none Behavior Code:	15 min watch
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	2:00 :	Tower	clear	Manatee	200 yds	1 / 1 / 1 — calves	toward or away parallel none Behavior Code: <u>SW</u>	swimming away (No vibratory)
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	3:25 :	Tower	clear	Manatee's	0 yds	4 / 4 / 4 — calves	toward or away parallel none Behavior Code: <u>SW</u>	Right on the sheet metal

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Project name: Wharf Bravo
 Project location: Mayport/Tower

Lead observer: Declan
 Lead observer contact info: Radio

Page 2 of 2
 Date: 7/5/17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - <u>Vibratory</u> - Impact Sighting - Delay - Shutdown	3 :30 : :	<u>Eric Denora</u> Tower	clear		yds	/ / calves	toward or away parallel none Behavior Code:	started Back up Manatees left
Start Monitoring - End Monitoring Soft Start - <u>Vibratory</u> - Impact <u>Sighting</u> - Delay - Shutdown	3 :50 : :	Tower	clear	Manatees	1000 yds	3 / 3 / 3 calves	toward or away parallel none Behavior Code: 6W	leaving The Basin
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - <u>Shutdown</u>	4 :50 : :	Tower	clear		yds	/ / calves	toward or away parallel none Behavior Code:	
Start Monitoring - <u>End Monitoring</u> Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	5 :20 : :	Tower	clear		yds	/ / calves	toward or away parallel none Behavior Code:	30 min watch
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: : :				yds	/ / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: : :				yds	/ / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: : :				yds	/ / calves	toward or away parallel none Behavior Code:	

Project name: Wharf BravoLead observer: ~~James P. Ford~~

Declan Rodriguez

Page 1 of Project location: Monfort Wharf Bravo I / RocksLead observer contact info: 954 296 0164Date: 7-5-7

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	7:45 :	Dock Declan Rodriguez			yds	1 / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	9:41 :	Declan Rodriguez Dock	glare	manatee no take	100 yds	1 / 1 / calves	toward or away parallel none Behavior Code: SW	SW no vibratory
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	12:52 :	Declan Rodriguez Dock	glare wind		yds	1 / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	2:02 :	Declan Rodriguez Dock	glare wind	manatee	150 yds	1 / 1 / calves	toward or away parallel none Behavior Code: SW	no vibratory
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	3:27 :	Declan Rodriguez Dock	glare wind	manatee	0-10 yds	1 / 4 0 calves	toward or away parallel none Behavior Code: SW	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	4:50 :	Declan Rodriguez Dock			yds	1 / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	4:50 5:20	Declan Rodriguez Dock			yds	1 / calves	toward or away parallel none Behavior Code:	

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Appendix J. Marine Mammal Observer data sheets for 6 July 2017.

Project name: Bravo Wharf
Project location: Bravo Wharf 1 Dock

Lead observer: Declan Rodriguez
Lead observer contact info: 954 266 0164

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Date: 6/6/17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	7:45 :	Declan Rodriguez Dock	glare		yds	/ / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	8:00 :	Declan Rodriguez Dock	glare	Manatee	10-20 yds	/ / 1 calves	toward or away parallel none Behavior Code: SW	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	8:50 :	Declan Rodriguez Dock	glare	Manatee	15 yds	/ / calves	toward or away parallel none Behavior Code: SW	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	4:45 5:10	Declan Rodriguez Dock	wind		yds	/ / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	5:00 :	Dock			yds	/ / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	/ / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	/ / calves	toward or away parallel none Behavior Code:	

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Project name: Wharf BravoLead observer: DeclinPage 1 of Project location: Mayport/TowerLead observer contact info: RadioDate: 7/6/17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
<u>Start Monitoring</u> - End Monitoring Soft Start - Vibratory - Impact <u>Sighting</u> - Delay - Shutdown	7 :50 :	Eric Denora Tower	clear		yds	1 / 1 calves	toward or away parallel none Behavior Code:	15min watch
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact <u>Sighting</u> - Delay - Shutdown	8 :02 :	Tower	clear	Manatee	10 yds	1 / 1 / 1 1 calves	<u>toward</u> or away parallel none Behavior Code:	Shut Down for manatee
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact <u>Sighting</u> - Delay - Shutdown	8 :50 :	Tower	clear	Dolphins	800 yds	2 / 4 / 4 0 calves	<u>toward</u> or away parallel none Behavior Code: SW/FO	A pod of Dolphins look to be feeding (No Vibratory)
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact <u>Sighting</u> - Delay - Shutdown	9 :02 :	Tower	clear	Dolphins	1000 yds	3 / 3 / 3 1 calves	toward or away <u>parallel</u> none Behavior Code: SW/FO	Are feeding school of fish near Basin entrance. (No Vibratory)
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact <u>Sighting</u> - Delay - Shutdown	9 :42 :	Tower	clear	Dolphins	900 yds	2 / 2 / 2 calves	toward or away <u>parallel</u> none Behavior Code: SW/FO	Swimming out of Basin. Might be same one's from 9:02
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact <u>Sighting</u> - Delay - Shutdown	9 :55 :	Tower	clear	Manatee	1000 yds	1 / 1 / 1 calves	toward or away parallel <u>none</u> Behavior Code: SW	Just staying with in The docks near tower
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact <u>Sighting</u> - Delay - Shutdown	10 :16 :	Tower	clear	Dolphins	1000 yds	5 / 7 / 7 1 calves	<u>toward</u> or away parallel none Behavior Code: PL/SW	Might be a combo from 8:50 and 9:02, but not sure

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Project name: Wharf BravoLead observer: DeclinPage 2 of Project location: Mayport/TowerLead observer contact info: RadioDate: 7/6/17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring – End Monitoring Soft Start – <u>Vibratory</u> – Impact Sighting – Delay – Shutdown	10 :15 :	Tower	clear		yds	/ / — calves	toward or away parallel none Behavior Code:	Vibratory started back up.
Start Monitoring – <u>End Monitoring</u> Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	12 :00 :	Tower	clear		yds	/ / — calves	toward or away parallel none Behavior Code:	30 min watch
<u>Start Monitoring</u> – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	12 :35 :	Tower	clear		yds	/ / — calves	toward or away parallel none Behavior Code:	15 min watch
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact <u>Sighting</u> – Delay – Shutdown	4 :40 :	Tower	clear	Dolphin	1000 yds	1 / 1 / 1 — calves	toward or away parallel none Behavior Code:	last 30 min watch (No Takes)
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact <u>Sighting</u> – Delay – Shutdown	4 :55 :	Tower	clear	Dolphins	700 yds	2 / 2 / 2 — calves	<u>toward</u> or away parallel none Behavior Code:	last 30 min watch One of the Dolphin is the same from 4:40 (No Takes)
Start Monitoring – <u>End Monitoring</u> Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	5 :10 :	Tower	clear		yds	/ / — calves	toward or away parallel none Behavior Code:	last 30 min
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	: :				yds	/ / — calves	toward or away parallel none Behavior Code:	

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Appendix K. Marine Mammal Observer data sheets for 7 July 2017.

Project name: Wharf Bravo

Lead observer: Bernardo Real

Page _____ of _____

Project location: Naval Air Station Wharf Bravo 2 / Dock

Lead observer contact info: 386-747-1574

Date: 7-7-17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
<u>Start Monitoring</u> - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	9:05	Bernardo Real	Clear		yds	/ / — calves	toward or away parallel none Behavior Code:	no sighting
<u>Start Monitoring</u> - End Monitoring Soft Start - Vibratory - Impact <u>Sighting</u> - Delay - Shutdown	10:30	Bernardo Real	Clear	SEA TURTLE	48 yds	/ / 1 TURTLE	toward or away parallel none Behavior Code: SP	sticking head out of water
<u>Start Monitoring</u> - <u>End Monitoring</u> Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	12:00	Bernardo Real	Clear		yds	/ / — calves	toward or away parallel none Behavior Code:	lunch break
<u>Start Monitoring</u> - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	12:36	Bernardo Real	Clear		yds	/ / — calves	toward or away parallel none Behavior Code:	
<u>Start Monitoring</u> - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	14:50	Bernardo Real	Clear windy		yds	/ / — calves	toward or away parallel none Behavior Code:	
<u>Start Monitoring</u> - <u>End Monitoring</u> Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	6:18	Bernardo Real	Clear windy		yds	/ / — calves	toward or away parallel none Behavior Code:	
<u>Start Monitoring</u> - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown					yds	/ / — calves	toward or away parallel none Behavior Code:	

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Project name: Wharf Bravo

Lead observer: Bernardo Real

Page 1 of

Project location: Mayport/Tower

Lead observer contact info: Radio

Date: 7/7/17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	9:05 :	Tower	clear		yds	1 1 — calves	toward or away parallel none Behavior Code:	15 min watch
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	10:30 :	Tower	clear	Manatee	900 yds	1 1 1 1 — calves	toward or away parallel none Behavior Code:	Seen in the Docks near The tower on 7/7/17
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	11:30 :	Tower	clear	Dolphin	1000 yds	1 1 1 1 — calves	toward or away parallel none Behavior Code: SW	No Vibratory (No Takes)
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	12:00 :	Tower	clear	Manatee	yds	1 1 — calves	toward or away parallel none Behavior Code:	last 30 min
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	12:40 :	Tower	clear		yds	1 1 — calves	toward or away parallel none Behavior Code:	15 min watch
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	4:25 :	Tower	clear	Dolphins	900 yds	3 13 13 — calves	toward or away parallel none Behavior Code: PL/SV	A pod going to vibratory
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	5:10 :	Tower	clear		yds	1 1 — calves	toward or away parallel none Behavior Code:	last 30 min

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Appendix L. Marine Mammal Observer data sheets for 10 July 2017.

Project name: Wharf Bravo

Lead observer: Declan Rodriguez

Page 1 of

Project location: Wharf Bravo 1

Lead observer contact info: 954 296 0164

Date: 7/10/17

Dock

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	8 :30 :	Declan Rodriguez Dock	glare		yds	/ / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	10 :05 :	Dock Declan Rodriguez	glare	turtle	50 yds	/ / / calves	toward or away parallel none Behavior Code: sw	no take no vibratory
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - !	3 :00 :	Dock Declan Rodriguez	wind clouds	rain	yds	/ / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay -	4 :00 :	Dock Declan Rodriguez	wind clouds	rain	yds	/ / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	* * :				yds	/ / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	* * :				yds	/ / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	* * :				yds	/ / calves	toward or away parallel none Behavior Code:	

Sighting Form revised January 10, 2013

NAVFAC SOUTHEAST POC: Jered Jackson, Email at jered.jackson@navy.mil or Phone at 904-542-5308

Project name: Wharf BravaLead observer: DeclinPage 1 of Project location: Mayport/TowerLead observer contact info: RadioDate: 7/10/12

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	7:55 : :	Tower	clear		yds	1 1 — calves	toward or away parallel none Behavior Code:	15 min watch
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	9:45 : :	Tower	clear	Manatee	400 yds	1 1 1 — calves	toward or away parallel none Behavior Code:	Near Dock by Tower
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	12:05 : :	Tower	clear		yds	1 1 — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	12:40 : :	Tower	slight wind rain		yds	1 1 — calves	toward or away parallel none Behavior Code:	lunch vary light rain drops
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	1:05 : :	Tower	cloudy windy	Dolphins	700 yds	1 1 2 1 2 — calves	toward or away parallel none Behavior Code: SW/PD	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	1:20 : :	Tower	cloudy windy	Dolphin	1000 yds	1 1 1 1 1 — calves	toward or away parallel none Behavior Code: SW/PD	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	2:00 : :	Tower	cloudy windy	Dolphins	800 yds	1 1 2 1 2 — calves	toward or away parallel none Behavior Code:	Most likely same ones from 1:20, leaving Basin

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NAVFAC SOUTHEAST POC: Jered Jackson, Email at jered.jackson@navy.mil or Phone at 904-542-6308

Project name: Wharf BravoLead observer: DeclinPage 2 of Project location: Mayport/TowerLead observer contact info: RadioDate: 7/10/17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay	2:58 :	Tower	cloudy wind		yds	1 / 1 — calves	toward or away parallel none Behavior Code:	shutdown for lightning
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay	3:25 :	Tower	cloudy wind	Dolphins	900 yds	1 / 1 / 1 — calves	toward or away parallel none Behavior Code: SW	still shutdown
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	4:05 :	Tower	cloudy wind	Dolphin	1000 yds	1 / 1 / 1 — calves	toward or away parallel none Behavior Code: SW	still shutdown
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	4:10 :	Tower			yds	1 / 1 — calves	toward or away parallel none Behavior Code:	Day ended due to weather
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	1 / 1 — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	1 / 1 — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	1 / 1 — calves	toward or away parallel none Behavior Code:	

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Appendix M. Marine Mammal Observer data sheets for 11 July 2017.

Project name: Wharf Bravo Lead observer: Declan Rodriguez Page 1 of
 Project location: Wharf Bravo 1 Lead observer contact info: 754 296 0164 Date: 7/11/17
Dock

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	7 : 35 :	Dave Declan Rodriguez	glare		yds	/ / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	2 : 50 :	Dave Declan Rodriguez	wind	dolphin	600 yds	1 / 3 / 2 calves	toward or away parallel none Behavior Code: SW PO	not doing blowback
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	4 : 45 5 : 00	Dave Declan Rodriguez	Clouds		yds	/ / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	/ / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	/ / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	/ / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	/ / calves	toward or away parallel none Behavior Code:	

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Project name: Wharf BravoLead observer: DeclinPage 2 of 2Project location: Mayport/TowerLead observer contact info: RadioDate: 7/11/17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	1 :00 :	Eric Donovan Tower	clear	Dolphin Dolphin	700 yds	1 1 1 1 — calves	toward or away parallel none Behavior Code:	No Vibratory (No Takes)
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	1 :05 :	Tower	clear	Dolphin	1000 yds	1 1 1 1 — calves	toward or away parallel none Behavior Code:	This one is not the one from 100. (No Takes) No Vibratory
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	2 :25 :	Tower	clear		yds	1 1 — calves	toward or away parallel none Behavior Code:	start of vibratory No Sighting
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	2 :36 :	Tower	clear	Dolphins	800 yds	3 1 4 1 4 — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	4 :44 4 :55	Tower	clear		yds	1 1 — calves	toward or away parallel none Behavior Code:	last 30 min
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	1 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	1 1 — calves	toward or away parallel none Behavior Code:	

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NAVFAC SOUTHEAST POC: Jered Jackson, Email at jered.jackson@navy.mil or Phone at 904-542-6308

Project name: Wharf BravoLead observer: DeclinPage 1 of 2Project location: Mayport TowerLead observer contact info: RadioDate: 7/11/17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	7:35 :	Tower			yds	1 / 1 — calves	toward or away parallel none Behavior Code:	15 min watch
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	8:01 :	Tower	clear	Manatee	900 yds	1 / 1 / 1 — calves	toward or away parallel none Behavior Code:	Tower Docks
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	9:40 :	Tower	clear	Dolphin	900 yds	1 / 1 / 1 — calves	Toward or away parallel none Behavior Code: SW	Seems to be staying in the same area.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	10:35 :	Tower	clear	Dolphin	800 yds	1 / 1 / 1 — calves	toward or away parallel none Behavior Code:	Might be the same one from 9:40
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	11:35 :	Tower	clear	Dolphin	1000 yds	1 / 1 / 1 — calves	Toward or away parallel none Behavior Code:	Just came into the Basin
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	12:05 :	Tower	clear		yds	1 / 1 — calves	toward or away parallel none Behavior Code:	Break
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	12:35 :	Tower	clear		yds	1 / 1 — calves	toward or away parallel none Behavior Code:	15 min watch "

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Appendix N. Marine Mammal Observer data sheets for 12 July 2017.

Project name: Wharf bravo

Lead observer: Bernardo Reu

Page 1 of 1

Project location: Monfort Wharf Bravo V Dock

Lead observer contact info: 386-747-1574

Date: 7-12-17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	8:15 :	Bernardo Reu	Glare		yds	/ / ___ calves	toward or away parallel none Behavior Code:	no sighting
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	1:30 :	Dock Eric Denora	clear	Sea Turtle	50 yds	1 / / / ___ calves	toward or away parallel none Behavior Code:	leaving work area
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	3:15 :	Dock Eric Denora	clear	Sea Turtle	50 yds	1 / / / ___ calves	toward or away parallel none Behavior Code:	In the middle of steel sheets
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	5:20 :	Dock Eric Denora	clear		yds	/ / ___ calves	toward or away parallel none Behavior Code:	30 min watch
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	* * *				yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	* * *				yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	* * *				yds	/ / ___ calves	toward or away parallel none Behavior Code:	

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NAVFAC SOUTHEAST POC: Jered Jackson, Email at jered.jackson@navy.mil or Phone at 904-542-6308

Project name: Wharf BravoLead observer: Bernardo RealPage 1 of Project location: Maxport / TowerLead observer contact info: RadioDate: 7/12/17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	7:50 :	Eric Denova Tower	clear		yds	1 / 1 calves	toward or away parallel none Behavior Code:	15 min watch
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	8:30 :	Tower	clear	Manatee	1000 yds	1 / 1 / 1 calves	toward or away parallel none Behavior Code: SW	By the Boat ramp near the Tower dock
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	11:22 :	Tower	clear	Manatee	1000 yds	1 / 1 / 1 calves	toward or away parallel none Behavior Code:	Might be the same one from 8:30
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	12:05 :	Tower	clear	dolphin	1000 yds	1 / 13 calves	toward or away parallel none Behavior Code: SW PO	NOT during Vibratory (NDV)
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	2:38 :	Tower	clear	dolphin	1000 yds	4 / 6 / 5 calves	toward or away parallel none Behavior Code: PO SW	NDV
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	3:01 :	Tower	clear	dolphin	1000 yds	2 / 3 / 3 calves	toward or away parallel none Behavior Code: PO SW	Might be the NDV same as 2:30
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	4:50 :	Tower	clear		yds	1 / 1 calves	toward or away parallel none Behavior Code:	30 min watch

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Appendix O. Marine Mammal Observer data sheets for 13 July 2017.

Project name: Wharf Bravo
Project location: May port / Tower

Lead observer: Eric Denora
Lead observer contact info: Radio

Page 1 of
Date: 7/13/17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	7 :35 :	Eric Denora Tower	clear		yds	1 / calves	toward or away parallel none Behavior Code:	15 min watch
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	7 :40 :	Eric Denora Tower	clear	Dolphin	900 yds	4 / 6 / 15 0 calves	toward or away parallel none Behavior Code: Fo	Feeding by dock (No Takes) not during vibratory
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	2 :30 :	Declan Rodriguez Tower	clear	Dolphin	800 yds	1 / 1 0 calves	toward or away parallel none Behavior Code: SW PO	Fo Feeding by tower
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	3 :00 :	Declan Rodriguez Tower	clear	Dolphin	15 yds	1 / 1 calves	toward or away parallel none Behavior Code: SW PO	Same dolphin swam into shutdown zone
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	8 :42 :	Declan Rodriguez Tower	clear		yds	1 / calves	toward or away parallel none Behavior Code:	30 minute watch
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	1 / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	1 / calves	toward or away parallel none Behavior Code:	

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NAVFAC SOUTHEAST POC: Jered Jackson, Email at jered.jackson@navy.mil or Phone at 904-542-6308

Project name: Lindorf BravoLead observer: Fernando RealPage 1 of 1Project location: Marina Lindorf Bravo 1 / DockLead observer contact info: 386-747-1594Date: 7-13-17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	7:35 :	Dock Bernardo Real	Glare		yds	1 / calves	toward or away parallel none Behavior Code:	15 min watch
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	2:30 :	Dock Eric Denova	clear + windy	Dolphin	900 yds	1 / / / calves	toward or away parallel none Behavior Code: SW	By Black Barr
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	2:55 :	Dock Eric Denova	clear	Dolphin	60 yds	1 / / / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	3:00 :	Dock Eric Denova	clear	Dolphin	16 yds	1 / / / calves	toward or away parallel none Behavior Code:	Shut-down
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	3:50 :	Dock Eric Denova	clear		yds	1 / calves	toward or away parallel none Behavior Code:	last 30 min
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	1 / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	1 / calves	toward or away parallel none Behavior Code:	

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NAVFAC SOUTHEAST POC: Jered Jackson, Email at jered.jackson@navy.mil or Phone at 904-542-6308

Appendix P. Marine Mammal Observer data sheets for 14 July 2017.

Project name: Wharf Bravo

Lead observer: Bernardo Real

Page 1 of 1

Project location: mainport wharf bravo 2/pack

Lead observer contact info: 386-747-1576

Date: 7-14-17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	9:15 : :	Bernardo Real	Clear		yds	/ / — calves	toward or away parallel none Behavior Code:	no sighting
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	12:00 : :	Bernardo Real	clear		yds	/ / — calves	toward or away parallel none Behavior Code:	no sighting
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	12:35 : :	Bernardo Real	clear		yds	/ / — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	3:15 : :	Bernardo Real	clear/wind		yds	/ / — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	3:30 : :	Bernardo Real	clear		yds	/ / — calves	toward or away parallel none Behavior Code:	30 minutes after vibratory
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: : :				yds	/ / — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: : :				yds	/ / — calves	toward or away parallel none Behavior Code:	

Sighting Form revised January 10, 2013

NAVFAC SOUTHEAST POC: Jered Jackson, Email at jered.jackson@navy.mil or Phone at 904-542-6308

Project name: Wharf Bravo
 Project location: Maxport/Tower

Lead observer: Bernardo Real
 Lead observer contact info: 386 747-1514

Page 1 of 1
 Date: 7/14/17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	9:35	Eric Denova Tower	clear		yes	1 1 calves	toward or away parallel none Behavior Code:	15 min watch
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	10:20	Eric Denova Tower	clear	Dolphins	1000 yds	2 1 2 2 calves	toward or away parallel none Behavior Code: SW	Just came into Basin (No Vibratory)
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	12:00	Eric Denova Tower	clear		yds	1 1 calves	toward or away parallel none Behavior Code:	Break
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	12:35	Eric Denova Tower	clear		yds	1 1 calves	toward or away parallel none Behavior Code:	Watch Watch
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	2:45	Eric Denova Tower	clear	Dolphin	900 yds	1 1 1 1 calves	toward or away parallel none Behavior Code:	Came into Basin and then left the Basin (No Vibratory)
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	2:45	Eric Denova Tower	clear	Dolphins	700 yds	2 1 2 2 calves	toward or away parallel none Behavior Code:	A new pod of Dolphins swimming in the mid of Basin (No Vibratory)
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	3:30	Eric Denova Tower	clear		yds	1 1 calves	toward or away parallel none Behavior Code:	last 30 min watch

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 NAVFAC SOUTHEAST POC: Jered Jackson, Email at jered.jackson@navy.mil or Phone at 904-542-6308

Appendix Q. Marine Mammal Observer data sheets for 17 July 2017.

Project name: Wharf Bravo
Project location: Mayport/Dock

Lead observer: Eric Denora
Lead observer contact info: 386 490 6033

Page 1 of 1
Date: 7/17/17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	7:45 :	Dock Eric Denora	Glare		yds	1 / 1 — calves	toward or away parallel none Behavior Code:	15 min watch
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	7:45 7:55	Dock Eric Denora	Glare	Sea Turtle	30 yds	1 / 1 / 1 — calves	toward or away parallel none Behavior Code: F0	Feeding on Algae (No Vibratory)
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	11:45 :	Dock Eric Denora	cloudy	Dolphins	700 yds	3 / 4 / 3 — calves	toward or away parallel none Behavior Code: F0/5W	Tower seen about 5-6 but I only seen 3
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	2:30 :	Dock Eric Denora	cloudy + Windy		yds	1 / 1 — calves	toward or away parallel none Behavior Code:	lightning shut down
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	30:20 :	Dock Eric Denora	cloudy + Windy		yds	1 / 1 — calves	toward or away parallel none Behavior Code:	Ended Due to weather
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	1 / 1 — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	1 / 1 — calves	toward or away parallel none Behavior Code:	

Sighting Form revised January 10, 2013

NAVFAC SOUTHEAST POC: Jered Jackson, Email at jered.jackson@navy.mil or Phone at 904-542-6308

Project name: Wharf BravoLead observer: EricPage 1 of Project location: Mayport / Wharf Bravo-1Lead observer contact info: RadioDate: 7/17/17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	7:45 :	Declan Rodriguez Tower			yds	1 / — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	9:47 :	Declan Rodriguez Tower	good	manatee	1000 yds	1 / 1 — calves	toward or away parallel none Behavior Code: SW	at the tugboat docks
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	10:47 :	Declan Rodriguez Tower	clouds	dolphin	900 yds	3 / 5 / 4 — calves	toward or away parallel none Behavior Code: PO	not during vibratory
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	11:35 :	Declan Rodriguez Tower	clouds	dolphin	900 yds	6 / 8 / 7 1 calves	toward or away parallel none Behavior Code: PO FO	Feeding By the barge
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	2:25 :	Declan Rodriguez Tower	clouds	dolphin	1000 yds	1 / 12 — calves	toward or away parallel none Behavior Code: PO	Spotted during a TI shutdown
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	3:30 :	Declan Rodriguez Tower	clouds		yds	1 / — calves	toward or away parallel none Behavior Code:	Been shutdown for while due to lightning
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	1 / — calves	toward or away parallel none Behavior Code:	

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Appendix R. Marine Mammal Observer data sheets for 18 July 2017.

Project name: Wharf Bravo Lead observer: Declan Rodriguez Page 1 of 1
 Project location: Mayport / Wharf Bravo - 1 Lead observer contact info: 954 296 0164 Date: 7-18-17
Dock

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	10:00 :	Declan Rodriguez Tower	cloudy		yds	1 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	11:28 :	Declan Rodriguez Tower	cloudy	dolphin	1000 yds	1 13 calves	toward or away parallel none Behavior Code: FO PO	Feeding by post entrance no vibratory
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	2:53 :	Declan Rodriguez Tower	cloudy	dolphin	1000 yds	1 13 calves	toward or away parallel none Behavior Code: PO	SW no vibratory
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	3:02 :	Declan Rodriguez Tower	cloudy	dolphin	900 yds	1 12 calves	toward or away parallel none Behavior Code: PO	different dolphins no vibratory
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	3:25 :	Declan Rodriguez Tower	cloudy	dolphin	700 yds	1 14 calves	toward or away parallel none Behavior Code: PO	the new pod again no vibratory
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	5:00 :	Declan Rodriguez Tower	cloudy		yds	1 1 calves	toward or away parallel none Behavior Code:	25 minute watch
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	1 1 calves	toward or away parallel none Behavior Code:	

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 NAVFAC SOUTHEAST POC: Jered Jackson, Email at jered.jackson@navy.mil or Phone at 904-542-6308

Project name: Wharf BravoLead observer: Eric DenoraPage 1 of Project location: Mayport/DockLead observer contact info: 386 490 6033Date: 7/18/17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	11 :00 :	Dock Eric Denora	clear		yds	/ / — calves	toward or away parallel none Behavior Code:	15 min watch
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	5 20 :	Dock Eric Denora	clear		yds	/ / — calves	toward or away parallel none Behavior Code:	30 min watch
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	/ / — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	/ / — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	/ / — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	/ / — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	/ / — calves	toward or away parallel none Behavior Code:	

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Appendix S. Marine Mammal Observer data sheets for 19 July 2017.

Project name: Bravo Wharf 1
 Project location: Mayport / Bravo Wharf-1
Tower

Lead observer: Eric
 Lead observer contact info: Radio

Page 1 of
 Date: 7/19/17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	8:00 :	Declan Rodriguez Tower	cloudy		yds	1 / 1 — calves	toward or away parallel none Behavior Code:	5 min watch
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	11:10 :	Declan Rodriguez Tower	cloudy	manatee	100 yds	1 / 1 2 calves	toward or away parallel none Behavior Code: SW	Staying by tugboat dock slips
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	3:10 :	Declan Rodriguez Tower	cloudy	dolphin	900 yds	1 / 12 — calves	toward or away parallel none Behavior Code: PO	no vibratory
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	3:35 :	Declan Rodriguez Tower	cloudy	dolphin	800 yds	2 / 3 / 3 0 calves	toward or away parallel none Behavior Code: PO	Same group 3 Vibratory started now
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	4:35 :	Declan Rodriguez Tower	cloudy		yds	1 / 1 — calves	toward or away parallel none Behavior Code:	30 minute watch
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	1 / 1 — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	1 / 1 — calves	toward or away parallel none Behavior Code:	"

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Project name: Wharf Bravo

Lead observer: Eric Denova

Page 1 of 1

Project location: Mayport/Dock

Lead observer contact info: 386 440 6033

Date: 7/19/17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	7:45 :	Eric Denova Dock	cloudy		yds	1 / 1 ___ calves	toward or away parallel none Behavior Code:	15 min Watch
Start Monitoring - End Monitoring Soft Start - <u>Vibratory</u> - Impact Sighting - Delay - Shutdown	3:37 :	clear	Dolphins	25	yds	2 / 2 / 2 ___ calves	toward or away parallel none Behavior Code:	There was Vibratory on
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	4:35 :	clear			yds	1 / 1 ___ calves	toward or away parallel none Behavior Code:	30 min Watch
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	1 / 1 ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	1 / 1 ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	1 / 1 ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	1 / 1 ___ calves	toward or away parallel none Behavior Code:	

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Appendix T. Marine Mammal Observer data sheets for 20 July 2017.

Project name: Wharf Bravo

Lead observer: Eric Denova

Page 1 of

Project location: Mayport / Dock

Lead observer contact info: 386 490 6033

Date: 7/20/17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	10 :35 : :	Dock Eric Denova	clear glare		yds	/ / ___ calves	toward or away parallel none Behavior Code:	15 min watch
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	5 :25 : :	Dock Eric Denova	cloudy + windy		yds	/ / ___ calves	toward or away parallel none Behavior Code:	15 min watch
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	+: +: :				yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	+: +: :				yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	+: +: :				yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	+: +: :				yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	+: +: :				yds	/ / ___ calves	toward or away parallel none Behavior Code:	

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NAVFAC SOUTHEAST POC: Jered Jackson, Email at jered.jackson@navy.mil or Phone at 904-542-6308

Project name: Wright BravoLead observer: Eric DeckerPage 1 of 2Project location: Wright Bravo 2 / 1000

Lead observer contact info: _____

Date: 7-20-17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	10:35 :	Bernardo Real	clear		yds	1 / calves	toward or away parallel none Behavior Code:	no sighting
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	12:05 :	Bernardo Real	clear		yds	1 / calves	toward or away parallel none Behavior Code:	lunch break
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	1:55 :	Bernardo Real	clear		yds	1 / calves	toward or away parallel none Behavior Code:	no sighting
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	2:12 :	Bernardo Real	clear windy	Dolphin	100 yds	1 / 3 dolphins of 2 calves toward	toward or away parallel none Behavior Code: SP	Swimming toward deck and tower not really moving in direction
- End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	4:50 :	Bernardo Real	clear		yds	1 / calves	toward or away parallel none Behavior Code:	Start of 30 min watch
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	6:20 :	Bernardo Real	clear		yds	1 / calves	toward or away parallel none Behavior Code:	3 minutes after violation
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	1 / calves	toward or away parallel none Behavior Code:	

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Appendix U. Marine Mammal Observer data sheets for 21 July 2017.

Project name: Wharf Bravo
 Project location: Mayport Wharf Bravo 3 / Dock

Lead observer: Bernardo Real
 Lead observer contact info: 386-747-1574

Page _____ of _____
 Date: 7-21-17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	11 : 06	Bernardo Real	clear		yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	11 : 34	Bernardo Real	clear		yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	*				yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	*				yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	*				yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	*				yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	*				yds	/ / ___ calves	toward or away parallel none Behavior Code:	

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 NAVFAC SOUTHEAST POC: Jered Jackson, Email at jered.jackson@navy.mil or Phone at 904-542-6308

Project name: Wharf Bravo
 Project location: Mayport/Bravo Tower

Lead observer: Bernardo Real
 Lead observer contact info: Radio

Page 1 of 1
 Date: 7/20/17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	11:00 :	Eric Denova Tower	clear		yds	1 / — calves	toward or away parallel none Behavior Code:	15 watch
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	12:00 :	Eric Denova Tower	clear	Dolphin	900 yds	1 / 1 / — calves	toward or away parallel none Behavior Code: SW	leaving the Basin
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	2:05 :	Eric Denova Tower	clear	Manatee	800 yds	1 / 1 / — calves	toward or away parallel none Behavior Code: SW	Swimming around Control Tower Dock (No Vibratory)
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	4:15 :	Eric Denova Tower	clear	Dolphins	1000 yds	4 / 4 / 4 — calves	toward or away parallel none Behavior Code: FO/SW	Feeding at the entrance to basin (No Vibratory)
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	4:45 :	Eric Denova Tower	clear		yds	1 / — calves	toward or away parallel none Behavior Code:	last 30 min
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	1 / — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	1 / — calves	toward or away parallel none Behavior Code:	

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 NAVFAC SOUTHEAST POC: Jered Jackson, Email at jered.jackson@navy.mil or Phone at 904-542-6308

Appendix V. Marine Mammal Observer data sheets for 24 July 2017.

Project name: Wharf Bravo

Lead observer: Bernardo Real

Page 1 of 2

Project location: Naval Air Station Wharf Bravo 1 / tower

Lead observer contact info: 386-747-1574

Date: 7-24-17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	11 : 54	Bernardo Real	clear		yds	/ / — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	3 : 30	Bernardo Real	clear		yds	/ / — calves	toward or away parallel none Behavior Code:	TZ
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	5 : 10	Bernardo Real	clear		yds	/ / — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	:				yds	/ / — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	:				yds	/ / — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	:				yds	/ / — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	:				yds	/ / — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	:				yds	/ / — calves	toward or away parallel none Behavior Code:	

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NAVFAC SOUTHEAST POC: Jered Jackson, Email at jered.jackson@navy.mil or Phone at 904-542-6308

Project name: Wharf BravoLead observer: Eric DenovaPage 1 of Project location: Mayport/DockLead observer contact info: 386 4826032Date: 7/24/17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	12:30 :	Dock Eric Denova	glare		yds	1 / — calves	toward or away parallel none Behavior Code:	15 min watch
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	3:30 :	Dock Eric Denova	clear		yds	1 / — calves	toward or away parallel none Behavior Code:	T1 Winds
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	5:10 :	Dock Eric Denova	clear		yds	1 / — calves	toward or away parallel none Behavior Code:	last 30 min
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	1 / — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	1 / — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	1 / — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	1 / — calves	toward or away parallel none Behavior Code:	

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NAVFAC SOUTHEAST POC: Jered Jackson, Email at jered.jackson@navy.mil or Phone at 904-542-6308

Appendix W. Marine Mammal Observer data sheets for 25 July 2017.

Project name: Wharf Bravo
Project location: Bravo Mayport/Dock

Lead observer: Amado Real
Lead observer contact info: 386-749-1574

Page 1 of 1
Date: 7/25/17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	9:12 11:00	Dock	Glare		yds	/ / calves	toward or away parallel none Behavior Code:	15 min watch
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	3:30	Dock	cloudy		yds	/ / calves	toward or away parallel none Behavior Code:	30 min watch
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	*				yds	/ / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	*				yds	/ / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	*				yds	/ / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	*				yds	/ / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	*				yds	/ / calves	toward or away parallel none Behavior Code:	

Project location: Mayport / Tower

Lead observer: ERIC DEANOVA

Lead observer contact info: _____

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Date: 7/25/17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	7 : 35	Tower Eric Denora	cloudy		yds	/ / — calves	toward or away parallel none Behavior Code:	15 min Watch
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	10 : 00	Tower Eric Denora	clear	Dolphin	1000 yds	/ / / / — calves	toward or away parallel none Behavior Code: SW	leaving Basin (No Vibratory)
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	1 : 40	Tower Eric Denora	clear	Dolphin	900 yds	/ / / / — calves	toward or away parallel none Behavior Code: SW	(No Vibratory)
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	3 : 30	Tower Eric Denora	clear		yds	/ / — calves	toward or away parallel none Behavior Code:	last 30 min
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	:				yds	/ / — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	:				yds	/ / — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	:				yds	/ / — calves	toward or away parallel none Behavior Code:	

Sighting Form revised January 10, 2013

NAVFAC SOUTHEAST POC: Jered Jackson, Email at jered.jackson@navy.mil or Phone at 904-542-6308

Appendix X. Marine Mammal Observer data sheets for 26 July 2017.

Project name: Wharf Bravo

Lead observer: Eric Denora

Page 1 of

Project location: Mayport/Dock

Lead observer contact info: 386 490-6033

Date: 7/26/17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	9:45 :	Dock Eric Denora	Glare		yds	/ / — calves	toward or away parallel none Behavior Code:	15 min watch
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	10:05 :	Dock Eric Denora	Glare	Manatee	17 yds	1 / 1 / — calves	toward or away parallel none Behavior Code:	was swimming away after min before vibratory started, I told them to hold off for a few
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	4:50 :	Dock Eric Denora	cloudy		yds	/ / — calves	toward or away parallel none Behavior Code:	last 30 min
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	/ / — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	/ / — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	/ / — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	/ / — calves	toward or away parallel none Behavior Code:	

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Project name: Wharf BravoLead observer: ERICK DENOVA

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Project location: Monfort Wharf Bravo 1 / Tower

Lead observer contact info: _____

Date: 7-26-17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	10:03	Bernardo Reel Tower	Clear Glare			1 / 1 calves	toward or away parallel none Behavior Code:	no sighting
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	1:24	Bernardo Reel Tower	windy cloudy	Dolphin	2 145 yds 1,400	1 / 1 2 dolphins	toward or away parallel none Behavior Code: SP	swimming towards gate leaving area (no vibratory)
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	3:05	Bernardo Reel Tower	Clear	Dolphin	2 145 yds 700	1 / 1 1 dolphin	toward or away parallel none Behavior Code: SP	swimming across gate not really changing directions
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	3:37	Bernardo Reel Tower	Clear	Dolphin	2 145 yds 550	1 / 1 1 dolphin	toward or away parallel none Behavior Code: SP	heading towards pile drive rest leaving passer gate Same from 3:05
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	5:00	Bernardo Reel Tower	Clear		950	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	:				950	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	:				950	1 / 1 calves	toward or away parallel none Behavior Code:	

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Appendix Y. Marine Mammal Observer data sheets for 27 July 2017.

Project name: Wineff bravo Lead observer: Bernardo Real
 Project location: Mayport wharf bravo I / docks Lead observer contact info: 386-747-1574

Page of
 Date: 7-27-17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	8:50	Bernardo Real DOCK	clear		yds	1 / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	10:04	Bernardo Real DOCK			yds	1 / calves	toward or away parallel none Behavior Code:	This was not a shutdown pile driving was suspended to unload sheet pile
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	1:10	Bernardo Real DOCK			yds	1 / calves	toward or away parallel none Behavior Code:	TI
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown					yds	1 / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown					yds	1 / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown					yds	1 / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown					yds	1 / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown					yds	1 / calves	toward or away parallel none Behavior Code:	

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Project name: Wharf BravoLead observer: Bernardo RealPage 1 of Project location: Mayport/TowerLead observer contact info: Radi'oDate: 7/27/17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - vibratory - impact Sighting - Delay - Shutdown	8:50 :	Eric Denova Tower	cloudy		yds	1 / calves	toward or away parallel none Behavior Code:	15 min watch
Start Monitoring - End Monitoring Soft Start - Vibratory - impact Sighting - Delay - Shutdown	9:00 :	Eric Denova Tower	cloudy	Dolphins	800 yds	3 / 4 / 3 0 calves	toward or away parallel <u>none</u> Behavior Code: SW	Just swimming in the same area most likely left basin (No vibratory)
Start Monitoring - End Monitoring Soft Start - <u>vibratory</u> - impact Sighting - Delay - Shutdown	9:25 :	Eric Denova Tower	cloudy	Dolphins	700 yds	3 / 5 / 3 1 calves	toward or away parallel <u>none</u> Behavior Code: PI/PO	Same pod from 9:00
Start Monitoring - End Monitoring Soft Start - Vibratory - impact Sighting - Delay - <u>Shutdown</u>	10:04 :	Eric Denova Tower	cloudy		yds	1 / calves	toward or away parallel none Behavior Code:	This was not a shutdown. Pile Driving was temporarily suspended to unload a shoot pile truck
Start Monitoring - End Monitoring Soft Start - Vibratory - impact Sighting - Delay - <u>Shutdown</u>	1:10 :	Eric Denova Tower	cloudy		yds	1 / calves	toward or away parallel none Behavior Code:	T1
Start Monitoring - End Monitoring Soft Start - Vibratory - impact Sighting - Delay - Shutdown	3:00 :	Eric Denova Tower	cloudy		yds	1 / calves	toward or away parallel none Behavior Code:	1st 30 min
Start Monitoring - End Monitoring Soft Start - Vibratory - impact Sighting - Delay - Shutdown	 :				yds	1 / calves	toward or away parallel none Behavior Code:	

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Appendix Z. Marine Mammal Observer data sheets for 28 July 2017.

Project name: Wharf Bravo
Project location: Mayport / Dock

Lead observer: Eric Denova
Lead observer contact info: 386 490 6033

Page 1 of 1
Date: 7/28/17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	8:30 :	Eric Denova Mayport Dock	Glare		yd	1 1 - calves	toward or away parallel none Behavior Code:	15 min watch
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	2:00 :	Eric Denova Mayport Dock	clear	Dolphins	500 yds	4 1 4 - calves	toward or away parallel none Behavior Code: SW	Two different Different Pods (No Vibratory)
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	2:00 :	Eric Denova Dock	clear	Dolphins	700 yds	2 1 3 2 - calves	toward or away parallel none Behavior Code: SW	Two Different pods (No Vibratory)
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	2:40 :	Eric Denova Dock	clear		yd	1 1 - calves	toward or away parallel none Behavior Code:	T1 started Back up at 3:40
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	4:55 :	Eric Denova Dock			yd	1 1 - calves	toward or away parallel none Behavior Code:	last 30 min watch
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yd	1 1 - calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yd	1 1 - calves	toward or away parallel none Behavior Code:	

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NAVFAC SOUTHEAST POC: Jered Jackson, Email at jered.jackson@navy.mil or Phone at 904-542-6308

Project name: Wharf Bravo

Lead observer: Eric Denora

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Project location: Mayport / Turret

Lead observer contact info: _____

Date: July 28/2017

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	6:30	Jacob/Turret	clear		yds	1 / 1 calves	toward or away parallel none Behavior Code:	15 min. watch
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	8:45	Jacob/Turret	clear	Dolphin	1,000 yds	5 / 5 / 5 1 calves	toward or away parallel none Behavior Code: SW SW/ED	(no vibratory) for feeding at entrance of cove
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	2:51	Jacob/Turret	cloudy	Dolphin	1,000 yds	5 / 5 / 5 1 calves	toward or away parallel none Behavior Code: SW SW	(no vibratory) same group as 8:45
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	2:52	Jacob/Turret	cloudy		yds	1 / 1 calves	toward or away parallel none Behavior Code:	Delay for T1
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	4:55	Jacob/Turret	cloudy		yds	1 / 1 calves	toward or away parallel none Behavior Code:	30 min watch
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown					yds	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown					yds	1 / 1 calves	toward or away parallel none Behavior Code:	

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Appendix AA. Marine Mammal Observer data sheets for 1 August 2017.

Project name: Whale Bravo

Lead observer: Eric DeRuva

Page _____ of _____

Project location: Mayport bridge/tower

Lead observer contact info: _____

Date: 8/1/17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring	7:40	Jacob Tower			yds	/ /	toward or away parallel none Behavior Code:	15 min watch
Soft Start - Vibratory - Impact	:					calves		
Sighting - Delay - Shutdown	:							
Start Monitoring - End Monitoring	12:55	Jacob Tower	cloudy	Dolphin	1,050 yds	4 / 4 / 4	toward or away parallel none Behavior Code:	Came in and then left (vibratory!)
Soft Start - Vibratory - Impact	:					calves	SW	
Sighting - Delay - Shutdown	:							
Start Monitoring - End Monitoring	4:30	Jacob Tower			yds	/ /	toward or away parallel none Behavior Code:	Last 30 min watch
Soft Start - Vibratory - Impact	:					calves		
Sighting - Delay - Shutdown	:							
Start Monitoring - End Monitoring	:				yds	/ /	toward or away parallel none Behavior Code:	
Soft Start - Vibratory - Impact	:					calves		
Sighting - Delay - Shutdown	:							
Start Monitoring - End Monitoring	:				yds	/ /	toward or away parallel none Behavior Code:	
Soft Start - Vibratory - Impact	:					calves		
Sighting - Delay - Shutdown	:							
Start Monitoring - End Monitoring	:				yds	/ /	toward or away parallel none Behavior Code:	
Soft Start - Vibratory - Impact	:					calves		
Sighting - Delay - Shutdown	:							

Sighting Form revised January 10, 2013

NAVFAC SOUTHEAST POC: Jered Jackson, Email at jered.jackson@navy.mil or Phone at 904-542-6308

Project name: Wharf BravoLead observer: Eric Denora

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Project location: Mayport / DockLead observer contact info: 386 490 6033Date: 8/1/17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	7:40	Eric Denora Dock	Heavy glare cloudy		yes	1 / 1 calves	toward or away parallel none Behavior Code:	15 min watch
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	4:35	Eric Denora Dock	Clear		yes	1 / 1 calves	toward or away parallel none Behavior Code:	last 30 min
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown					yes	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown					yes	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown					yes	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown					yes	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown					yes	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown					yes	1 / 1 calves	toward or away parallel none Behavior Code:	

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Appendix BB. Marine Mammal Observer data sheets for 2 August 2017.

Project name: WMAF bravo Lead observer: Bernardo Real Page of
 Project location: monfort bravo 1/ tower Lead observer contact info: 386-747-1571 Date: 8-2-17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	10:20	Bernardo Real	clear wind		yes	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	1:20	Bernardo Real			yes	1 / 1 calves	toward or away parallel none Behavior Code:	T1
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown					yes	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown					yes	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown					yes	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown					yes	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown					yes	1 / 1 calves	toward or away parallel none Behavior Code:	

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 NAVFAC SOUTHEAST POC: Jered Jackson, Email at jered.jackson@navy.mil or Phone at 904-542-6308

Project name: Wharf BravoLead observer: Bernardo RealPage 1 of Project location: Mayport / TowerLead observer contact info: RadioDate: 8/2/17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	10:00 10:20	Eric Denova Tower	Clear		Yds	1 1 — calves	toward or away parallel none Behavior Code:	15 min watch
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	1:05 :	Eric Denova Tower	cloudy	Dolphins	900 yds	3 13 13 — calves	toward or away parallel none Behavior Code: SW	staying in the same area (No Vibratory)
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	1:20 :	Eric Denova Tower	cloudy		Yds	1 1 — calves	toward or away parallel none Behavior Code:	T1 Delay
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	3:00 :	Eric Denova Tower	cloudy		Yds	1 1 — calves	toward or away parallel none Behavior Code:	30 min watch Ended Due to weather
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				Yds	1 1 — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				Yds	1 1 — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				Yds	1 1 — calves	toward or away parallel none Behavior Code:	

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Appendix CC. Marine Mammal Observer data sheets for 3 August 2017.

Project name: Wharf Bravo

Lead observer: Eric Denova

Page 1 of 1

Project location: Mayport/Dock

Lead observer contact info: 386 490 6033

Date: 8/3/17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	7:50 :	Eric Denova Dock	Glare		yds	1 1 calves	toward or away parallel none Behavior Code:	15 min watch
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	11:00 :	Eric Denova Dock	cloudy	Dolphins	700 yds	2 1 2 12 calves	toward or away parallel none Behavior Code: SW	Never came in closer (No Vibratory)
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	2:50 :	Eric Denova Dock	cloudy windy		yds	1 1 calves	toward or away parallel none Behavior Code:	last 30 min
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: : :				yds	1 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: : :				yds	1 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: : :				yds	1 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: : :				yds	1 1 calves	toward or away parallel none Behavior Code:	

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NAVFAC SOUTHEAST POC: Jered Jackson, Email at jered.jackson@navy.mil or Phone at 904-542-6308

Project name: Wharf BravoLead observer: B. Eric DenovaPage 1 of 2Project location: Mayport Wharf Bravo 1 / Tower

Lead observer contact info: _____

Date: 8-8-17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
<u>Start Sighting</u> - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	8:20	<u>Bernardo Real</u> <u>Tower</u>	Clear		yds	1 / 1 calves	toward or away parallel none Behavior Code:	no sighting
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact <u>Sighting</u> - Delay - Shutdown	10:08	<u>Bernardo Real</u> <u>Tower</u>	Cloudy	Dolphin	400-425 yds from pile drive	1 / 1 Dolphin	toward or away parallel none Behavior Code: CD	changing directions towards main base (no vibratory)
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	2:40	<u>Bernardo Real</u> <u>Tower</u>	Clear		yds	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	:				yds	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	:				yds	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	:				yds	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	:				yds	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	:				yds	1 / 1 calves	toward or away parallel none Behavior Code:	

Sighting Form revised January 10, 2013

NAVFAC SOUTHEAST POC: Jered Jackson, Email at jered.jackson@navy.mil or Phone at 904-542-6308

Appendix DD. Marine Mammal Observer data sheets for 4 August 2017.

Project name: Wharf Bravo

Lead observer: ~~XXXXXXXXXX~~ Bernardo Real

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Project location: Mayport + Tower

Lead observer contact info: Radio

Date: 8/4/17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Self Start - Vibratory Impact Sighting - Delay - Shutdown	10:15 :	Eric Denova Tower	cloudy		yd	1 1 calves	toward or away parallel none Behavior Code:	15 min watch
Start Monitoring - End Monitoring Self Start - Vibratory Impact Lighting - Delay - Shutdown	10:25 :	Eric Denova Tower	cloudy	Dolphins	800 yd	2 12 12 calves	toward or away parallel none Behavior Code:	(No Vibratory) Most likely the same two from 10:25 (No Vibratory)
Start Monitoring - End Monitoring Self Start - Vibratory Impact Lighting - Delay - Shutdown	1:05 :	Eric Denova Tower	clear	Dolphins	1600 yd	2 12 12 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Self Start - Vibratory Impact Lighting - Delay - Shutdown	1:25 :	Eric Denova Tower	clear		yd	1 1 calves	toward or away parallel none Behavior Code:	30 min Watch
Start Monitoring - End Monitoring Self Start - Vibratory Impact Sighting - Delay - Shutdown	: :				yd	1 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Self Start - Vibratory Impact Sighting - Delay - Shutdown	: :				yd	1 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Self Start - Vibratory Impact Sighting - Delay - Shutdown	: :				yd	1 1 calves	toward or away parallel none Behavior Code:	

Sighting Form revised January 10, 2013.

NAVFAC SOUTHEAST POC: Jered Jackson, Email at jered.jackson@navy.mil or Phone at 904-542-6308

Project name: NAVF BRAYO

Lead observer: Bernardo Real

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Project location: mayport brayo 1 / tower

Lead observer contact info: 380-747-1576

Date: 8-4-17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	10:15	Bernardo Real Deck	Chicore		yes	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	1:07	Bernardo Real Deck			yes	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown					yes	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown					yes	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown					yes	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown					yes	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown					yes	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown					yes	1 / 1 calves	toward or away parallel none Behavior Code:	

Sighting Form revised January 10, 2013

NAVFAC SOUTHEAST POC: Jered Jackson, Email at jered.jackson@navy.mil or Phone at 904-542-6308

Appendix EE. Marine Mammal Observer data sheets for 5 August 2017.

Project name: Wharf break

Lead observer: Eric Denbua

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Project location: marport bravo 1/tower

Lead observer contact info: _____

Date: 8-5-17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - vibratory - impact Sighting - Delay - Shutdown	10 : 10 :	Bernardo Real Tower			yds	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - impact Sighting - Delay - Shutdown	1 : 50 :	Bernardo Real Tower	windy cloudy	manatee	500 yds from pile drive	1 / 1 2 calves	toward or away parallel none Behavior Code: SP	managing around the deck in front of tower (no vibratory)
Start Monitoring - End Monitoring Soft Start - Vibratory - impact Sighting - Delay - Shutdown	3 : 49 :	Bernardo Real			yds	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - impact Sighting - Delay - Shutdown	: :				yds	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - impact Sighting - Delay - Shutdown	: :				yds	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - impact Sighting - Delay - Shutdown	: :				yds	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - impact Sighting - Delay - Shutdown	: :				yds	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - impact Sighting - Delay - Shutdown	: :				yds	1 / 1 calves	toward or away parallel none Behavior Code:	

Sighting Form revised January 10, 2013

NAVFAC SOUTHEAST POC: Jered Jackson, Email at jered.jackson@navy.mil or Phone at 904-542-6308

Project name: Wharf Bravo

Lead observer: Eric Denova

Page 1 of 1

Project location: Maxport/Dock

Lead observer contact info: 386.490.6033

Date: 8/5/17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	9:45	Eric Denova Dock	cloudy		yd	1 / 1 calves	toward or away parallel none Behavior Code:	15 min watch
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	3:45	Eric Denova Dock	cloudy		yd	1 / 1 calves	toward or away parallel none Behavior Code:	last 30 min
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown					yd	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown					yd	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown					yd	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown					yd	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown					yd	1 / 1 calves	toward or away parallel none Behavior Code:	

Sighting Form revised January 10, 2013

NAVFAC SOUTHEAST POC: Jered Jackson, Email at jered.jackson@navy.mil or Phone at 904-542-6308

Appendix FF. Marine Mammal Observer data sheets for 7 August 2017.

Project name: Wharf Bravo
Project location: Mayport/Dock

Lead observer: Eric Denova
Lead observer contact info: 3864906033

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Date: 8/7/17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	3:25 :	Eric Denova Dock	Glare		yds	1 / 1 calves	toward or away parallel none Behavior Code:	15 min
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	5:00 :	Eric Denova	Glare		yds	1 / 1 calves	toward or away parallel none Behavior Code:	30 min
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	1 / 1 calves	toward or away parallel none Behavior Code:	

Sighting Form revised January 10, 2013

NAVFAC SOUTHEAST POC: Jared Jackson, Email at jared.jackson@navy.mil or Phone at 904-542-6308

Project name: Wharf BravoLead observer: ERIC DENOVA

Page _____ of _____

Project location: MAJOR WHARF BRAVOLead observer contact info: 386-490-6033Date: 8-7-17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	3:00 :	Bernardo Reed Tower	Clear		yds	1 / calves	toward or away parallel none Behavior Code:	15 min
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	5:00 :	Bernardo Reed Tower	Clear		yds	1 / calves	toward or away parallel none Behavior Code:	30 min
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	1 / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	1 / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	1 / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	1 / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	1 / calves	toward or away parallel none Behavior Code:	

Sighting Form revised January 10, 2013

NAVFAC SOUTHEAST POC: Jered Jackson, Email at jered.jackson@navy.mil or Phone at 904-542-6308

Appendix GG. Marine Mammal Observer data sheets for 8 August 2017.

Project name: Wharf Bravo

Lead observer: Bernardo Real

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Project location: Marine Corps Air Station / POC

Lead observer contact info: 386-747-1674

Date: 8-8-17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	7:30	Bernardo Real DOCF	Clear		yds	1 / 1 calves	toward or away parallel none Behavior Code:	15 min
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	8:50	Bernardo Real DOCF	Clear		yds	1 / 1 calves	toward or away parallel none Behavior Code:	30 min
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown					yds	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown					yds	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown					yds	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown					yds	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown					yds	1 / 1 calves	toward or away parallel none Behavior Code:	

Sighting Form revised January 10, 2013.

NAVFAC SOUTHEAST POC: Jered Jackson, Email at jered.jackson@navy.mil or Phone at 904-542-6308

Project name: Wharf Beavo
 Project location: Maxport/Tower

Lead observer: Bernardo Real
 Lead observer contact info: 386-747-1574

Page: _____ of _____
 Date: 8/8/17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	7:30 :	Eric Denora Tower	Clear		yds	1 / 1 calves	toward or away parallel none Behavior Code:	15 min
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	8:50 :	Eric Denora	Clear		yds	1 / 1 calves	toward or away parallel none Behavior Code:	30 min
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	1 / 1 calves	toward or away parallel none Behavior Code:	

Sighting Form revised January 10, 2013

NAVFAC SOUTHEAST POC: Jered Jackson, Email at jered.jackson@navy.mil or Phone at 904-542-6308

Appendix HH. Marine Mammal Observer data sheets for 10 August 2017.

Project name: Wharf Bravo

Lead observer: Eric Denava

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Project location: Maxpool / Dock

Lead observer contact info: 386 440 6033

Date: 8/10/17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	1 :05	Eric Denava Dock	Clear		yds	1 / 1 calves	toward or away parallel none Behavior Code:	15 min Watch
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	2 :30	Eric Denava Dock	Clear		yds	1 / 1 calves	toward or away parallel none Behavior Code:	30 min Watch
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown					yds	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown					yds	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown					yds	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown					yds	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown					yds	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown					yds	1 / 1 calves	toward or away parallel none Behavior Code:	

Sighting Form revised January 10, 2013

NAVFAC SOUTHEAST POC: Jered Jackson, Email at jered.jackson@navy.mil or Phone at 904-542-6308

Project name: Wharf BravoLead observer: Eric DeNovaPage 1 of 1Project location: Mayport/TowerLead observer contact info: RadioDate: 8/10/17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	1 :05	Bernardo Real Tower	Clear		yds	1 / 1 - calves	toward or away parallel none Behavior Code:	15 min watch
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	1 :47	Bernardo Real	Clear	Dolphin	1000 yds	1 / 1 / 1 - calves	toward or away parallel none Behavior Code: SW	Entered Basin then left (No Vibrator)
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	2 :30	Bernardo Real	Clear		yds	1 / 1 - calves	toward or away parallel none Behavior Code:	30 min watch
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	•				yds	1 / 1 - calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	•				yds	1 / 1 - calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	•				yds	1 / 1 - calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	•				yds	1 / 1 - calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	•				yds	1 / 1 - calves	toward or away parallel none Behavior Code:	

Sighting Form revised January 10, 2013

NAVFAC SOUTHEAST POC: Jered Jackson, Email at jered.jackson@navy.mil or Phone at 904-542-6308

Appendix II. Marine Mammal Observer data sheets for 14 August 2017.

Project name: Wharf Bravo

Lead observer: Eric Denova

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Project location: Mayport/Dock

Lead observer contact info: 386 490 6033

Date: 8/14/17

Effort Info				Sighting Info				
Event	Time of Event (Start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	N of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Self Start - Vibratory - Impact Sighting - Delay - Shutdown	3:00 3:00	Eric Denova Dock	clear		yds	1 / 1 calves	toward or away parallel none Behavior Code:	15 min watch
Start Monitoring - End Monitoring Self Start - Vibratory - Impact Sighting - Delay - Shutdown	3:50 3:50	Eric Denova Dock	clear		yds	1 / 1 calves	toward or away parallel none Behavior Code:	30 min watch
Start Monitoring - End Monitoring Self Start - Vibratory - Impact Sighting - Delay - Shutdown					yds	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Self Start - Vibratory - Impact Sighting - Delay - Shutdown					yds	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Self Start - Vibratory - Impact Sighting - Delay - Shutdown					yds	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Self Start - Vibratory - Impact Sighting - Delay - Shutdown					yds	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Self Start - Vibratory - Impact Sighting - Delay - Shutdown					yds	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Self Start - Vibratory - Impact Sighting - Delay - Shutdown					yds	1 / 1 calves	toward or away parallel none Behavior Code:	

Sighting Form revised January 10, 2013

NAVFAC SOUTHEAST POC: Jered Jackson, Email at jered.jackson@navy.mil or Phone at 904-542-6308

Project name: Wharf Bravo

Lead observer: Eric Osenera

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Project location: Mayport / Dock

Lead observer contact info: _____

Date: 8/14/17

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	3:00	Jacob Tower	clear		yds	/ / calves	toward or away parallel none Behavior Code:	15 min watch
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	4:00	Jacob	clear		yds	/ / calves	toward or away parallel none Behavior Code:	30 min watch
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown					yds	/ / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown					yds	/ / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown					yds	/ / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown					yds	/ / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown					yds	/ / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown					yds	/ / calves	toward or away parallel none Behavior Code:	

Sighting Form revised January 10, 2013

NAVFAC SOUTHEAST POC: Jered Jackson, Email at jered.jackson@navy.mil or Phone at 904-542-6308