**Appendix A: Data Sheets and Field Forms** 

#### Vehicular Security Center at World Trade Center: Vessel Inventory Form Date: 7 /1,7 /2010 Site Number: A06101.018000 OPRHP Project Review Number: 05PR04753 Site Name: Vehicular Security Center at World Trade Center Principal Investigator: Warren Riess and Carrie Atkins Fulton Affiliation: AKRF, Inc. and Pemaguid Art & Science Address of Site: Liberty, Cedar, Washington, and West Streets, New York, NY Block and Lot: Block 56, Lot 15 GPS Coordinates: 74°0'49.248"W 40°42'37.27"N Client: LMDC Name of Feature: Adrian Artifact Number: FN -15-1 Artifact Name: Wholes K Lood Condition: Material: 6.7 Location: (sided) Gigu D W Dimensions: L (molded) Number and type of fasteners: Spikes Trunnels Other (Describe: ) Photographs: in situ full details Detailed Illustrations? Associated Timbers: Frame point near keelson Notes tapeno to Now Beaken into 3 pieces comes 61 6'9" 5 3/4 4" 15-5 Scale: NO Sketch by:

Site Number: <u>A06101.018000</u> OPRHP Project Review Number: <u>05PR04753</u> Site Name: <u>Vehicular Security Center at World Trade Center</u> Principal Investigator: <u>Warren Riess and Carrie Atkins Fulton</u> Affiliation: <u>AKRF, Inc. and Pemaquid Art &amp; Science</u> Address of Site: <u>Liberty, Cedar, Washington, and West Streets, Ne</u>	
Block and Lot: Block 56, Lot 15       GPS Coordinates: 74°0'49.243         Client: LMDC_Name of Feature: Adrian	
Artifact Name: <u>Fv Hvvks</u> Artifact Material: <u>Condition:</u>	
Location: U U D D (sided)	$\frac{5 \frac{1}{2}}{\text{(molded)}}$
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Vehicular Security Center at	World Trade Center: Vessel	Inventory Form
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	Vehicular Security Center at World Trade Center: Vessel Inventory Form
	Site Number:A06101.018000Date:7 / 272010OPRHP Project Review Number:05PR04753Site Name:Vehicular Security Center at World Trade CenterPrincipal Investigator:Warren Riess and Carrie Atkins FultonAffiliation:AKRF, Inc. and Pemaquid Art & ScienceAddress of Site:Liberty, Cedar, Washington, and West Streets, New York, NYBlock and Lot:Block 56, Lot 15GPS Coordinates:74°0'49.248"W 40°42'37.27"N
	Client: LMDC_Name of Feature: Adrian       Artifact Name: FN-16-1         Artifact Name: FV-16-1       Material: Condition:         Material: W00 Condition:       Condition:         Location: $5^{1}4^{11}$ W $5^{11}$ D (molded)
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Site Number: <u>A06101.018000</u> OPRHP Project Review Number: <u>05PR04753</u> Site Name: <u>Vehicular Security Center at World Trade Center</u> Principal Investigator: <u>Warren Riess and Carrie Atkins Fulton</u> Affiliation: <u>AKRF, Inc. and Pemaquid Art &amp; Science</u> Address of Site: <u>Liberty, Cedar, Washington, and West Streets, Ne</u> Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>74°0'49.24</u> Client: LMDC Name of Feature: <u>Adrian</u>		ñ
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u> Artifact Name: <u>fulfulus</u> Artifact Material: <u>wow</u> Condition: <u>ful</u> Location: <u>NOVE</u> Dimensions: L <u>17547</u> W <u>411</u> D (sided)	t Number $FN 15 - 5$ $4^{11}$ (molded)	- 30 •
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Site Number: <u>A06101.018000</u> OPRHP Project Review Number: <u>05PR04753</u> Site Name: <u>Vehicular Security Center at World Trade Ce</u> Principal Investigator: <u>Warren Riess and Carrie Atkins Fr</u> Affiliation: <u>AKRF, Inc. and Pemaquid Art &amp; Science</u> Address of Site: <u>Liberty, Cedar, Washington, and West S</u> Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>7</u>	<u>ulton</u> <u>treets, New York, NY</u> 4°0'49.248"W 40°42'37.27"N
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u> Artifact Name: <u>fulfulus</u> Material: <u>Condition:</u> Location: <u>south repusited spector</u> Dimensions: L <u>3'10'</u> W (sided)	Artifact Number: $\underline{FS}$ $\underline{15-2}$ D $\underline{5^{11}}$ (molded)
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Site Nun	nber: <u>A06101.018000</u>				Date: 7/2	7/2010	
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	I Investigator: Warren F				X		
	on: AKRF, Inc. and Pen						
	of Site: Liberty, Cedar,			treets. No	ew York, NY		
	d Lot: Block 56, Lot 15					27"N	~
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	Site Number: A06101.018000 Date: 7 27/20	10
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	Site Name: Vehicular Security Center at World Trade Center	
	Principal Investigator: Warren Riess and Carrie Atkins Fulton	12.0
	Affiliation: AKRF, Inc. and Pemaquid Art & Science	
	Address of Site: <u>Liberty, Cedar, Washington, and West Streets, New York, NY</u> Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: 74°0'49.248"W 40°42'37.27"N	
	Client: <u>LMDC</u> Name of Feature: <u>Adrian</u>	-2
	Artifact Name: <u>FN-1</u> Material: <u>W66</u> Condition: <u>Artifact Number</u> : <u>FN-1</u>	2_2
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OPRHP Project Review Number: Site Name: <u>Vehicular Security Ce</u> Principal Investigator: <u>Warren Rie</u> Affiliation: <u>AKRF</u> , Inc. and Pema Address of Site: <u>Liberty</u> , <u>Cedar</u> , <u>W</u> Block and Lot: <u>Block 56</u> , <u>Lot 15</u>	nter at ss and quid Ar /ashing GPS	World Trade Co Carrie Atkins F rt & Science ton, and West S Coordinates: 7	<u>Fulton</u> Streets, N		12 -71 -7
Client: <u>LMDC</u> Name of Feature Artifact Name:			Artifa	act Number: FN	20-0
Artifact Name: C	Conditio	on:			
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Dimensions: L 139 "	_ W	53/4"	D	6/4"	
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Site Name: Vehici					× .	
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Affiliation: AKRF					T T 1 NTY	
Address of Site: L					-	
Block and Lot: Block	OCK 50, LOT 15	GPS C	oordinates: //	4°0'49.2	248"W 40°42'37.27"N	
Client: <u>LMDC</u> 1						
Artifact Name:				Artifa	act Number: <u>FN 19</u> -	3
Material:	Co	ndition				
Location:					(molded)	
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			(sided)		(molded)	
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	tor: Warren Riess an		Fulton		
	Inc. and Pemaquid				
	berty, Cedar, Washin				
Block and Lot: <u>Blo</u>	ck 56, Lot 15 GI	PS Coordinates:	74°0'49.248	"W 40°42'37.27"	<u>'N</u>
Client: LMDC N	lame of Feature: <u>Adr</u>	ian			
Artifact Name:			Artifact	Number: FS/F	N 18-0
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Site Number: <u>A06101.018000</u>	0.500.045			Date: 7/27	<u>+/2010</u>	
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Address of Site: Liberty, Cedar, V Block and Lot: Block 56, Lot 15	Vashingto	on, and West St			<u>7"N</u>	
Client: <u>LMDC</u> Name of Featur Artifact Name: Material:	0 1'4'		_ Artifa	ct Number: <u>FN</u>	FS 17-0	
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ite Number: A06101.018000	Date: $7 / 27/2010$
PRHP Project Review Number: 05PR04	
ite Name: Vehicular Security Center at V	
rincipal Investigator: Warren Riess and G	Carrie Atkins Fulton
ffiliation: AKRF, Inc. and Pemaquid Ar	
ddress of Site: Liberty, Cedar, Washing	
lock and Lot: <u>Block 56, Lot 15</u> GPS	Coordinates: 74°0'49.248"W 40°42'37.27"N
lient: <u>LMDC</u> Name of Feature: <u>Adrian</u>	in
rtifact Name:	Artifact Number: FN/FS 16-0
Interial: Condition	Artifact Number: <u>FN/FS 16-0</u>
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Site Name: Vehi						
Principal Investi				fulton	0	
Affiliation: <u>AKR</u> Address of Site:				Straata N	ow Vork NV	
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Site Number: <u>A06101.018000</u> OPRHP Project Review Number Site Name: <u>Vehicular Security C</u> Principal Investigator: <u>Warren R</u> Affiliation: <u>AKRF, Inc. and Pen</u> Address of Site: <u>Liberty, Cedar</u> , Block and Lot: <u>Block 56, Lot 15</u>	Center at V liess and C haquid Art Washingt	Vorld Trade C Carrie Atkins H & Science on, and West	Fulton Streets, N		<u>10</u>
Client: <u>LMDC</u> Name of Feature Artifact Name: Material:			Artifa	act Number: FN 21-	<u>)                                    </u>
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Site Number: <u>A06101.01800</u> OPRHP Project Review Num Site Name: <u>Vehicular Security</u> Principal Investigator: <u>Warrer</u> Affiliation: <u>AKRF</u> , Inc. and P Address of Site: <u>Liberty, Ceda</u> Block and Lot: <u>Block 56, Lot</u>	ber: <u>05PR04</u> y Center at V n Riess and ( emaquid Ar ar, Washingt	World Trade Cer Carrie Atkins Fu t & Science ton, and West St	<u>ilton</u> treets, No	Date: <u>7 / 27 /2</u> ew York, NY 8"W 40°42'37.27"	
Client: <u>LMDC</u> Name of Fea Artifact Name:	ature: <u>Adria</u>	<u>n</u>	Artifac	et Number: <u>FN</u>	22-3
Material: Location: Dimensions: L <u>(</u> \'	W	4.5 <sup>*</sup>	_ D	4.5° (molded)	
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Site Number: <u>A06101.018000</u>			Date: <u> </u>	<u>.0</u>
OPRHP Project Review Number: 05PR				
Site Name: Vehicular Security Center a				
Principal Investigator: <u>Warren Riess an</u> Affiliation: <u>AKRF, Inc. and Pemaquid</u>		Fulton		2
Address of Site: Liberty, Cedar, Washing		Streeta N	low Vork NV	
Block and Lot: <u>Block 56, Lot 15</u> GI				
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Client: <u>LMDC</u> Name of Feature: <u>Adv</u>		A		
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Vehicular Security Center at World Trade Center:	<b>Vessel Inventory Form</b>	ι
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Site Number: A06101.018000	Date: 7 /27/2010
OPRHP Project Review Number: 05PR047	
Site Name: Vehicular Security Center at W	orld Trade Center
Principal Investigator: Warren Riess and Ca	
Affiliation: AKRF, Inc. and Pemaquid Art	
Address of Site: <u>Liberty, Cedar, Washingto</u>	
Block and Lot: <u>Block 56, Lot 15</u> GPS C	Coordinates: <u>74°0'49.248"W 40°42'37.27"N</u>
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u>	01 17 7
Artifact Name: Utrule	Artifact Number: $\uparrow N 11-5$
Location:	
Dimensions: L 3' '/' W	D
	Artifact Number: <u>FN 17-3</u> D (sided) (molded)
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Site Number: <u>A06101.018000</u> OPRHP Project Review Number: <u>05PR0475</u>	3 Date: 1 / 27 /2010	
Site Name: Vehicular Security Center at Wo Principal Investigator: Warren Riess and Car	rld Trade Center	e
Affiliation: <u>AKRF</u> , Inc. and Pemaquid Art & Address of Site: Liberty, Cedar, Washington	z <u>Science</u>	
Block and Lot: <u>Block 56, Lot 15</u> GPS Co		
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u> Artifact Name: <u>Future</u>	Artifact Number: FN 17-1	
Material: Condition: Condition:	gass	
Location: North side Dimensions: L5'8" W	$\frac{D}{(\text{sided})} \frac{D}{(\text{molded})}$	
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SpikesTrunnels Photographs:in situfull	Other (Describe:)	
Detailed Illustrations?		
Associated Timbers:		
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Site Name: Vehicular Security Center at World Tr	
Principal Investigator: <u>Warren Riess and Carrie At</u> Affiliation: <u>AKRF, Inc. and Pemaguid Art &amp; Scien</u>	
Address of Site: Liberty, Cedar, Washington, and	
Block and Lot: Block 56, Lot 15 GPS Coordin	
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u> Artifact Name: <u>Futfullos</u> Material: <u>Wrood</u> Condition: Location: <u>Alerta Side</u> Dimensions: L <u>32''</u> W <u>4'/2</u> (side	Artifact Number: FN 18-3
Number and type of fasteners:         Spikes       Trunnels         Photographs:       in situ         Detailed Illustrations?         Associated Timbers:	(Describe:) ls
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Sketch by:	

	Site Number: <u>A06101.018000</u>	Date: 7 / 7 7/2010	
	OPRHP Project Review Number: 05PR04753	*	
	Site Name: Vehicular Security Center at World Trade Ce	enter	
	Principal Investigator: Warren Riess and Carrie Atkins F	ulton	
	Affiliation: AKRF, Inc. and Pemaquid Art & Science		
	Address of Site: Liberty, Cedar, Washington, and West S		
	Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: 7	<u>4°0'49.248"W_40°42'37.27"N</u>	
	Client: <u>LMDC</u> Name of Feature: <u>Adrian</u>	4	
	Artifact Name: FVHvdy +6K 18	Artifact Number: 18 - 5	
	Location:		
	Dimensions: L 3'1'/ W	D	
	Material: Condition: Location: Dimensions: L 3'   ½" W (sided)	(molded)	
		· · · ·	80
	Number and type of fasteners:         Spikes       Trunnels         Other (Desc	vrihe )	
	Photographs: in situ full details	)	
	Detailed Illustrations?		
	Detailed Illustrations?Associated Timbers:		
	Notes		•
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	84	2 <b>2</b> 2.	
	et o		
	31,0	*D=4"	
	3'12"		
		N YU	
	N	72//)	
	14		
		A	
			£
	Scale: W?		
	Sketch by:		

Site Number: <u>A06101.018000</u>				Date: 7 / 27 /20	010
OPRHP Project Review Number:				8	
Site Name: Vehicular Security Cer					
Principal Investigator: Warren Rie			ulton		
Affiliation: AKRF, Inc. and Pemac	-		Streets Nov	Vort NV	
Address of Site: <u>Liberty, Cedar, W</u> Block and Lot: <u>Block 56, Lot 15</u>					
Client: <u>LMDC</u> Name of Feature Artifact Name: <u>FUHUCKS</u> Material: <u>North Side</u> Dimensions: L <u>5'</u> ]"	: <u>Adrian</u>	-;	_ Artifact	Number: FN 19	
Dimensions: L 5? 1"	W	 4*	D	5/2."	
	_ • • •	(sided)		(molded)	
Number and type of fasteners:         Spikes       Trunnels         Photographs:       in situ         Detailed Illustrations?       Associated Timbers:	full	Other (Desc details	ribe:	)	
Notes					
	_	FN_I	9-0	~	
£ 4' 9"	*D=	51/2		1344	
4-3 {J4"				14" 7234	
	_		18	°-0	
				-	
				*	
Scale: Not Sketch by: C. Fully					
Sketch by:					

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			Artifact Numb	or (S-1/1 -	- 1
(	Conditic	on:		or. <u>//</u>	s 8
	W		D		
		(sided)	(mol	ded)	
Trunnels in situ ns?	full	Other (Descri	be:		
		<u> </u>		)	
37'5" s-1/2		18/2"	- 5000 19141	u obder #	4
1. 15: 3/4 °		( D - 1″	Ď		
	of fasteners: Trunnels ns? s: 37_2_2''	W of fasteners: Trunnels full ns? s: 37 ' <u>5</u> ''	$W = \frac{W}{(sided)}$ of fasteners: $M = \frac{W}{(sided)}$ of fasteners: $M = \frac{W}{(sided)}$ Other (Descrifting in situ full details in situ situ full details is situ situ situ situ situ situ situ	W = D (sided) (mol fasteners: $Trunnels  Other (Describe: ] in situ  full  details ns? S:  $	$\begin{array}{c} \underline{\ } Trunnels \\ \underline{\ } other (Describe: \) \\ \underline{\ } in situ \\ \underline{\ } full \\ \underline{\ } details \\ ns? \\ \underline{\ } s: \\ \underline{\ } \\ \end{array}$

	Site Number: <u>A06101.018000</u>	47.50	Date: $\frac{7}{\sqrt{27/201}}$	<u>.0</u>
	OPRHP Project Review Number: <u>05PR04</u> Site Name: <u>Vehicular Security Center at V</u>	World Trade Center	• •	
	Principal Investigator: Warren Riess and Affiliation: AKRF, Inc. and Pemaquid An			
	Address of Site: Liberty, Cedar, Washing	ton, and West Street	s, New York, NY	
	Block and Lot: <u>Block 56, Lot 15</u> GPS Client: <u>LMDC</u> Name of Feature: <i>Adria</i>	(1)		
	Artifact Name: CEILING (NORTH UN	IICNEWN Ar	tifact Number: <u>CN-1Q</u>	1 + 9/2
	Material: Conditio		# 13/11	- 1, 1
	Location:W	D (sided)	$\frac{-Q1 - 1/4}{(\text{molded})}$	- 1-4
	Number and type of fasteners:			
	Spikes     Trunnels       Photographs:    in situ    full	Other (Describe: details	)	
2	Detailed Illustrations? Associated Timbers:			
н. Э	Notes			
	2		2	•
54	18/4	9'2"		
7	3/ 5		T 1, 3/1 1	
	<sup>34</sup> <b>Q</b> \ <u>3</u>	Q2	J 4 34 "	
-			-	
	5.			
			17	30
				8
	n		12.9.	
	Scale: Sketch by: CRESS	2		
	5. ×			
	· · · · · · · · · · · · · · · · · · ·			
		10 E		

	e:// <u>2010</u>
OPRHP Project Review Number: <u>05PR04753</u>	
Site Name: Vehicular Security Center at World Trade Center	
Principal Investigator: Warren Riess and Carrie Atkins Fulton	
Affiliation: AKRF, Inc. and Pemaquid Art & Science	1
Address of Site: Liberty, Cedar, Washington, and West Streets, New Yo	
Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>74°0'49.248"W</u>	40°42'37.27"N
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u>	
Artifact Name: Artifact Num Material: Condition:	ber: $CS - 2/1 - 5$
Material: Condition:	
Location:	
$\sim$ Dimensions: L W D	aldad)
Material: Condition: Location: D Dimensions: L W D (sided) (m	olded)
Number and type of fasteners:	
SpikesTrunnelsOther (Describe:	)
Photographs: in situ full details	
Detailed Illustrations?	
Associated Timbers:	
Notes	
Scs-2/2 1 cs: 7 5 cs. 2	1/2"
CAL-2/D TOTO TOTO	3
(cs-2/2) (cs-2/2) (cs: ) (cs- :	2/5
3 1 2/3	d
	5
es. obscured	
14: by water	
D-3/4" D-1" D-3/4"	1 12 11
D-34	174
N-5"4 W-5" W-5"	2'5"
$\omega - 4''$	0 ~
L-62"	
and the second se	
Scale:	
Scale: Sketch by: Nancy Shippen	а ) а

	Site Number: <u>A06101.018000</u>	Date: 7 127/2010
	OPRHP Project Review Number: 05PR04753	
	Site Name: Vehicular Security Center at World	
	Principal Investigator: Warren Riess and Carr	
	Affiliation: AKRF, Inc. and Pemaquid Art &	
	Address of Site: Liberty, Cedar, Washington,	
	Block and Lot: <u>Block 56, Lot 15</u> GPS Coc	ordinates: 74°0'49.248"W 40°42'37.27"N
	Client: <u>LMDC</u> Name of Feature: <u>Adrian</u>	
	Artifact Name:	Artifact Number: $\frac{CS-2/6-13}{13}$
	Material: Condition:	
	Location:	
	Dimensions: L W	D
	Material: Condition: Location: Dimensions: L W	(sided) (molded)
	Number and type of fasteners:	
		Other (Describe: )
	Spikes Trunnels ( Rhotographs: in situ full (	details
ŝ.	Detailed Illustrations?	
	Associated Timbers:	
	Notes	
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ĩ,	into water of a still	
	apax 1 6'4 5'4	
	17 1 1 10	mudt. W-3/2"
-1	L c l c	L 7" I" D
4	6 8 8	and i' a
4		74-4
1	7" Aprov	NAR Juston 774 W
	12 1	13 1 D-14"
		L-122
1	D 14 D 34	W-8"
	D'1' 1'4"	
ŝ	N 1 1 W-434	
	62	
	w2"7" "2'	4"-W
		5°-L
	Seeler # 8 1	3/4"-D
	Scale: # 8 1 - 12"	· 1
	Sketch by:	
	KILICIS	

Vehicular Security	Center at World	<b>Trade Center:</b>	<b>Vessel Inventor</b>	y Form
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Site Number: <u>A06101.0</u> OPRHP Project Review Site Name: <u>Vehicular Se</u> Principal Investigator: <u>W</u> Affiliation: <u>AKRF</u> , Inc. a Address of Site: <u>Liberty</u> , Block and Lot: <u>Block 56</u>	Number: 05PR0475 curity Center at Wor arren Riess and Car and Pemaquid Art & Cedar, Washington	Id Trade Cente rie Atkins Fulto Science and West Stree	<u>r</u> on ets, New Yorl	<u>7 1 27/2010</u> <u>c, NY</u> 0°42'37.27''N	
Client: <u>LMDC</u> Name of Artifact Name: Material: Location: Dimensions: L		·	Artifact Numb	er: <u>CS-2/14</u>	-16
Location:			÷		
Dimensions: L	W		D		
	382	(sided)	(mo	lded)	
Number and type of faste	eners:				
Spikes T	Trunnels	Other (Describe	e:	)	
Spikes T Photographs: in s	itu full	details			
Detailed Illustrations?					
Associated Timbers:					
Notes					
a -					
				×	
A A A A A A A A A A A A A A A A A A A	13'4" 1"D	ept.	20'-		
	t ),			Luctri,	
W 8"	- 13 <sup>3</sup> 4"	-1 5	J-3'4" >-1'4"	×.	,
D 3/4"					
0 1					

Scale:

Sketch by: ERESS

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Site Number: A06101.01800	00		Date: $7/27/2$	2010
OPRHP Project Review Nun		753		
Site Name: Vehicular Securi				
Principal Investigator: Warre				
Affiliation: <u>AKRF, Inc. and</u>				
Address of Site: Liberty, Cec			New York NY	
Block and Lot: Block 56, Lo				N
			,240 W 40 42 57.27 1	
Client: <u>LMDC</u> Name of F	eature: <u>Adrian</u>			10 -
Artifact Name: COLING	(NORTH) (	NKNOWN Art	ifact Number: <u>CN-</u>	421-5
Artifact Name: <u>LMDC</u> Name of Fo Artifact Name: <u>LMLING</u> Material:	Condition			
Location:			111 11	
Dimensions: L	W	D	1 - AI PI	CCS .
Location: Dimensions: L		(sided)	(molded) (	
Number and type of fastener	s:			
Spikes Trun Photographs: in situ	nels	Other (Describe:	)	
Photographs: in situ	full	details		
Detailed Illustrations?				
Associated Timbers:				
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				*
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				2
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. Q1 \ Q2	53	Q2	1 89	8
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1/ 11		31."	10	1/11
.48"	W.	34 10	10	a
			V	
			33/4" W	- E .
			319 ~	-
v				J.
CN - 2/	DI T	5.,		411
LN - al	X1-2		6	1 .0
		a	020	
Scale:			2 a	
Sketch by: $L M Z S$	>		8 L	
	· · · · ·			4L **
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				8

5

Site Numb	er: A06101.01800	0			Date: 7 / 26	/2010	
	oject Review Num		753			655	
	Vehicular Securit			enter			
	nvestigator: Warren						
	AKRF, Inc. and P						
	Site: Liberty, Ced	-		Streets, 1	New York, NY		
	Lot: Block 56, Lot					27"N	
Client: I	MDC Name of Fe	oturo: Advian					
Artifact No	<u>MDC</u> Name of Fe	ature. <u>Auriun</u>		Artif	at Number OP-	22/1	
Matorial:	ime:	Condition	· Ponette	Aitilia		20/1	
Ivialeriai.			. magne				
Dimonsion	a.I. 12.5 "	337	1 5 "	D	1/_ 4		
Dimension	S. L 1977	VV	(bebig)		(moldod)		
	s: L <u>\3,5</u> *		(sided)		(monded)		
Number an	d type of fasteners	None					
Spil	runn Trunn	els	Other (Desc	ribe:	)		
Photograph	is: in situ $_{=}$	full	details				
Detailed II	lustrations? Timbers:						
Associated	Timbers: <u>See</u>	notes					
Notes	west and float	en					
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			13.5				
	1		13.5				
	4.5"			7			
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Scale:							
UNDERG.							

Sketch by:

	Site Number: A06101.018000 Date: $7 / 27/2010$	
	OPRHP Project Review Number: 05PR04753	
	Site Name: Vehicular Security Center at World Trade Center	
	Principal Investigator: Warren Riess and Carrie Atkins Fulton	
	Affiliation: AKRF, Inc. and Pemaquid Art & Science	
2	Address of Site: Liberty, Cedar, Washington, and West Streets, New York, NY Plack and Lat: Plack 56, Lat 15, GPS Coordinator: 7480/40 248"W 40842127 27"N	
	Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>74°0'49.248"W 40°42'37.27"N</u>	
	Client: <u>LMDC</u> Name of Feature: <u>Adrian</u>	
	Artifact Name: ORLOP PLANKING Artifact Number: OP - 5/1	
	Material: SOFTWOD Condition: FRAGILE	
	Location: ORLOP DECK	
	Dimensions: L $2^{1}8''$ W $(a'2'' D ^{3}4''$	
	(sided) (molded)	
	Number and type of fasteners: None vis	
	Spikes Trunnels Other (Describe: )	
	Photographs: full details	
	Associated Timbers:	
	Notes OP 6/2 is over the W end -	
	Note Durine Soil Sampline/ Scieening	ſ
	MP noted organic material	
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	C (~ , OP)	
	6-2	
	2'8	
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	al proved	
	N-S Ortop Beam	
		_
	Scale:	
	Sketch by: M. MCD	

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Site Number: <u>A06101.018000</u> OPRHP Project Review Number: <u>05PR04753</u>	Date: 7/26/201	0
 Site Name: Vehicular Security Center at World Trade Center Principal Investigator: Warren Riess and Carrie Atkins Fulton Affiliation: AKRF, Inc. and Pemaquid Art & Science Address of Site: Liberty, Cedar, Washington, and West Streets, New Block and Lot: Block 56, Lot 15 GPS Coordinates: 74°0'49.248'		
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u> Artifact Name: <u>Artifact</u> Artifact Material: <u>Condition:</u> Location: <u>#3</u> Dimensions: L $\frac{\#1}{18''}$ $\frac{\#2}{13''}$ $\frac{\#3}{13''}$ $\frac{\#4}{24''_2}$ (sided)	Number: <u>DP - 21</u>	
Number and type of fasteners:         Spikes       Trunnels       Other (Describe:		
Notes		150
	14 ×	
11 Q <sup>4</sup> /		ē.
1/14 2" IT13" 14"		
13-13/1 24.5"		
LUL NA	84	
Scale: Sketch by R Ritss		

Vehicular Security Center at World Trade Center: Vessel Inventory Form Date: 7 / 26 /2010 • Site Number: <u>A06101.018000</u> OPRHP Project Review Number: 05PR04753 Site Name: Vehicular Security Center at World Trade Center Principal Investigator: Warren Riess and Carrie Atkins Fulton Affiliation: AKRF, Inc. and Pemaguid Art & Science Address of Site: Liberty, Cedar, Washington, and West Streets, New York, NY GPS Coordinates: 74°0'49.248"W 40°42'37.27"N Block and Lot: Block 56, Lot 15 Client: LMDC Name of Feature: Adrian \_\_\_\_ Artifact Number:  $\frac{OD}{20/2} + \frac{OD}{20/2}$ Artifact Name: Orlop deck plank Material: Soft wood Condition: Door Location: Orlop deck, south side D Dimensions: L\_ cie below W -(molded) ---(sided) Number and type of fasteners: None seen Spikes \_\_\_\_\_ Trunnels Other (Describe: Photographs: full details ∠in situ Detailed Illustrations? Associated Timbers: AOB 2/2 + OOB 2/3May have shipped OD 16 thru OD/19 baca Notes =12.25" 1/2 in thiss 20.0 755€ Scale: C Riess Sketch by

Ċ.

Site Number: <u>A06101.018000</u>	Date: / /2010
OPRHP Project Review Number: 05PR04753	
Site Name: <u>Vehicular Security Center at World Trade Center</u> Principal Investigator: <u>Warren Riess and Carrie Atkins Fulton</u>	
Affiliation: <u>AKRF, Inc. and Pemaquid Art &amp; Science</u>	
Address of Site: Liberty, Cedar, Washington, and West Streets, N	ew York, NY
Block and Lot: Block 56, Lot 15 GPS Coordinates: 74°0'49.24	<u>18"W 40°42'37.27"N</u>
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u>	
Artifact Name: ORLOP PLANKS Artifact	et Number: $Q - 2 \& Q - 3$
Artifact Name: <u>ORLOP PLANKS</u> Artifact Material: <u>Softwood</u> Condition: <u>Fragile</u>	
Dimensions: L $L'2''$ $\star'9'' \gg C'' 2-2/2'' D$	3411
Material: <u>Sectore</u> Location: <u>UPLOP</u> DECK Dimensions: L <u><math>J'2''</math></u> , $f'9'' \gg $ <u><math>5''</math></u> , $2-2/2''$ D (sided)	(molded)
Number and type of fasteners: Non<	
SpikesTrunnelsOther (Describe:	)
Photographs: in situ full details	
Detailed Illustrations? Associated Timbers:	
and the second se	K + C II
Notes Appear to be dislocated.	adage in the
$\gtrsim$	19
4-3	
T 5" 7	
1'2'	
m	
Q-" 2"-2"/2"	
(0e.10) af2	
. (04	
beat and	5 8
21"(1'9")	
Scale:	
Sketch by:	14
	2

Site Number: <u>A06101.018000</u> OPRHP Project Review Number: <u>05PR04753</u> Site Name: <u>Vehicular Security Center at World Trade Center</u> Principal Investigator: <u>Warren Riess and Carrie Atkins Fulton</u> Affiliation: <u>AKRF, Inc. and Pemaquid Art &amp; Science</u> Address of Site: <u>Liberty, Cedar, Washington, and West Streets, N</u> Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>74°0'49.2</u>	
Material: <u>Softward</u> Condition: <u>FRAGILÉ</u> Location: <u>ORLOP DECK</u> Dimensions: L <u>14/2"</u> , <u>1'</u> W <u>5''</u> <u>1,5"</u> D (sided)	
Number and type of fasteners:       None	Poss. Nailhole
1'41'2' OP-4/2 OP-4/1 Pors Former torner hole? 5'' 55'	

#### Scale:

Sketch by:

Site Number: <u>A06101.018000</u> OPRHP Project Review Number: <u>05PR04753</u> Site Name: <u>Vehicular Security Center at World Trade Center</u> Principal Investigator: <u>Warren Riess and Carrie Atkins Fulton</u> Affiliation: <u>AKRF, Inc. and Pemaquid Art &amp; Science</u> Address of Site: <u>Liberty, Cedar, Washington, and West Streets, N</u> Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>74°0'49.2</u>	
Material: <u>Softward</u> Condition: <u>FRAGILÉ</u> Location: <u>ORLOP DECK</u> Dimensions: L <u>14/2"</u> , <u>1'</u> W <u>5''</u> <u>1,5"</u> D (sided)	
Number and type of fasteners:       None	Poss. Nailhole
1'41'2' OP-4/2 OP-4/1 Pors Former torner hole? 5'' 55'	

#### Scale:

Sketch by:

Site Number: A06101.018000	Date: 7 / 26 /2010
OPRHP Project Review Number: 05PR04753	
Site Name: Vehicular Security Center at World Trade Center	
Principal Investigator: Warren Riess and Carrie Atkins Fulton	à.
• Affiliation: AKRF, Inc. and Pemaquid Art & Science	
Address of Site: Liberty, Cedar, Washington, and West Streets.	New Vork NV
Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>74°0'49</u>	
Block and Lot. <u>Block 30, Lot 15</u> OF 5 Cooldinates. <u>74 045</u>	.240 W 40 42 57.27 IV
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u>	
Artifact Name: Orug PLANKS Arti	fact Number: <u>OP - II</u>
Material: Sorwood Condition: FRAGILE	
Location: Office Deck 4"	x 11
Dimensions: L $3'$ W $4''$ D	
(sided)	(molded)
Number and time of factorized	
Number and type of fasteners:	
<u>1-2</u> Spikes Trunnels Other (Describe:	)
Photographs: in situ full details	
Detailed Illustrations?	ULLOP IL/I
Associated limbers: botween Q-L, Q-D, Dr-	14 a OF- 4/1
Associated Timbers: botween Q-2, Q-3, OP- Notes Jadonally oriented plank	from or lop Leck
	2
4 "D	1
Mut	
N. 1. 1	
$\langle + + \rangle \langle $	A
hold.	
2'1" A HAI War?	s. Al 12 - 2
311 10+	
- nail	
<b>Dol</b>	
· V	
Scale:	
Sketch by:	

Date: 7 / R6/2010 Site Number: A06101.018000 **OPRHP** Project Review Number: 05PR04753 Site Name: Vehicular Security Center at World Trade Center Principal Investigator: Warren Riess and Carrie Atkins Fulton Affiliation: AKRF, Inc. and Pemaguid Art & Science Address of Site: Liberty, Cedar, Washington, and West Streets, New York, NY Block and Lot: Block 56, Lot 15 GPS Coordinates: 74°0'49.248"W 40°42'37.27"N Client: <u>LMDC</u> Name of Feature: <u>Adrian</u> Location: DRUP Dimensions: L 2'1'', 2'7'' W 6'' b''' D 3/4'' (sided) (molded) Number and type of fasteners: 2 Spikes \_\_\_\_\_ Trunnels Other (Describe: Photographs: v in situ v full details Detailed Illustrations? N Associated Timbers: Notes OP 312 -BEND IN WOOD 0P-3/2 Scale: L, KIESS Sketch by: measurements added by MMCD

1

	Site Number: <u>A06101.018000</u> Date: <u>7 / 27/2010</u>
	OPRHP Project Review Number: 05PR04753
	Site Name: Vehicular Security Center at World Trade Center Principal Investigator: Warran Biasa and Carria Atking Fultan
	Principal Investigator: <u>Warren Riess and Carrie Atkins Fulton</u> Affiliation: <u>AKRF, Inc. and Pemaquid Art &amp; Science</u>
	Address of Site: Liberty, Cedar, Washington, and West Streets, New York, NY
	Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>74°0'49.248"W 40°42'37.27"N</u>
	Client: <u>LMDC</u> Name of Feature: <u>Adrian</u> Artifact Name: <u>ORLOP PLANKS</u> Artifact Number: <u>OP-10</u>
	Material:     Set The op     Condition:     Fragile       Location:     ORLO (       Dimensions:     L     25-27     W     6"     D     3/4"       (sided)     (molded)
**	Location: ORLOP
	Dimensions: L $25-27$ W $6''$ D $3/4''$
	(sided) (molded)
	Number and type of fasteners: None Vis
	Spikes Trunnels Other (Describe: )
2	Photographs: in situ full details
	Detailed Illustrations? N
	Associated Timbers:
B	
	Notes
	6" _OP-10
	24
	1 27-25'
	DR-FLA
	ORIOF
	Scale:
	Sketch by:

Site Number: <u>A06101.018000</u>	Date: 7 126 12010
OPRHP Project Review Number: <u>05PR04753</u> Site Name: <u>Vehicular Security Center at World Trade</u>	Center
Principal Investigator: Warren Riess and Carrie Atkins	
Affiliation: <u>AKRF</u> , Inc. and Pemaquid Art & Science Address of Site: <u>Liberty</u> , Cedar, Washington, and Wes	t Streets, New York, NY
Block and Lot: Block 56, Lot 15 GPS Coordinates	
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u>	Artifact Number:OP -9/1
Material: Softwood Condition: FRAG	SILE
Location: <u>ORLOP DECK - FAR South</u> Dimensions: L $153/4$ "- $33/4$ "W $0.5$ " (sided)	
Dimensions. $L = 1 > 74$ $(sided)$ (sided)	(molded)
Number and type of fasteners: $(1-2)$	1
I-2       Spikes       Trunnels       Other (Dependencies)         Photographs:       Image: Image	
	plank South, OP 8/2 is imm North of it
Notes	plaine control .
1	1 cm
Nail	*
Poss	
AT Det Neil	Plots
1 13/4" OP 8-2	231/4
S. erver ORLOP PURMES OP-9/1	27-1
OFLAND	
151/4 10.5"	
1 and a	
7	
pors intentionally	
Scale:	Y
Sketch by: appears	to have
split	ered

Site Number: <u>A06101.018000</u> OPRHP Project Review Number: <u>05PR04753</u> Site Name: <u>Vehicular Security Center at World Trad</u>	Date: 7 / 26 /2010 e Center
Principal Investigator: <u>Warren Riess and Carrie Atki</u> Affiliation: <u>AKRF, Inc. and Pemaquid Art &amp; Science</u> Address of Site: <u>Liberty, Cedar, Washington, and Wa</u> Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinate	ns Fulton 2 est Streets, New York, NY
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u> Artifact Name: <u>ORLOP DECLE BEAM end</u> Material: <u>Condition:</u> Location: <u>Condition:</u> Dimensions: L <u>31" - 073D</u> W <u>ODB - 6"</u> (sided)	Artifact Number: $ODB - 3/1 + 2$ OP 23/1 - 4 D ODB - 2'4'' (molded)
Number and type of fasteners:	
Notes	
31″	
6"] 3/1 23/1 23/1 23	3/2 - 6BD 3/1+3/2 + 0P 23/3
20.75	6P23/3 6.25 length 2.5 w.
13"	tt 0 p 23/4 - 8,25 /eight 3.0 width is depth 0 p 23/1+2 1" depth
Scale: Sketch by: <u>F</u> RESS	
	1941 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 19

venicular Security Center at world I rade Center: vessel inventory form	
Site Number: <u>A06101.018000</u> OPRHP Project Review Number: <u>05PR04753</u> Site Name: <u>Vehicular Security Center at World Trade Center</u> Principal Investigator: <u>Warren Riess and Carrie Atkins Fulton</u> Affiliation: <u>AKRF, Inc. and Pemaquid Art &amp; Science</u> Address of Site: <u>Liberty, Cedar, Washington, and West Streets, New York, NY</u> Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>74°0'49.248"W 40°42'37.27"N</u>	
Client:       LMDC_Name of Feature:       Adrian         Artifact Name:	
Number and type of fasteners:  SpikesTrunnelsOther (Describe:)   Photographs:in situfulldetails   Detailed Illustrations?   Associated Timbers:	ж Ф
$\frac{55''}{11}$	
Scale: Sketch by:	

\* 7

Block and Lot: <u>Block 56, Lot 15</u> Client: <u>LMDC</u> Name of Feature Artifact Name:	enter at World Trade Center ess and Carrie Atkins Fulton aquid Art & Science Vashington, and West Streets, New York, NY GPS Coordinates: 74°0'49.248"W 40°42'37.27"N
	(sided) (molded)
Number and type of fasteners:        Spikes      Trunnels         Photographs:      in situ	Other (Describe:) full details
Detailed Illustrations?	
	(egt 6/4 - 7.35 6/5 - 9.5 6/3 - 15 6/2 - 25.25
	6/5 - 9.5
	6/3 - 15
	ES 6/2 - 23.23
u t	45 37
13 6/2	
E I	- 25.25 6/2 length
6/1	
	)
	1
3	0.75 "
Scale:	
Sketch by: KRICSS	

Vehicular Security Center at World Trade Center: Vessel Inventory Form

Date: 7 / 26 /2010 Site Number: A06101.018000 **OPRHP** Project Review Number: 05PR04753 Site Name: Vehicular Security Center at World Trade Center Principal Investigator: Warren Riess and Carrie Atkins Fulton Affiliation: AKRF, Inc. and Pemaquid Art & Science Address of Site: Liberty, Cedar, Washington, and West Streets, New York, NY Block and Lot: Block 56, Lot 15 GPS Coordinates: 74°0'49.248"W 40°42'37.27"N Client: <u>LMDC</u> Name of Feature: Adrian Artifact Name: ORWCK DECK BEAM # 2 Artifact Number: ODB 2/1, 2/2, 2/3, 2/4 Material: HARDWOOD ? Condition: FRAGILE (sided) D 2/1: 1" - Tapers in depth @ (sided) (moldad) Location: <u>OFLock DECK (W OF ODB 1)</u> ODB Dimensions: L W OF ODB 1) D 241: Dimensions: L 000 (molded) 2/2. 124" depth 000B 2/3. 2" ODB Number and type of fasteners: 13/4" 12 Spikes Trunnels \_\_\_\_Other (Describe:\_\_\_\_ Photographs: in situ full details 100 Detailed Illustrations? Associated Timbers: CODB 1/1-4 & ODB 3 Notes 00B 2/4 63/4" ODB 2/2 ODB 2/3 83/4 331/2" vails/ Nail holes yearled metal Scale: M.MC Sketch by:

Site Number: <u>A06101.018000</u>	Date: 7 1 26/2010
OPRHP Project Review Number: 05PR04	
Site Name: <u>Vehicular Security Center at W</u> Principal Investigator: <u>Warren Riess and C</u>	
Affiliation: AKRF, Inc. and Pemaquid Art	
Address of Site: Liberty, Cedar, Washingto	
	Coordinates: 74°0'49.248"W 40°42'37.27"N
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u>	
Artifact Name: ORLOP DECK BEAM	Artifact Number: $0DB - /1 - 4$
Matarial	
Dimensions: L <u>See Anwys</u> W	
Dimensions: L <u>See Anwys</u> W	$5 \cdot 25$ D $\underline{5}$
0	(sided) (molded)
Number and type of fasteners:	
Spikes Trunnels Photographs: in situ full	Other (Describe:)
Detailed Illustrations?	
Associated Timbers:	
Notes	
Notes	· · · · · · · · · · · · · · · · · · ·
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030-11	12 ODB-2 13 12014"
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	, '4' 1 22'4"
43 3/4 2	141 2214
10 14	N 1
	4 511
	-1.3
1 · · · · · · · · · · · · · · · · · · ·	i von ilu
13 3/4" long damaged piece	5.25 DBD-1/4
10 T long d'amageor piere	
Scale:	DISTANCE DE NOP!
Sketch by:	DISTANCE BET. OBB!
	2014" 00DBA

Site Name: <u>Vehicular S</u> Principal Investigator: <u>Affiliation: AKRF, Inc.</u> Address of Site: <u>Liberty</u> Block and Lot: <u>Block 5</u>	Warren Riess and and Pemaquid A y, Cedar, Washin 6, Lot 15 GP	Carrie Atkins I Art & Science gton, and West S Coordinates:	Fulton Streets, Ne		<u>""N</u>
Client: <u>LMDC</u> Name Artifact Name: <u>Material</u> :	cor Feature: <u>Aari</u>	an	Artifac	t Number: 0p	-7/1
Dimensions: $L_{2}$	Conditi	(sided)	D	$\frac{3/4}{4}$ (molded)	
Number and type of fas	teners: Trunnels situ full	Other (Des details	cribe:	)	
	51			×.	
	674 08-7/11	21	.2.		

Site Number: <u>A06101.018000</u>	Date: $\frac{7}{126}/2010$					
OPRHP Project Review Number: 05PR04753						
	Site Name: Vehicular Security Center at World Trade Center					
Principal Investigator: Warren Riess and Carrie Atkins I	Fulton					
Affiliation: AKRF, Inc. and Pemaquid Art & Science						
Address of Site: Liberty, Cedar, Washington, and West						
Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates:	74°0'49.248"W 40°42'37.27"N					
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u>	2					
	Artifact Number: $OP - 81/1, 2+3$					
Artifact Name: Condition:						
Location: W	1 /1					
Dimensions: L W 12''	D					
(sided)	(molded)					
Number and type of fasteners:						
Spikes TrunnelsOther (Des	cribe: )					
Photographs: in situ full details						
Detailed Illustrations?						
Associated Timbers:						
Notes concretion in sta	2 mid - width					
	2					
MA	indussible at top					
IT Jupen d	ligside with					
	Vran					
-t m	÷					
11 0-						
1/2 01 01	concretion					
272 82 40						
. 51    -1    10						
I LA P T						
8 3 NOP 15"						
10'	34: 					
long						
Scale:						
Sketch by: $PRIES$						

Site Name: <u>Vehic</u> Principal Investig Affiliation: <u>AKR</u> Address of Site:	06101.018000 Review Number: <u>(</u> cular Security Cer gator: <u>Warren Rie</u> F, Inc. and Pemac Liberty, Cedar, W Block 56, Lot 15	nter at Wo ss and Ca quid Art & ashingtor	orld Trade Cer rrie Atkins Fu & Science 1, and West St	<u>llton</u> reets, N	Date: <u>712</u> (ew York, NY 48"W 40°42'37	
Artifact Name:	Name of Feature			Artifa	ct Number: 6	2-13
Dimensions: L	C	_W<	(sided)	_ D	14 (molded)	
Number and type Spikes Photographs: Detailed Illustrat	e of fasteners: Trunnels in situ ions? ers:	full	_Other (Descr _ details	ibe:	)	
					÷	
C.W. Polul off	1- ten	UN)	2 with 2			
		in the second se				
	019-13	14		-		81
	5 5/8"					
Scale: Sketch by:				_		

Site Number: <u>A06101.018000</u>	Date: 1/2/2010						
OPRHP Project Review Number: 05PR04753							
Site Name: <u>Vehicular Security Center at World Trade Ce</u> Principal Investigator: Warren Riess and Carrie Atkins F							
Principal Investigator: <u>Warren Riess and Carrie Atkins Fulton</u> Affiliation: <u>AKRF</u> , Inc. and <u>Pemaquid Art &amp; Science</u>							
Address of Site: Liberty, Cedar, Washington, and West S							
Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: 7	'4°0'49.248"W 40°42'37.27"N						
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u>							
Artifact Name: Condition:	_ Artifact Number: $0P - 17$						
Material: Condition:							
Dimensions: L $14$ $14$ W $6^{31}4$	$D = \frac{3}{4}$						
Material:Condition: Location: Dimensions: L $14 \frac{14}{4} W = \frac{34}{(sided)}$	(molded)						
Number and type of fasteners:							
Spikes Trunnels Other (Desc Photographs: in situ full details	cribe:)						
Photographs: in situ full details	5						
Detailed Illustrations?Associated Timbers:							
Notes Top Top Top Top Top							
	1 N						
9							
ION TOP TAP	EKS IN DEPTH						
0	11 59 F						
AL AL							
14.9							
() p-14 ()							
DI	2						
1							
ol in the	4						
- AD -NALL HOLD	-						
63/1	¥						
Scale:							

Site Number: <u>A06101.018000</u> OPRHP Project Review Number: <u>05PR04753</u> Site Name: <u>Vehicular Security Center at World Trade Cer</u> Principal Investigator: <u>Warren Riess and Carrie Atkins Fu</u> Affiliation: <u>AKRF, Inc. and Pemaquid Art &amp; Science</u> Address of Site: <u>Liberty, Cedar, Washington, and West St</u> Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>74</u>	ilton treets, New York, NY
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u> Artifact Name: <u>ORLOP</u> Material: <u>Condition:</u> Location: <u>Unexpected and Sectors</u> W <u>8.5"</u> /b <sup>''</sup> , /0 <sup>''</sup> W'' (sided)	
Number and type of fasteners: Spikes Trunnels Other (Descr Photographs: in situ full details Detailed Illustrations? Associated Timbers: OP 13 14 J 15	tibe:)
Notes	
0P-12/2 10-KNOT 6.5" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4" 10'4"	0P-12 + 19/2
L LA LIRON CONCILE 8.5"	
Scale: Sketch by: KALZB	

Site Name: <u>Vehicula</u> Principal Investigato Affiliation: <u>AKRF, 1</u> Address of Site: <u>Lib</u>	01.018000_ iew Number: 05PR04753_ ar Security Center at World Trade Cor: Warren Riess and Carrie Atkins I fnc. and Pemaquid Art & Science erty, Cedar, Washington, and West k 56, Lot 15 GPS Coordinates:	Fulton Streets, New York, NY
Artifact Name:	The of Feature: <u>Adrian</u> Condition: $\frac{7}{4}, \frac{9}{2}, \frac{1}{2}, \frac{9}{2}, \frac{1}{2}, \frac{9}{2}, \frac{1}{2}, \frac{1}{2},$	Artifact Number: $\frac{DP - 15}{D}$
Number and type of Spikes Photographs: Detailed Illustrations	(sided) fasteners: TrunnelsOther (Des in situfulldetails s?	cribe:)
	- 21 11	
Lung Nail	5/18" TOP TA UNSO	pers the
Scale: Sketch by:	RIESS	

	Site Number: <u>A06101.018000</u> Date: <u>7/26/2010</u>	
	OPRHP Project Review Number: <u>05PR04753</u> Site Name: Vehicular Security Center at World Trade Center	
	Principal Investigator: Warren Riess and Carrie Atkins Fulton	
	Affiliation: <u>AKRF, Inc. and Pemaquid Art &amp; Science</u> Address of Site: Liberty, Cedar, Washington, and West Streets, New York, NY	
	Block and Lot: Block 56, Lot 15 GPS Coordinates: $74^{\circ}0'49.248"W 40^{\circ}42'37.27"N$	
	Client: <u>LMDC</u> Name of Feature: <u>Adrian</u> Artifact Name: <u>OVTOR PLANKING</u> (Feil OFF N. <sup>57</sup> Artifact Number: <u>OPN - /</u>	
	Artifact Name: <u>OPN _ / ANKING (Fell SFF N.<sup>3</sup></u> Artifact Number: <u>OPN _ /</u> Material: Condition:	
	Dimensions: L $97''$ W $\underline{Gee} dew D = \frac{3/4''}{(sided)}$ (molded)	
	Number and type of fasteners:Other (Describe: IRON NAIL) /+OLESSpikesTrunnels	
άr.	Photographs: in situ full details	
7	Detailed Illustrations?Associated Timbers:	
» ]] н	Associated Timbers: Notes _ 3 NAIL HOLES & concretions on flip side	
ſ	OUTER PLANKING PIECE OFF NORTH S. DE - Fell off	
	Nai hales	
1	Nai	
1 .		
	16 91/211 0	
18	12 35"	
6		11
		5
	2'2''w	
	Nail holes	
1.1		
- · [		
	Scale: Sketch by: Kiess	÷.
•		

Site Number: <u>A06101.018000</u>	Date: 7 / 26 / 2010
OPRHP Project Review Number: 05PR04753	<u></u>
Site Name: Vehicular Security Center at World Trade Center	
Principal Investigator: Warren Riess and Carrie Atkins Fulton	
Affiliation: AKRF, Inc. and Pemaquid Art & Science	
Address of Site: Liberty, Cedar, Washington, and West Streets, N	
Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>74°0'49.24</u>	<u>48"W 40°42'37.27"N</u>
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u>	
Artifact Name: OUT Artifact Material: Condition: Artifact	ct Number: $OUT = 1$
Material: Condition:	
Location: in SOUTH FILL	211
Material:          Location:          Dimensions:       L         2       6         W       See         (sided)	3
(sided)()	(molded)
Number and type of fasteners:	
SpikesTrunnelsOther (Describe:	$\sqrt{7}$
Photographs: in situ full details	
Detailed Illustrations?	
Associated Timbers:	
Notes	
	×
VERY WORN away	· · · ·
VER WORLD award	
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7-15- 8.10	/
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	-
2' 6''	
26	
on other side l'possible	
tool murk	
	N IN SOUTH FILL
Scale:	
Sketch by: KRiess	

Site Number: A06101.018000	Date: 7/26/2010
OPRHP Project Review Number: 05PR04753	
Site Name: Vehicular Security Center at World Trade Center	
Principal Investigator: Warren Riess and Carrie Atkins Fultor	1
Affiliation: AKRF, Inc. and Pemaquid Art & Science	
Address of Site: Liberty, Cedar, Washington, and West Street	
Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>74°0'4</u>	19.248"W 40°42'37.27"N
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u>	
Artifact Name: Q - 1/1 Part of Cask A	rtifact Number: $Q - V_{I}$
Material: Wood (& Meta) Condition: Fair	
Logation: Orlop Acck	
	) <u> </u>
(sided)	(molded)
Number and type of fasteners: NIAC VIS	
SpikesTrunnelsOther (Describe:	)
Photographs: in situ full details	
Detailed Illustrations? No	
Associated Timbers: Q - 1/2 & Q/2	
Notes Plank integral to metal apparently part of a cask	piece -
apparently part of a cask	
$\frac{1}{1} - \frac{1}{1} - \frac{1}$	
are	
R-7	
( Metar )	
(a-1/3 / ) /	
Lus	R
<u>ل</u> ــــرا	
Scale:	
Sketch by:	

Site Number: <u>A06101.018000</u>				Date: 7/26	/2010
<b>OPRHP</b> Project Review Number					π.
Site Name: Vehicular Security (					
Principal Investigator: Warren R			Fulton		
Affiliation: AKRF, Inc. and Pen			Streets No	w Vork NV	۵.
Address of Site: <u>Liberty, Cedar</u> , Block and Lot: Block 56, Lot 15				<u>8"W 40°42'37.27</u>	7"N
	2		/+ 0+9.2+	<u>5 W 40 42 57.2</u>	
Client: <u>LMDC</u> Name of Feature	are: <u>Adria</u>	<u>n</u>	A 110		
Artifact Name: CASK	Mondition	n: Poor/	Artifac	t Number: <u>Q</u> -	/ 5
Material: Wood (a Metal Location: Orbe Deck	gonanio		-asi		
Dimensions: L		2."	D	1 "	
		(sided)		(molded)	
Number and type of fasteners:	None	NS			
Spikes Trunnels		Other (De	scribe:	)	
Photographs: vin situ	full	details			
Detailed Illustrations? No					
Associated Timbers: <u>Q</u> -	1/1 &	QYZ			
Notes Suc Q-1/		~~ =			
Ng ·				).	
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Sec Q - 1/1	2				
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a.					
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Scale:					
Sketch by:				-	

Site Number: <u>A06101.018000</u>		Date: 7 / 26 /2010	
OPRHP Project Review Number: Site Name: <u>Vehicular Security Ce</u> Principal Investigator: <u>Warren Rie</u> Affiliation: <u>AKRF</u> , Inc. and Pema Address of Site: <u>Liberty</u> , <u>Cedar</u> , W Block and Lot: <u>Block 56</u> , Lot 15	nter at World Trade Center ess and Carrie Atkins Fulton quid Art & Science Vashington, and West Streets, 1		
Client: <u>LMDC</u> Name of Feature Artifact Name: <u>Cask</u> Material: <u>Wood (&amp; Metal</u> C Location: <u>Orlog Deck</u> Dimensións: L <u>20</u> "	Condition: Pool/Fair	Tact Number: $Q - \sqrt{2}$ (molded)	
Number and type of fasteners: Spikes Trunnels Photographs: in situ Detailed Illustrations? Associated Timbers:	Jone Vis Other (Describe: full details	)	<u>5</u> .
Notes See $Q - Y_1$			8
See Q-1/1			
Sketch by:			

Site Number: A06101.018000 Mon. Date: <u>7 126 2010</u>						
OPRHP Project Review Number: 05PR04753						
Site Name: Vehicular Security Center at World Trade Center						
Principal Investigator: Warren Riess and Carrie Atkins Fulton						
Affiliation: AKRF, Inc. and Pemaquid Art & Science						
Address of Site: Liberty, Cedar, Washington, and West Streets, New York, NY						
Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>74°0'49.248"W 40°42'37.27"N</u>						
Client: LMDC Name of Feature: Adrian						
Artifact Name: OP - 1/1 2 + 3 OR SANK Artifact Number: OP - 1/1, 2, 3						
Client: <u>LMDC</u> Name of Feature: <u>Aarian</u> Artifact Name: $\underline{OP - 1/1}$ $\underline{Z + 3}$ $\underline{OR - 1/1}$ Artifact Number: $\underline{OP - 1/1}$ $\underline{Z}$ $\underline{Z}$ Material: Condition:						
Location:						
Dimensions: L 3.5% W $1.25$ D $.75$ 34						
$\begin{array}{c} \text{Material:} \\ \text{Location:} \\ \text{Dimensions: L} \underline{3' 5''_2} W \underline{1' \cdot 2 5''} D \underline{.75} \underline{3'4''} \\ (\text{sided}) \end{array} \begin{array}{c} \text{(molded)} \end{array}$						
Number and type of fasteners:						
SpikesTrunnelsOther (Describe: <u>Small Nails</u> )						
Photographs: in situ full details						
Detailed Illustrations? <u>VA</u>						
Associated Timbers:						
Notes NONE	i,					
lu-la						
3.52						
of 1/3 - 2' 3'2"						
- 12						
$I_{R}OIQ = UFU/I_{C}$						
11.85						
11.25 Scale:						

	Site Number: <u>A06101.018000</u> Date: <u>126.12</u>	010
	OPRHP Project Review Number: 05PR04753	
	Site Name: Vehicular Security Center at World Trade Center	
	Principal Investigator: Warren Riess and Carrie Atkins Fulton	
	Affiliation: <u>AKRF, Inc. and Pemaquid Art &amp; Science</u> Address of Site: <u>Liberty, Cedar, Washington, and West Streets</u> , New York, NY	
< - P	Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: 74°0'49.248"W 40°42'37.27"N	J
ł	Client: <u>LMDC</u> Name of Feature: <u>Adrian</u> Artifact Name: <u>ORLPP</u> <u>PLANK</u> Artifact Number: $\underline{OP - 2}$ Material: <u>Condition:</u> Location: <u>Location</u>	/) <u>†</u> 2
	Location: D_ $\underline{1}^{\prime}\underline$	
	Number and type of fasteners:	
	Spikes TrunnelsOther (Describe: <u>NO NE</u> ) Photographs: in situ full details	
	Photographs: in situ full details	
	Detailed Illustrations?	
	Associated Timbers: $\frac{p-2/3}{2} + \frac{2}{4}$	
ŧ	Notes <u>NIGNÉ</u>	
Y		
1	15"	
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	der ter IN T	
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Wa	for The IN	
	11/3"	
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	OF-41	
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	· / 1'3"	
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ų.	Sketch by: C. KICS	

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Date: 7 / 26 /2010 Site Number: A06101.018000 **OPRHP** Project Review Number: 05PR04753 Site Name: Vehicular Security Center at World Trade Center Principal Investigator: Warren Riess and Carrie Atkins Fulton Affiliation: AKRF, Inc. and Pemaquid Art & Science Address of Site: Liberty, Cedar, Washington, and West Streets, New York, NY Block and Lot: Block 56, Lot 15 GPS Coordinates: 74°0'49.248"W 40°42'37.27"N Client: LMDC Name of Feature: Adrian Artifact Name: O - lop Deck Artifact Number: OP - 2/3 & OP - 2/4Material: Softword Condition: Degraded. Location: O - lop DeckDimensions: L (g'/z - 27)'4'' W (2)'2 + 0 + 0 = 3/4''(sided) (molded) Number and type of fasteners: <u>3-4</u> Spikes Trunnels Other (Describe:\_\_\_\_\_ Photographs: \_\_\_\_\_ in situ \_\_\_\_ full \_\_\_\_ details Detailed Illustrations? Associated Timbers: <u>OP-Z/1 & OP-2/2 (all OP-2s bagged</u> together) Notes <u>Midway on orling Allk</u>, <u>OP-2/3 & OP-2/4</u> <u>appear to have been part of same plank</u> <u>originally</u>. Cut on an angle (orig). hole/ remnant (OP-2/1& OP-2/2 are imm. East) OP-2/2 0 Nail 121/2 Scale: Sketch by: MMed

	Site Number: <u>A06101.018000</u>	Date: 7 / 2010					
	OPRHP Project Review Number: 05PR0475						
	Site Name: Vehicular Security Center at World Trade Center						
	Principal Investigator: Warren Riess and Carrie Atkins Fulton						
	Affiliation: <u>AKRF, Inc. and Pemaquid Art &amp; Science</u> Address of Site: <u>Liberty, Cedar, Washington, and West Streets, New York, NY</u>						
	Block and Lot: <u>Block 56, Lot 15</u> GPS Co						
		forumates. <u>74 0 47.248 W 40 42 57.27 IN</u>					
	Client: <u>LMDC</u> Name of Feature: <u>Adrian</u>	Artifact Number					
	Artifact Name: Condition:						
	Location:						
	Dimensions: L W	$=$ D $(N^{3/1})$ = . 75"					
	2	$\frac{D}{(\text{sided})} = .75'' = .75'' (\text{molded}) = .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75''' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'' / .75'$					
	Number and type of fasteners:	3/3 - 3/4''					
	Spikes Trunnels	Other (Describe: ) $3/4 - 3/4$					
	Photographs: in situ full	details					
	Detailed Illustrations?	6. 10					
(8)	Associated Timbers:						
	Notes						
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		haicht Sb					
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		surfit )					
		20"					
	11-11	1 dd					
	43	JI 6'14"					
		the second secon					
	19" CN-313	6"19": CN-3/4					
	CN-3/12 CA1-3/2						
	21-311 CN-3/2	19'2"					
	1 r 65	5 ta ta					
	Beveled Scarf	$\lambda = \lambda$					
		Naille					
	Scale:						
	Sketch by: Elizabeth leade						

Artifact Name:	Name of Feature: <u>Ada</u>	NORTH	Artifa	act Number: <u>CN</u>	-1/1
Dimensions: L	<u>33</u> W	$\frac{5'/2}{(sided)}$	D	$\frac{3}{4}$ (molded)	-
Number and type Spikes Photographs: Detailed Illustration	of fasteners: Trunnels in situfull ons? ers:	Other (I	Describe:	)	
				9	
}	-33″		(		
5/2	c~ - 1/1		J.	CN - 1/2	
1 CN-2/.	cN - 1/1		Nail		
			×		
	N.H.	2			
		5 E C			

Block and Lot:	: <u>Liberty, Cedar,</u> Block 56, Lot 15	GPS Coord	nd West Street	s, New York, NY 9.248"W 40°42'	37.27 <u>"N</u>
Client: <u>LMDC</u> Artifact Name:	Name of Featu	re: <u>Adrian</u>	A	tifact Number: _	2N-2/1-
Material: Location:	-	Condition:		41 . 1/ 11	Ht. Will
Dimensions: L	#1 #2 32 ×4" 5"		ided)	$\frac{\frac{t^2}{-12^{\prime\prime}}}{\text{(molded)}}$	2-12
Detailed Illustra Associated Tim	Trunnels in situ ations? bers:				
)/	, 7 <sup>3</sup> /4	<i>'</i> ,			*
341 CN	17 <sup>3</sup> /4	". F 2/2	-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -		
34″I [ _ c.v	2/3	1. F- 2/2 5" 2/1	I 12%"	52"	
341 CN	2/3	1. F-2/2 511 2/1	-   ]   <sup>2</sup> /8"	5 1/2 "	*

	Site Number: <u>A06101.018000</u>	Date: 7 / 26/2010	
	OPRHP Project Review Number: <u>05PR04753</u>		
	Site Name: Vehicular Security Center at World Trade Cent Principal Investigator: Warren Riess and Carrie Atkins Ful		
	Affiliation: <u>AKRF, Inc. and Pemaquid Art &amp; Science</u>		
	Address of Site: Liberty, Cedar, Washington, and West Str		
	Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>74°</u>	°0'49.248"W 40°42'37.27"N	
8	Client: <u>LMDC</u> Name of Feature: <u>Adrian</u>	A ALIA	
	Artifact Name: Condition:	Artifact Number: <u>CIV-II</u>	
	Location:	2/4	
	Location: $\_$ $\_$ $\_ 20'' ? W \_ 5'' \_ \_ \_ \_ \_ \_ \_ \_ \_ \_$	DYY''	
		(molded)	
	Number and type of fasteners:        Spikes      Trunnels        Other (Description)	he:	
1	Photographs: in situ full details	)	
	Detailed Illustrations?		
	Associated Timbers:		
	Notes		2
	<u>.</u>		
	Length only approp	ximate	
	Length only approp	20" ?.	
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	CN1/2 mul		
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-	2/4		
		2.	
	CN &/s-	a	
	Scale:	ν	
	Sketch by: 12 RIESS		

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Site Number: <u>A06101.018000</u>	Date: 7 / 2010
OPRHP Project Review Number: 05PR04753	
Site Name: Vehicular Security Center at World Trade Center	
Principal Investigator: Warren Riess and Carrie Atkins Fulton	
Affiliation: AKRF, Inc. and Pemaquid Art & Science	
Address of Site: Liberty, Cedar, Washington, and West Streets, M	New York, NY
Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>74°0'49.2</u>	248"W 40°42'37.27"N
Client: LMDC Name of Feature: Adrian	
Artifact Name: Q N of Keelson, w/ CN Artifa	act Number: $Q \cdot 5/1 \& Q - 5/3$
Material: Softwood? Condition: Fraéile	4 1 2 4 73
Location: CN	and Withdraugh
Dimensions: L W D	Q. S/3: 12 depth
(see below) (sided)	Q· 5/3 : Ye" depth Q- 5/1 : Y2" depth (molded).
Number and type of fasteners: Spikes Trunnels Other (Describe:	·
Photographs:       Trunnels       Other (Describe:         Photographs:       in situ       full       details	)
Detailed Illustrations?	
Associated Timbers: 0-5/2 on sep. form.	
Notes	
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Scale:	L
Sketch by: M. MeD	· · · · · · · · · · · · · · · · · · ·
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Site Number: A06101.018000	Date: $\frac{1}{26} \frac{2010}{2010}$
OPRHP Project Review Number: 05PR04753	
Site Name: Vehicular Security Center at World Trade C	enter
Principal Investigator: Warren Riess and Carrie Atkins I	Fulton
Affiliation: AKRF, Inc. and Pemaquid Art & Science	
Address of Site: Liberty, Cedar, Washington, and West	Streets New York NY
Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates:	74°0'40 248"W 40°42'37 27"N
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u>	0 01 21 8 21
Artifact Name: CN	Artifact Number: $CN - 2/11$ , $9/20$ $7/3$
Material: Softward? Condition: Condition	8-2/11
Location: CN North of Keelson	$c_N = 2/12 \delta$ 1" death
Dimensions: L	DCN-2/13=1/411 (a had)
(subelow) (sided)	$ \begin{array}{c} \text{Artifact Number: } \underline{CN-2/11, 2/12 \& 2/13} \\ \underline{CN-2/11 = 1'' \text{ depth}} \\ D_{\underline{CN-2/13 = 1/4''}} \\ (\text{molded}) \end{array} $
Number and type of fasteners: 12 17. Spikes Trunnels Other (Des	cribe: )
	)
Photographs: in situ full details	
Detailed Illustrations? <u>J</u>	
Associated Timbers:	
Notes	
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and co	
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(2'6 @ mil Pt	
C. C.	

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Site Number: <u>A06101.018000</u>	Date: 7 / 26 /2010
OPRHP Project Review Number: 05PR04753	
Site Name: Vehicular Security Center at World Trade Center	
Principal Investigator: Warren Riess and Carrie Atkins Fult	<u>on</u>
Affiliation: AKRF, Inc. and Pemaquid Art & Science	
Address of Site: Liberty, Cedar, Washington, and West Street	
Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>74°(</u>	0'49.248"W 40°42'37.27"N
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u>	
Artifact Name: <u>CN along Keelson</u> Material: <u>Softwood</u> Condition: <u>Fragile</u> Location: <u>Planks along</u>	Artifact Number: <u>CN 1/5 &amp; CN 1/6</u>
Material: Softwood Condition: Francisco	
Location: <u>Planks Alon</u> Dimensions: L <u>(see Weluw</u> ) (sided)	
Dimensions: L(see Welow)	D for CN /4
(sided)	(moldød)
Number and type of fasteners:	
Spikes Trunnels Other (Describ	e:)
Photographs: in situ full details	
Detailed Illustrations?	
Associated Timbers:	
Notes	
	*
	Y
CN- Nail Shi 15/2"	2
4/2 0 31/2" 44"	
1 31/4" wide	
CN- 1/4 B	*
CN	
NE 16	
	*
4/4"	
Scale:	
Sketch by:	
	State of the state

Site Number: <u>A06101.018000</u> OPRHP Project Review Number: <u>05PR04753</u> Site Name: <u>Vehicular Security Center at Worl</u> Principal Investigator: <u>Warren Riess and Carr</u> Affiliation: <u>AKRF, Inc. and Pemaquid Art &amp; S</u> Address of Site: <u>Liberty, Cedar, Washington,</u> Block and Lot: <u>Block 56, Lot 15</u> GPS Coc	e Atkins Fulton cience nd West Streets, New York, NY
	ong'CN) Artifact Number: $Q \cdot 6/1 \otimes Q \cdot 6/2$ Very Françola 1 3/c1 D Q 6-2 (molded) $Q \cdot 6-1 = 1$ (molded)
Number and type of fasteners:       None       Vision         Spikes       Trunnels       O         Photographs:       In situ       full       O         Detailed Illustrations?       Sociated Timbers:       Ne site       Sociated Site         Notes       Image: Social site       Social site       Social site       Social site	ther (Describe:) etails
N K O Scale: Sketch by: M MAD	Kerlson 1'2"// 81/4 11/2"

Site Number: <u>A06101</u>		Da	ite: 7 1 26 12	010
Site Name: Vehicular Principal Investigator: Affiliation: <u>AKRF</u> , Ind Address of Site: <u>Liber</u>	w Number: <u>05PR04753</u> <u>Security Center at World Trade Center at World Trade Center at World Trade Center Riess and Carrie Atkins Function and Pemaquid Art &amp; Science ty, Cedar, Washington, and West States States States Coordinates: 74</u>	llton reets, New Y		<u>V</u>
Material Colling	ne of Feature: <u>Adrian</u> <u>A f Keelson</u> , <u>amil CN</u> <u>A condition:</u> <u>Fragil</u> <u>M condition</u> <u>M co</u>	e	•	5/2
Spikesi Photographs:i	TrunnelsOther (Descr n situfulldetails	ibe:	)	
	. 1.			
24	17" 05/2 1141/4" 2017			e,
	33/4"			
Scale:	· · · · ·	¢		2
Sketch by:	<b>X</b>			040

Site Number: <u>A06101.018000</u> OPRHP Project Review Number: <u>05PR04753</u> Site Name: <u>Vehicular Security Center at World Trade Center</u> Principal Investigator: <u>Warren Riess and Carrie Atkins Fulton</u> Affiliation: <u>AKRF, Inc. and Pemaquid Art &amp; Science</u> Address of Site: <u>Liberty, Cedar, Washington, and West Streets, N</u> Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>74°0'49.2</u>	
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u> Artifact Name: <u>Q-7/1 amove Colling Plans N</u> Artifa Material: <u>Softwood?</u> Condition: <u>Fragile</u> Location: <u>Plans &amp; Keelson</u> amid "CN" Dimensions: L <u>4<sup>1</sup>/2" W <u>3<sup>1</sup>/4</u> D (sided)</u>	•
Number and type of fasteners: None Vis Spikes Trunnels Other (Describe: Photographs: in situ full details Detailed Illustrations? N Associated Timbers: Near CN-Y7 & Q-5/2 Notes Apperently dislocated maybe	
2	
9-7/12 Q-7/12 (V) (V) (V) (V) (V) (V) (V) (V) (V) (V)	ی ۲
5 31/4	с. Э
ZOOM VIEN OF Q-7/1	ιτ,
Scale:	
Sketch by: MMGD	

 $x \in \mathbb{R}_{n}$ 

OPRHP Pro Site Name: Principal In Affiliation: Address of 3 Block and I Client: <u>LM</u> Artifact Nat Material:	r: A06101.018000 oject Review Number Vehicular Security C vestigator: Warren Ri AKRF, Inc. and Pem Site: Liberty, Cedar, V Lot: Block 56, Lot 15 IDC Name of Featur me: CEILING PARELI SUF TWWD?	enter at World Tradi iess and Carrie Atki aquid Art & Science Washington, and W GPS Coordinat re: <u>Adrian</u> NOTO Condition: FRA	le Center ins Fulton e est Streets, New es: 74°0'49.248" Artifact N	W 40°42'37.27"1 Number: <u>CN-</u>	<u>N</u>
Dimensions	IMM N DE KEEL :: L 2 1 5 "	-W - 4.5'' (sided)	D	(molded)	
Number and Spik Photograph	d type of fasteners: es Trunnels s: in situ ustrations? Timbers:Keels on Thus is one of he else of	NONE VIS Other ( full details	Describe:	)	1/5
Scale: Sketch by:	2'5" MmoD.	Keeren Keeren		2	- - -

\* 307 under 315

Site Number: <u>A06101.018000</u> OPRHP Project Review Number: <u>05PR04753</u> Site Name: <u>Vehicular Security Center at World Trade</u> Principal Investigator: <u>Warren Riess and Carrie Atkin</u> Affiliation: <u>AKRF, Inc. and Pemaquid Art &amp; Science</u> Address of Site: <u>Liberty, Cedar, Washington, and Wes</u> Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates	st Streets, New York, NY	
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u> Artifact Name: <u>Cealing</u> <u>planting</u> Material: <u>Annol</u> Condition: <u>good</u> Location: <u>W</u> (sided)	Artifact Number: <u>(N 4/6 + 4</u> /7 D	÷
Number and type of fasteners: Spikes TrunnelsOther (D Photographs: in situ full details Detailed Illustrations? Associated Timbers: C.P. 4 Notes	escribe:)	
CN 4/6 1.25" CN 4/6 1.25" CN 4/6 1.25" CN 4/6 1.25"	fr ← FB CN 4/7 CN 4/7 S S S S S S S S S S S S S	1 24 8.75"
Scale: NOT	20.5"	down
Sketch by: CARRIE FULTON		3

-78

and the second

Site Number: A06101.018000	Date: 7 / 26 /2010
OPRHP Project Review Number: 05PR04753	· · · · · · · · · · · · · · · · · · ·
Site Name: Vehicular Security Center at World Trade Center	
Principal Investigator: Warren Riess and Carrie Atkins Fulton	
Affiliation: AKRF, Inc. and Pemaquid Art & Science	**
Address of Site: Liberty, Cedar, Washington, and West Streets,	
Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>74°0'49</u> .	<u>248 W 40 42 57.27 N</u>
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u> Artifact Name: <u>Cullors</u> plank <u>4</u> Artif	CHILD ILLA MA ILLA
Material: Condition:	
Material: Condition: Condition: Location: Unit E Row 4 Dimensions: L $\& b_1 , 25 \\ (sided) \\ \end{bmatrix}$	10
$\begin{array}{c} \text{Dimensions. } L \underline{ } & \underline{ }$	(molded)
	()
Number and type of fasteners:         5       Spikes         5       Spikes	
<u>5</u> Spikes Trunnels Other (Describe:	
Detailed Illustrations?	
Associated Timbers:	
Notes	· · ·
	2 D V
·	() ()
3/4 D I'' Leep	
	finished
1/2 →1 1/25-1 8,25	$\overline{z} \in \frac{1}{2}$ "D
	$\overline{z}$ $\epsilon / 2$ D
il cn-th	BRoken
15 La A	
1.15 CN-411	14"
	1 * Depth- 1"
1	
	7
86"4"	
2 8	
	~
Scale: NO	
Sketch by: CARELE FULTON	8
	8

Block and Lot: Block 56, Lot 15 G	at World Trade Center nd Carrie Atkins Fulton Art & Science ington, and West Streets, New York, NY PS Coordinates: 74°0'49.248"W 40°42'37.27"N	
Client: <u>LMDC</u> Name of Feature: <u>Ad</u> Artifact Name: <u>Columy 5</u> Material: <u>مرينيا</u> Condi Location: <u> </u>	Irian         CN           ition:         SK            D	5/10
Spikes Trunnels Photographs: in situ full	Other (Describe:)details	
$\frac{975}{511} = \frac{5/8}{5/8}$	} 5/9 } CN-5/10 € 99"	$\frac{1}{\sqrt{10}}$
Scale: Sketch by: <u>Comme Futton</u>		

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	Site Number: A06101.018000 Date: 7 / 26 /2010
	OPRHP Project Review Number: 05PR04753
	Site Name: Vehicular Security Center at World Trade Center
	Principal Investigator: Warren Riess and Carrie Atkins Fulton
	Affiliation: AKRF, Inc. and Pemaquid Art & Science
	Address of Site: Liberty, Cedar, Washington, and West Streets, New York, NY
	Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>74°0'49.248"W 40°42'37.27"N</u>
	Client: <u>LMDC</u> Name of Feature: <u>Adrian</u>
	Artifact Name: Artifact Number: <u>CN-3/10 + C</u> N-3/10A Material: Condition:
	Material: Condition:
	Location: //
	Dimensions: L         W         D
	Dimensions: L         W         D         I''           (sided)         (molded)
	Number and type of fasteners
	Spikes Other (Describe: $\hbar \omega$ )
	Photographs: in situ full details
	Detailed Illustrations?
×	Associated Timbers:
	Notes
	buckled
	bucket
	Yes
	buckled 155 CN-3/10 (N-3/10)
	11/10
	155 155
	> (N-3/10) CN-3/10A
	F L L L L L L L L L L L L L L L L L L L
	Real Parts
	. 2'
	103"
-	Scale:
	Sketch by: E. Meade
	A (A)

Site Number: <u>A06101.018000</u>	Date: 7/26/2010
OPRHP Project Review Number: 05PR04753	
Site Name: Vehicular Security Center at World Trade	Center
Principal Investigator: Warren Riess and Carrie Atkins	s Fulton
Affiliation: AKRF, Inc. and Pemaquid Art & Science	10. U
Address of Site: Liberty, Cedar, Washington, and Wes	
Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates	: 74°0'49.248"W 40°42'37.27"N
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u>	· · · · · · · · · · · · · · · · · · ·
Artifact Name: WOOD & MORTAR @ UMBER 1	(s) Artifact Number: $CS - 1 A$
Material ( Wood & morne Condition: DEGRAM	DED
Location: ABOVE LIMBER SOUTH OF KEELSU	
Dimensions: $L_{W^{0,0}}$ $G'' = W = 5''$	D
MURTER Q" (sided)	(molded)
Number and type of fasteners: Non-C	
Spikes TrunnelsOther (De	escribe:)
Photographs: <u>N</u> in situ full details	
Detailed Illustrations? N	Buck feature
Associated Timbers: <u>Cs-1 (series) &amp; Kee</u>	Ison : Also: HSSOC. W imm. east of
Detailed Illustrations? N Associated Timbers: Cs-1 (series) & Kee Notes Collected IN BAG	Keelson Which
	Sketched
	×

	<i>u</i>		
7	CE-1/1A		. <u>1</u>
	Moerae		00 <b>f</b> G
*	Min	*	
*			
	ส์		
Scale: Sketch by:	MmcD.		: K

Site Number:A06101.018000Date: $7/26/2010$ OPRHP Project Review Number:05PR04753Site Name:Vehicular Security Center at World Trade CenterPrincipal Investigator:Warren Riess and Carrie Atkins FultonAffiliation:AKRF, Inc. and Pemaquid Art & ScienceAddress of Site:Liberty, Cedar, Washington, and West Streets, New York, NYBlock and Lot:Block 56, Lot 15GPS Coordinates:74°0'49.248"W 40°42'37.27"N
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u> Artifact Name: <u>CN - <math>2/4</math> + <math>2/5</math> Material: <u>Condition:</u> Location: <u>Dimensions: L <math>\frac{2}{2/4} - \frac{17}{2}</math> W <math>\frac{2}{4} - \frac{1}{2}</math> (sided) D <math>\frac{1}{4}</math> (molded)</u></u>
Number and type of fasteners:
NOTEH, 1'2"
2'2 I CN-2/4 834" I CN-2/5 T
34 3/4
Scale: Sketch by:

	OPRHP Project Review Number: <u>05PR04753</u> Site Name: <u>Vehicular Security Center at World Trade Center</u> Principal Investigator: <u>Warren Riess and Carrie Atkins Fulton</u> Affiliation: <u>AKRF, Inc. and Pemaquid Art &amp; Science</u> Address of Site: <u>Liberty, Cedar, Washington, and West Streets, New Y</u> Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>74°0'49.248"W</u>	/ 40°42'37.27"N
	Client: <u>LMDC</u> Name of Feature: <u>Adrian</u> Artifact Name: Artifact Nu Material: Condition:	umber: $\frac{CN - 1/3}{CN - 2/6}$
(6)	Location: Dimensions: L W D $\frac{1/3}{(sided)}$	$-\frac{3}{4}''$ $\frac{3}{6} - \frac{3}{4}''$ molded)
	Number and type of fasteners:         Spikes       Trunnels       Other (Describe:         Photographs:       in situ       full       details         Detailed Illustrations?	
	21"	
	$3^{3/4}$ $2/b$ $1/3$ $3^{3/4}$ $1 = 18^{3/4}$	9.5" [
	Scale:	

Sketch by: \_\_\_\_

	Site Number: <u>A06101.018000</u> OPRHP Project Review Number: <u>05PR047</u> Site Name: <u>Vehicular Security Center at W</u> Principal Investigator: <u>Warren Riess and Ca</u> Affiliation: <u>AKRF, Inc. and Pemaquid Art a</u> Address of Site: <u>Liberty, Cedar, Washingto</u> Block and Lot: Block 56 Lot 15 GPS (	orld Trade Center arrie Atkins Fulton & Science
×	Client: IMDC Name of Feature: Adrian	Artifact Number: $CN 2/7 - 10$
	· · · · · · · · · · · · · · · · · · ·	(sided) (molded)
S	Number and type of fasteners:         Spikes       Trunnels         Photographs:       in situ       full         Detailed Illustrations?       Associated Timbers:       Image: Comparison of the second sec	_Other (Describe: <u>^ /a</u> ) _ details
	Scale:	261/2 in 6/n 2/10 1/2 /10 1/2 /10 1/2 /10 1/2 /10 /2 /10 /2 /10 /2 /10 /2 /10 /2 /10 /2 /10 /2 /2 /2 /2 /2 /2 /2 /2 /2 /2 /2 /2 /2
	Sketch by: N Shippen	

	umber: <u>A06101.</u>		5000475	· ·	Date: /	/ <u>2C/2010</u>	00
Site Na Princip Affilia Addres	P Project Review ame: <u>Vehicular S</u> al Investigator: <u>N</u> tion: <u>AKRF</u> , Inc. ss of Site: <u>Liberty</u>	ecurity Cen Warren Ries and Pemac , Cedar, W	ter at Wo ss and Car juid Art & ashington	rld Trade Center rrie Atkins Fulto z Science , and West Stree	n ets, New York, N		
Client: Artifac	and Lot: <u>Block 5</u> _ <u>LMDC</u> _Name t Name: al:	of Feature	<u>Adrian</u>	A	Artifact Number:	en-3/5-	9
Locatio Dimen	al: on: sions: L		_ W		D		х
				(sided)	(molde	d)	~
	er and type of fas Spikes	Trunnels		_Other (Describe			l
Detaile	raphs: in d Illustrations? _						
	ated Timbers:				κ.		
Notes							027
						>	
2.	CN - 3/5	0	7	N Hob	3/5,-3/7,3/7	6" 32 4'2 8 H'2 6	" "" '2 .9
		•	3/9	5 1/2"	3/9	5'&" E \$3'' 114	4.5 3/4
noe)	3/15	14,5.				13'	
	1999 - N.			Ξ.			
1					х		

Site Number: A06101.018000 Date: / /2010 OPRHP Project Review Number: 05PR04753 Site Name: Vehicular Security Center at World Trade Center Principal Investigator: Warren Riess and Carrie Atkins Fulton Affiliation: AKRF, Inc. and Pemaquid Art & Science Address of Site: Liberty, Cedar, Washington, and West Streets, New York, NY Block and Lot: Block 56, Lot 15 GPS Coordinates: 74°0'49.248"W 40°42'37.27"N Artifact Number:  $CS \frac{4}{3}$ ,  $CS \frac{4}{4}$ ,  $CS \frac{4}{5}$   $D \frac{3}{4}$  (molded) Client: LMDC Name of Feature: Adrian Artifact Name: <u>culing planning</u> Material: <u>UTAN</u> Condition: <u>Sk</u> Material: Location: ROW 4 BOW W Dimensions: L Number and type of fasteners: 
 Spikes
 Trunnels
 Other (1)

 Photographs:
 \_\_\_\_\_\_\_in situ
 full
 details
 \_\_\_\_Other (Describe: \_\_\_\_\_) Detailed Illustrations? Associated Timbers: plete in same line as Notes wide 251/211 STrunnel? (54/3 CS 21 34" 13" CS 4/3A FID 112 NU Scale: Sketch by: Carrie Atkins

S

Site Number: A06101.018000       Date: / /2         OPRHP Project Review Number: 05PR04753       Site Name: Vehicular Security Center at World Trade Center         Principal Investigator: Warren Riess and Carrie Atkins Fulton       Affiliation: AKRF, Inc. and Pemaquid Art & Science         Address of Site: Liberty, Cedar, Washington, and West Streets, New York, NY         Block and Lot: Block 56, Lot 15       GPS Coordinates: 74°0'49.248"W 40°42'37.27"	
Client:       LMDC       Name of Feature:       Adrian         Artifact Name:       LMLnown       Artifact Number:       U//         Material:       Location:       Condition:       O//         Location:       BON - 5       Part of CS 47       D         Dimensions:       L       W       D       (molded)	1
Number and type of fasteners:        Spikes      Trunnels       Other (Describe:)         Photographs:      full      details         Detailed Illustrations?          Associated Timbers:      ?	
Notes unknown - perhaps outing planking w/	į .
CS 4/5	
C54/6 Q-17 3.5"	
1 - D	N
Scale: ND	ŝ

		Date: / / <u>27/2010</u>	
	OPRHP Project Review Number: 05PR04753		
	Site Name: <u>Vehicular Security Center at World Trade Center</u> Principal Investigator: <u>Warren Riess and Carrie Atkins Fulton</u>		
	Affiliation: AKRF, Inc. and Pemaquid Art & Science		
	Address of Site: Liberty, Cedar, Washington, and West Streets, New	York, NY	
	Block and Lot: Block 56, Lot 15 GPS Coordinates: 74°0'49.248'		
	Client: <u>LMDC</u> Name of Feature: <u>Adrian</u>		
	Artifact Name: Artifact Artifact	Number: $CS - 4/1 + 4/2$	
	Artifact Name: <u>celling planking</u> Artifact I Material: <u>Jobe</u> Condition: <u>of</u>		
	Location:		
	Dimensions: L W D		
	(sided)	(molded)	
	Number and type of fasteners:		
	Spikes TrunnelsOther (Describe:	)	
	Photographs: in situ full details		
	Detailed Illustrations?		
	Detailed Illustrations? Associated Timbers: Connects w CS-43		
	Notes <u>CS-5 1 above</u>		
	CS-13/6 below		65
_	N		
	37" II x D=	111	
	× × ×		
	MZ A		
	5 05-41 434"		
	(A oc -4)	1	
	$)$ $b_{15}$ $c_{5}$ $f$		
	D= 3/4 *		
	D = 3/4 *	N	
	K 46"	X	
		- )	
	· E-14 E13		
		V	
		3	
			_
	Scale: NU	52	
	Sketch by: C. Fulton	- <i>2</i>	

Site	te Number: <u>A06101.018000</u> Date: <u>7/27/2</u>	010
OP	PRHP Project Review Number: 05PR04753	*
Site	te Name: Vehicular Security Center at World Trade Center	5
Priı	incipal Investigator: Warren Riess and Carrie Atkins Fulton	2 in 19 in 19
	ffiliation: AKRF, Inc. and Pemaquid Art & Science	
	ddress of Site: Liberty, Cedar, Washington, and West Streets, New York, NY	
Blo	ock and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>74°0'49.248"W 40°42'37.27"</u>	7
Clie Art	tifact Name of Feature: <u>Adrian</u> rtifact Name: <u>Stath Culture</u> Artifact Number: <u>CS</u> aterial: <u>Condition</u>	810-5-0118
Ma	aterial: Condition:	atti co allo
Loc	cation: caulta of	
Dir	imensions: L W D	
	imensions: L W D (sided) (molded)	9
N		
INU	umber and type of fasteners:         Spikes      Other (Describe:)	
Pho	notographs: in situ full details	
	etailed Illustrations?	
	ssociated Timbers:	
	19	2 (2)
INO	otes possibly in line w/ CS 4 - top part	2 · · · · · · · · · · · · · · · · · · ·
		B
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а. С		
	K 21.5"	
	D =	2
	4.5"	Ψ.
	4,75"	N
	cs-q17 $s-cs-q18$	·
	FILO DI 14" FIS	
	* 10.5"	
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	FILE	
	FILD FUTTOULL FIS	
	$\sim$	
Scal	ale: NO	×
Sket	etch by: <u>Carrie Fulton</u>	
		0

Site Number: A06101.018000Date: 7 / 27/2010OPRHP Project Review Number: 05PR04753Date: 7 / 27/2010Site Name: Vehicular Security Center at World Trade CenterDate: 7 / 27/2010
Principal Investigator: <u>Warren Riess and Carrie Atkins Fulton</u> Affiliation: <u>AKRF, Inc. and Pemaquid Art &amp; Science</u> Address of Site: <u>Liberty, Cedar, Washington, and West Streets, New York, NY</u> Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>74°0'49.248"W 40°42'37.27"N</u>
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u> Artifact Name: <u>Nump</u> <b>Ank</b> , Artifact Number: <u>CS - Q16</u> Material: <u>Condition:</u> <u>South</u>
Dimensions: L W D (sided) (molded)
Number and type of fasteners:         Spikes       Trunnels         Photographs:       in situ         full       details         Detailed Illustrations?
Associated Timbers: Notes
$\frac{1}{2} \int \nabla S - \Theta U_{0}$
*. 1"D
7.5"
34.5"
. No la companya da company No la companya da companya d
Scale: No Sketch by: C Stulton

Site Number: <u>A06101.018000</u>	Date: / / <u>2010</u>
OPRHP Project Review Number: 05PR04753_	
Site Name: Vehicular Security Center at World Trade Center	
Principal Investigator: Warren Riess and Carrie Atkins Fulton	
Affiliation: <u>AKRF, Inc. and Pemaquid Art &amp; Science</u> Address of Site: <u>Liberty, Cedar, Washington, and West Streets</u> , N	ow Vork NV
Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: 74°0'49.24	
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u>	ot Number: (8 -5/1 + 5/2
Artifact Name: <u></u>	
Dimensions: L W D	
Location: <u>S</u> Dimensions: L <u>W</u> <u>U</u> D (sided)	(molded)
Number and type of fasteners:	
Spikes Trunnels Other (Describe:	)
Photographs: in situ full details	
Detailed Illustrations?	
Associated Timbers:	
Notes 53+54 untimer	
14" F14 F13	
$D = \frac{14''}{cs - 5/2}$ F13	
(5-5)2	L T
	5.5" . C=-5/3
	5.5
1 2714"	
T	
CS-51	5 1
-74	/ ds 5/4
	$\rightarrow$ N
*12	
14," 3234"	
D=14	V
Scale: NU	
Sketch by: C Fully	, a

Client: <u>LMDC</u> Name of Fe	ntura: Advian		48"W 40°42'37.27"	
Artifact Name:	Condition	Artita	ict Number: $23 - 3$	1-2,60
Material: Location: Dimensions: L		· · · · · · · · · · · · · · · · · · ·		
Dimensions: L	W	D		
		(sided)	(molded)	
Spikes Trunn	els	_Other (Describe:	)	
Photographs: in situ	tull	details		2
Detailed Illustrations?		- R		
Notes				
	<u>e)</u>			E
3/ //	545			
F14 D 314		FIN	09-3	X:
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27"				
			1-45"	
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			D - 3/4'	
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- A		3		
19" F		6		
· )				
w 72	10 2"			
C.	w <b>T</b>			
D				

Vehicular Security	Center at World Trade Ce	nter: Vessel Inventory Form
Principal Investigator: <u>Warre</u> Affiliation: <u>AKRF</u> , Inc. and Address of Site: <u>Liberty</u> , Cee	nber: 05PR04753 ty Center at World Trade Cen en Riess and Carrie Atkins Fu	lton reets, New York, NY
Client: <u>LMDC</u> Name of F Artifact Name: Material: Location:	~ ***	Artifact Number: $CS - 3/5 + 9$
Dimensions: L	W(sided)	D
Number and type of fastener        Spikes      Trun         Photographs:      in situ         Detailed Illustrations?          Associated Timbers:	s: nelsOther (Descr full details	ibe:)
V		· · · · · · · · · · · · · · · · · · ·
72		CS-3 D-1"
	21"- 21"- 25 5	F3-1 18"W 10"W
E 2/15	. 62"	
	ه د	· ·
Scale: Sketch by:		

Site Number: <u>A06101.018000</u>	Date: 7 1 27/20	10			
OPRHP Project Review Number: 05PR04753					
Site Name: Vehicular Security Center at World Trade Center					
Principal Investigator: Warren Riess and Carrie Atkins Fulton					
Affiliation: <u>AKRF, Inc. and Pemaquid Art &amp; Science</u> Address of Site: <u>Liberty, Cedar, Washington, and West Streets, New York, NY</u>					
Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>7</u>	$4^{\circ}0'40 248"W 40^{\circ}42'37 27"N$				
	- 019.210 W 10 12 5 1.27 11				
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u> Artifact Name: Material: Condition:	Artifact Number: 19-3/	248			
Artifact Name: Condition:	_ Artifact Number. 03 7	5+1,0			
Location:					
Dimensions: L - W	D 3/4" all +	inters			
Material:Condition: Location: Dimensions: L W (sided)	(molded)				
Number and type of fasteners:        Spikes      Trunnels      Other (Desc         Photographs:      in situ      full      details	cribe:)				
Photographs: in situ full details					
Detailed Illustrations?	,				
Associated Timbers:					
Notes	52				
F10					
110	CS-3				
P II	27-3				
1 from					
22" FROM 63" TRUNNEL					
63					
TRUNNEL	t	1			
P					
8	-	20			
0	5	24			
7.3					
him 4		1991 -			
13"-1	-12"				
1.54	N-12				
W-1' W-6"	D - 3/4"				
D = 3/4					
Scale:					
Sketch by:		13			

	i 4
Vehicular Security Center at World Trade Center: V	essel Inventory Form
Site Number: <u>A06101.018000</u> OPRHP Project Review Number: <u>05PR04753</u> Site Name: <u>Vehicular Security Center at World Trade Center</u> Principal Investigator: <u>Warren Riess and Carrie Atkins Fulton</u> Affiliation: <u>AKRF, Inc. and Pemaquid Art &amp; Science</u> Address of Site: <u>Liberty, Cedar, Washington, and West Streets, N</u> Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>74°0'49.24</u>	
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u> Artifact Name: Artifa Material: Condition: Location: D Dimensions: L W D (sided)	ct Number: $\underline{C\phi} = 1 + 2$
(sided)	(molded)
Number and type of fasteners:         Spikes       Trunnels       Other (Describe:         Photographs:       in situ       full       details         Detailed Illustrations?       Associated Timbers:	
NotesF-Q	
Scale:	CØIZ "- bevet at bottom + top
Sketch by: $EMESS$	3

1 - 1 2 - 1 2 - 1

	Site Number: <u>A06101.018000</u>	Date: 7 / 27/2010
	OPRHP Project Review Number: <u>05PR04753</u> Site Name: Vehicular Security Center at World Trade Center	
	Principal Investigator: <u>Warren Riess and Carrie Atkins Fulton</u>	
	Affiliation: AKRF, Inc. and Pemaquid Art & Science	
	Address of Site: Liberty, Cedar, Washington, and West Streets, Ne	
	Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>74°0'49.248</u>	<u>3"W 40°42'37.27"N</u>
	Client: <u>LMDC</u> Name of Feature: <u>Adrian</u>	Number $d \leq d \leq d$
	Artifact Name: <u>Celling</u> <u>Planking</u> Artifact Material: <u>wood</u> <u>Condition</u> : <u>st</u>	Number: <u>C3 6</u>
	Material: <u>wood</u> <u>J</u> Condition: <u>st</u> Location: <u>Bow - south</u> Dimensions: L <u>W</u> <u>D</u> (sided)	
	Dimensions: L W D	
	(sided)	(molded)
	Number and type of fasteners:	a
	SpikesTrunnelsOther (Describe: Photographs: in situ fulldetails	
	Detailed Illustrations?	
	Associated Timbers:	
	Notes hat ciplant series on	south site
_		1
	F9 16.5"	
		-1*1
	CS 6/1	Tay
		214
	C'5 5 5	
		1
		}
	(*)	*
	Scale: Not Fulton Sketch by: Fulton	
	Sketch by:	8 
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Site Number: <u>A06101.018000</u> OPRHP Project Review Number: <u>05PR04</u>	Date: $7 / 27 / 2010$	
		э.
Site Name: Vehicular Security Center at W		
Principal Investigator: Warren Riess and C	Carrie Atkins Fulton	
Affiliation: AKRF, Inc. and Pemaquid Art		
Address of Site: Liberty, Cedar, Washingt		
Block and Lot: <u>Block 56, Lot 15</u> GPS	Coordinates: 74°0'49.248"W 40°42'37.27"N	
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u>	<u>n</u>	
Artifact Name: ceiling plank	Artifact Number: CS 5/5	
Material: www Condition	n: ok	
Location: 50W CS -5		
Dimensions: L W	(sided) D (molded)	
	(sided) (molded)	
Number and type of fasteners:		
	Other (Describe:)	
Photographs: in situ full	details	
Detailed Illustrations?Associated Timbers: 0 C 4		
Associated Timbers: C 4		
Notes		
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	$- [cs 6]^{1}$ $= 1/4$	1.
	A	17.
-14 Ers 515 0	- [ cs 6]1 / # D=14	<sub>  </sub> 5-3
05514 F 055150		5-3/
05514 5550		5-3/
05514 055150	The second secon	5-3/
		5-3/
	The second secon	5-3/
	The second secon	5-3/
	1014 cs 5/6	5-3/
	1014 cs 5/6	5-3/
	Trunnel 27"	5-3/
25 5 13 0	Trunnel 27"	5-3/
25 5 13 0	1014 cs 5/6	5-3/
	Trunnel 27"	5-3/
25 5 13 0	Trunnel 27"	5-3/
25 5 13 0	Trunnel 27"	5-3/3/4"

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	: 7 127/2010
OPRHP Project Review Number: 05PR04753	
Site Name: <u>Vehicular Security Center at World Trade Center</u> Principal Investigator: <u>Warren Riess and Carrie Atkins Fulton</u>	
Affiliation: AKRF, Inc. and Pemaquid Art & Science	
Address of Site: Liberty, Cedar, Washington, and West Streets, New Yor	
Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>74°0'49.248"W 4</u>	10°42'37.27"N
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u> Artifact Name: <u>Cerling</u> planking Artifact Num Material: <u>wood</u> Condition: <u>A</u>	
Location:	
Material:         WOOD         Condition:         Dimensions:           Location:	
	olded)
Number and type of fasteners:	``````````````````````````````````````
Spikes TrunnelsOther (Describe: Photographs: in situ full details	)
Detailed Illustrations?	
Associated Timbers: certing planking CS-5 - Followe	1 by
Associated Timbers: <u>certing planking 055 - Follow</u> Notes <u>055/443 preceding</u>	1
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64 ( CS 514	
There is a second secon	
1 1 15 5 3	Ċs
6" FTrumeli <sup>2</sup>	/ 5/5
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D=34" F-12 22 75"	(>1)
D= 4 F1 33.25"	J
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Scale: No	γ
Sketch by: CFultur	

Site Number: <u>A06101.018000</u> OPRHP Project Review Number: <u>05PR04753</u> Site Name: <u>Vehicular Security Center at World Trade Cente</u>	Date: <u>7 /27/2010</u>
Principal Investigator: <u>Warren Riess and Carrie Atkins Fulto</u> Affiliation: <u>AKRF, Inc. and Pemaquid Art &amp; Science</u> Address of Site: <u>Liberty, Cedar, Washington, and West Stre</u> Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>74°0</u>	ets, New York, NY
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u> Artifact Name: <u>Futtucks</u> Material: <u>Condition:</u> <u>Ok</u> Location: <u>WWM-Stan</u> <sup>2</sup> Dimensions: L <u>58"</u> W <u>4.5"</u> (sided)	
Number and type of fasteners:         Spikes       Trunnels       Other (Describ         Photographs:       in situ       full       details         Detailed Illustrations?       Associated Timbers:	e:)
Notes <u>3pokin in Nendmar</u>	FN 18-3?
FN-19-0	
FN-19-0	
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FN 18-0	
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Scale: NO Sketch by:	2

Address of Site: <u>Liberty</u> , Block and Lot: <u>Block 56</u> , Client: LMDC Name of	Lot 15 GPS Coord	1 West Streets, N inates: 74°0'49.24	48"W 40°42'37.2	*
Artifact Name: Material:,	Condition:	Artifa	ct Number: <u>C(</u>	$\frac{1}{2} - 18$
Location: Dimensions: L		15 C		
Dimensions: L	W(sid	D D	(molded)	
Number and type of faste SpikesT Photographs:in si Detailed Illustrations? Associated Timbers:	runnelsOth tufulldet	er (Describe: ails	)	9 6 9
Notes				
	F12		A	a P
יחיי T		2	T.	
2	CS-5/4	And the second s		
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Scale: Sketch by:				

Principal Investiga Affiliation: <u>AKRF</u> Address of Site: Li	eview Number: <u>051</u> ilar Security Center tor: <u>Warren Riess</u> , Inc. and Pemaqui berty, Cedar, Was	r at World Trade Co and Carrie Atkins F	enter Fulton Streets, Nev		
Client: <u>LMDC</u> N Artifact Name: Material: Location: Dimensions: L		4•,•	_ Artifact	Number: $FN$	<u>- 23</u> -1
Number and type of Spikes Photographs: Detailed Illustratio Associated Timber	of fasteners: Trunnels in situful ns? rs:	Other (Deso 1details	cribe:	)	25 ° 
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5'8"	73"			· · · · · ·	
				) en	X
Scale: Sketch by:	35				

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Vehicular Security Center at World Trade Center: Vessel Inventory Form
Site Number:A06101.018000Date: $7/27/2010$ OPRHP Project Review Number:05PR04753Site Name:Vehicular Security Center at World Trade CenterPrincipal Investigator:Warren Riess and Carrie Atkins FultonAffiliation:AKRF, Inc. and Pemaquid Art & ScienceAddress of Site:Liberty, Cedar, Washington, and West Streets, New York, NYBlock and Lot:Block 56, Lot 15GPS Coordinates:74°0'49.248"W40°42'37.27"N
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u> Artifact Name: Artifact Number: <u>FN- 23-</u> Material: Condition:
Location: Dimensions: L $3/"$ W $5/2"$ D $5/2"$ 1083 (sided) (molded)
Number and type of fasteners:         Spikes       Trunnels       Other (Describe:)         Photographs:       in situ       full       details         Detailed Illustrations?           Associated Timbers:
Notes

Site Name: <u>Vehicul</u> Principal Investigate Affiliation: <u>AKRF</u> , Address of Site: <u>Lib</u>	01.018000_ view Number: 05PR0 ar Security Center at or: Warren Riess and Inc. and Pemaquid A erty, Cedar, Washing k 56, Lot 15 GPS	World Trade Cer Carrie Atkins Fu rt & Science gton, and West St	nter Ilton reets, New		
Artifact Name:	ame of Feature: <u>Adric</u> Condition		_ Artifact N	Tumber: FN 4 1/2" (molded)	_ 22 -/
Number and type of Spikes Photographs: Detailed Illustration Associated Timbers		Other (Descr details	ibe:	)	4 4
side view	N	80 "		lest	
Scale: Sketch by:	<<				

Site Number: <u>A06101.018000</u> OPRHP Project Review Number: <u>05PR04</u> Site Name: <u>Vehicular Security Center at V</u> Principal Investigator: <u>Warren Riess and C</u> Affiliation: <u>AKRF, Inc. and Pemaquid Art</u> Address of Site: <u>Liberty, Cedar, Washingt</u> Block and Lot: <u>Block 56, Lot 15</u> GPS Client: <u>LMDC</u> Name of Feature: <u>Adrian</u> Artifact Name: <u>Condition</u> Location:	Vorld Trade Cen Carrie Atkins Fui t & Science on, and West Str Coordinates: 74 2	<u>lton</u> reets, Ne °0'49.24 Artifac	8"W 40°42'37.27"N	
Location: Dimensions: L 43 " W	<u>(sided)</u>	_ D	(molded)	
Number and type of fasteners:        Spikes      Trunnels         Photographs:      in situ      full         Detailed Illustrations?          Associated Timbers:	Other (Descr details	ibe:	)	
Notes	<i>t.</i>			2. D
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Scale: Sketch by: RIESS	¥.			

Site Number: <u>A06101.018000</u> OPRHP Project Review Number: <u>05PR0</u> Site Name: <u>Vehicular Security Center at</u> Principal Investigator: <u>Warren Riess and</u> Affiliation: <u>AKRF</u> , Inc. and Pemaquid A	World Trade Ce Carrie Atkins F		Date: <u>7/27</u>	<u>2010</u>
Address of Site: <u>Liberty, Cedar, Washing</u> Block and Lot: <u>Block 56, Lot 15</u> GPS	ton, and West S			'N
Client: <u>LMDC</u> Name of Feature: <u>Adria</u> Artifact Name: Material:Condition	<u>nn</u>	_ Artifac	et Number: <u>F5</u>	
Location: Condition Dimensions: L <u>32</u> W	(sided)	_ D	(molded)	e B
Number and type of fasteners:        Spikes      Trunnels         Photographs:      in situ      full         Detailed Illustrations?	Other (Desc details	ribe:	) 	- •
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Scale: RIBS	1			

Site Number: <u>A06101.018000</u> OPRHP Project Review Number: <u>05PR04</u> Site Name: <u>Vehicular Security Center at W</u> Principal Investigator: <u>Warren Riess and C</u> Affiliation: <u>AKRF</u> , Inc. and Pemaquid Art Address of Site: <u>Liberty, Cedar</u> , <u>Washingt</u>	Vorld Trade Cer Carrie Atkins Fu t & Science on, and West S	<u>ilton</u> treets, No	ew York,		
Block and Lot: Block 56, Lot 15       GPS         Client: LMDC_Name of Feature: Adrian         Artifact Name:         Material:       Condition         Location:       Dimensions: L       138'' W	<u>n</u>	_ Artifac	et Number	FN 2	<u>1</u> -Ø
Dimensions: L <u>38</u> W	(sided)	_ D	(mold	ed)	
Number and type of fasteners: Spikes Trunnels Photographs: in situ full Detailed Illustrations? Associated Timbers:	Other (Desc details	ribe:		)	
Notes					
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Site Number: <u>A06101.018000</u>	Date: <u> </u>
OPRHP Project Review Number: 05Pl	<u></u>
Site Name: Vehicular Security Center	
Principal Investigator: Warren Riess and	nd Carrie Atkins Fulton
Affiliation: AKRF, Inc. and Pemaquid	Art & Science
	ington, and West Streets, New York, NY
Block and Lot: <u>Block 56, Lot 15</u> G	PS Coordinates: 74°0'49.248"W 40°42'37.27"N
Client: <u>LMDC</u> Name of Feature: <u>Ad</u>	Irian
Artifact Name:	Artifact Number: FS 20-2
Material: Cond	ition:
Location:	-3/1 - 1/1/1
Dimensions: L $10^{7}$ W	$\frac{5^{-3}}{4} D = \frac{5^{1}}{4} \frac{1}{1}$ (sided) (molded)
	(sided) (inoided)
Number and type of fasteners:	
Spikes Trunnels	Other (Describe:)
Photographs: in situ full	details
Detailed Illustrations?	
Notes	
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Site Number: <u>A06101.018000</u> Date: <u>7/1//2010</u>
OPRHP Project Review Number: <u>05PR04753</u> Site Name: <u>Vehicular Security Center at World Trade Center</u> Principal Investigator: <u>Warren Riess and Carrie Atkins Fulton</u> Affiliation: <u>AKRF, Inc. and Pemaquid Art &amp; Science</u> Address of Site: <u>Liberty, Cedar, Washington, and West Streets, New York, NY</u> Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>74°0'49.248"W 40°42'37.27"N</u>
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u> Artifact Name: <u>Mthales</u> Artifact Number: <u>F5 12-2</u> Material: <u>Condition:</u> Location: <u><math>5''</math></u> <u><math>5'''</math></u> <u><math>0 \\ 5'''</math></u> <u><math>5'''</math></u> <u><math>5''''</math></u> <u><math>0 \\ 5'''</math></u> (sided) <u><math>5''''''</math></u> (molded)
Number and type of fasteners:        SpikesTrunnelsOther (Describe:)         Photographs:in situfulldetails         Detailed Illustrations?         Associated Timbers:
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Scale: NO
Sketch by: N ~>

Site	Number: <u>A06101.018000</u> Date: <del>7</del> / <u>7</u> / <u>7</u> / <u>20</u>	10				
	HP Project Review Number: 05PR04753					
	Name: Vehicular Security Center at World Trade Center					
Principal Investigator: <u>Warren Riess and Carrie Atkins Fulton</u>						
	liation: AKRF, Inc. and Pemaquid Art & Science					
	ress of Site: Liberty, Cedar, Washington, and West Streets, New York, NY					
Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>74°0'49.248"W 40°42'37.27"N</u>						
Clie Arti	act Name: <u>Fulfully</u> Artifact Number: <u>FN</u>	n –				
Mat						
	$\begin{array}{cccccccccccccccccccccccccccccccccccc$					
Dim						
	(sided) (molded)					
Pho	ber and type of fasteners: SpikesTrunnelsOther (Describe:) ographs:in situfulldetails iled Illustrations?					
Asso	ciated Timbers:					
Note	s to past of M-1					
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Site Number: <u>A06101.018000</u> Date: <u>7</u> _/ <u>2</u> OPRHP Project Review Number: <u>05PR04753</u> Date: <u>7</u> _/ <u>2</u> Site Name: <u>Vehicular Security Center at World Trade Center</u> Principal Investigator: <u>Warren Riess and Carrie Atkins Fulton</u> Affiliation: <u>AKRF, Inc. and Pemaquid Art &amp; Science</u> Address of Site: Liberty, Cedar, Washington, and West Streets, New York, NY	
Block and Lot: Block 56, Lot 15       GPS Coordinates: 74°0'49.248"W 40°42'37.2         Client: LMDC_Name of Feature: Adrian         Artifact Name: Sulfuelds         Material:       Condition:	
Location: Dimensions: L 4 10 W $5.5 - 6.25^{\circ}$ D $4^{3}4^{11}$ (sided) (molded)	
Number and type of fasteners:         3*       Spikes         9       Trunnels         Other (Describe:         0         Photographs:       in situ         full       details         Detailed Illustrations?         Associated Timbers:	
Notes	
NE.	) — — —

Site Number: <u>A06101.018000</u>	Date: 7 / 25/2010
OPRHP Project Review Number: <u>05PR04753</u> Site Name: <u>Vehicular Security Center at World Trade Center</u> Principal Investigator: <u>Warren Riess and Carrie Atkins Fulton</u> Affiliation: <u>AKRF, Inc. and Pemaquid Art &amp; Science</u> Address of Site: <u>Liberty, Cedar, Washington, and West Streets, Ne</u> Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>74°0'49.24</u>	
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u> Artifact Name: Artifact Material: Condition: Location: Dimensions: L 2 " W (o D (sided)	t Number: $\underline{F5 - 14 - 2}$ 5 $\underline{4''}$ (molded)
Number and type of fasteners:         Spikes       , Trunnels         Other (Describe:         Photographs:	
MA Start Sta	FS 14 1 FS 14
Scale: Not Sketch by: CFUITM SCALE	a la constante de la constante

Site Number: <u>A06101.018000</u>	Date: 7 125 /2010
OPRHP Project Review Number: 05PR04753	
Site Name: Vehicular Security Center at World Trade Center	
Principal Investigator: Warren Riess and Carrie Atkins Fult	on
Affiliation: <u>AKRF</u> , Inc. and Pemaquid Art & Science Address of Site: <u>Liberty</u> , <u>Cedar</u> , <u>Washington</u> , and <u>West Stree</u>	nata Naw Vork NV
Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>74</u> °	
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u>	
Artifact Name:	Artifact Number: <u>FN 14</u> -
Material: Wood Condition: good	
Location:	
Dimensions: L $3'5''$ W $5,5''$ (sided)	D <u>5.5''</u> (molded)
longest (sided)	(molded)
Number and type of fasteners:	
SpikesTrunnelsOther (Describ	e:)
Photographs: in situ full details	
Detailed Illustrations?Associated Timbers:	
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Notes dignal Scand w spi	Le connection
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	- 6 '
Scale: NO	8 2 20 10
Sketch by: Fultm	

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Date: 7-1272010 Site Number: A06101.018000 **OPRHP Project Review Number: 05PR04753** Site Name: Vehicular Security Center at World Trade Center Principal Investigator: Warren Riess and Carrie Atkins Fulton Affiliation: AKRF, Inc. and Pemaquid Art & Science Address of Site: Liberty, Cedar, Washington, and West Streets, New York, NY GPS Coordinates: 74°0'49.248"W 40°42'37.27"N Block and Lot: Block 56, Lot 15 Client: LMDC Name of Feature: Adrian Artifact Number: FN14-7 Artifact Name: Futures Condition: Material: Wood <u>5.5</u><sup>1</sup> D <u>4,5</u> (sided) (mold.) Location: Novth Dimensions: L overall 675" (molded) Number and type of fasteners: \_ Spikes \_\_\_\_\_ Trunnels Other (Describe: Photographs: in situ full details Detailed Illustrations? Associated Timbers: Notes Dagmal Scarf 14-1 Into 4-7 4-Diagono D = 3.5б TDP 14-1 3'10'= 4711 67.5" NOT Scale: Sketch by: \_\_\_\_\_ Fultm

Site Number: <u>A06101.018000</u>	Date: 7 / 27/2010
OPRHP Project Review Number: 05PR04753	
Site Name: <u>Vehicular Security Center at World Trade C</u>	
Principal Investigator: <u>Warren Riess and Carrie Atkins</u> Affiliation: <u>AKRF</u> , Inc. and Pemaguid Art & Science	Fulton
Address of Site: Liberty, Cedar, Washington, and West	Streets New York NY
Block and Lot: Block 56, Lot 15 GPS Coordinates:	
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u>	
Artifact Name: Flyve Fearly	Artifact Number: FNU9-0
Artifact Name: Floor Frame Material: Condition:	
Material: Condition: Location: Dimensions: L W (sided)	1
Dimensions: L <u><math>90^{\circ}</math></u> W <u><math>6^{\prime}</math></u>	D
(sided)	(molded)
Number and type of fasteners:	
Spikes       Trunnels       Other (Destriction of the second seco	scribe:)
Photographs: in situ tull details	
Detailed Illustrations?Associated Timbers:	
Notes	
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	Site Number: <u>A06101.018000</u>				Date: 7 / 27/20	10
	OPRHP Project Review Number: <u>OPRHP Project Review Number</u>					
	Principal Investigator: Warren Rie					
	Affiliation: <u>AKRF, Inc. and Pemac</u>			1011		
	Address of Site: Liberty, Cedar, W	ashington	, and West St			
	Block and Lot: Block 56, Lot 15	GPS Co	ordinates: 74	°0'49.248	<u>"W 40°42'37.27"N</u>	
	Client: <u>LMDC</u> Name of Feature	: <u>Adrian</u>				
	Artifact Name: Futucks Material: ndwd C	anditions		Artifact	Number: <u>FS-</u>	19-2
	Location:	onanion	detol	Ionann		
	Dimensions: L65"	_ W	43/4	D	53/4"	
	Location: <u>South</u> Dimensions: L <u>G5"</u>		(sided)		(molded)	
-	Number and type of fasteners:					
(2)	Photographs: in situ		Other (Descri	ibe:	)	
č	Photographs: in situ	full	details			
	Detailed Illustrations?	19				
	Notes	2				
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	Sketch by: <u>C. KIhon</u>				2	
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Artifact Name:		ture: <u>Adria</u> Conditio		Artifact N	lumber: <u>F</u>	12-3
ocation: Dimensions: L	27"	W	5"	D	3''	
Number and type		<sup>26</sup> 585	(sided)		(molded)	
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12-3/1		, 14 <sup></sup>	S'h"	/ 12-0		
12-3/1		, 14	S'h"	/ 12-0		
12-3/1		11-1	S'h"	/ 12-0 1		

Vehicular Se	ecurity Center	at World '	<b>Frade Center:</b>	Vessel Inventory	Form

Address of	n: <u>AKRF, Inc. ar</u> of Site: <u>Liberty, (</u> 1 Lot: <u>Block 56,</u>	Cedar, Washingt	on, and West			2.27"N	2
Artifact N Material:	<u>MDC</u> Name of Name:	Conditio		Artifa	ct Number:	N12-1	
Location: Dimensio	ns: L _ <del>7</del> 5"	W	43/4" (sided)	D	5″ (molded)		
Number a Sp Photograj Detailed Associate	and type of faster ikes Tr ohs: in sit Illustrations? od Timbers:	ners: runnels tufull	Other (Des details 	cribe:	)		25
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	Site Number: <u>A06101.018000</u> OPRHP Project Review Number: <u>05PR047</u>	/53		Date: 7 / 28 /20	10
	Site Name: Vehicular Security Center at W		nter		
	Principal Investigator: Warren Riess and Carteria Strategies and Strategies and Strategies and Carteria Strategies and Strategies an				
	Affiliation: AKRF, Inc. and Pemaquid Art	& Science		2	
	Address of Site: Liberty, Cedar, Washingto				
	Block and Lot: <u>Block 56, Lot 15</u> GPS C	Coordinates: 74	4°0'49.24	48"W 40°42'37.27"N	
	Client: <u>LMDC</u> Name of Feature: <u>Adrian</u>				. –
	Artifact Name: Condition:		_ Artifa	ct Number: <u>FN12-</u>	5
	Material: Condition:				
	Location:	/18	D	7 I M	
	Location: Condition: Dimensions: L W	(sided)	_ D	(molded)	
	Number and type of fasteners:				
	Spikes Trunnels	Other (Desci	ribe:	)	
	Photographs: in situ full	details		h	
	Detailed Illustrations?				
	Associated Timbers:				
	Notes				
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	17-3/1				
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	Scale:				
	Sketch by: Christian honpson				

Site Number: A06101.018000				Date: 7 / 28	/2010
OPRHP Project Review Number	r: <u>05PR0</u>	4753			
Site Name: Vehicular Security C	Center at	World Trade Ce			
Principal Investigator: Warren R			<u>ulton</u>		
Affiliation: AKRF, Inc. and Pen				s	
Address of Site: Liberty, Cedar,					7 II N T
Block and Lot: Block 56, Lot 15			1°0'49.2	48"W 40°42'37.2	<u>/"N</u>
Client: <u>LMDC</u> Name of Feature	ire: <u>Adria</u>	<u>an</u>			a ali
Artifact Name: Material:	0 11.1		_ Artifa	ct Number: <u>+N</u>	13-5/1
Material:	Conditio	on:			<u> </u>
Location:	11/	21."	D	114	
Dimensions: L	••	(sided)		(molded)	_
		(brace)		(1101000)	
Number and type of fasteners:		Other (Desc	rihe	)	
Spikes Trunnels Photographs: in situ	, full	details		)	
Detailed Illustrations?					
Associated Timbers:					
Notes					
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Scale:					
Sketch by: Christian Tho	noson				×
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Site Number: <u>A06101.018000</u>		Date: 7/28	/2010
OPRHP Project Review Number			
Site Name: Vehicular Security C			
Principal Investigator: Warren R		Fulton	
Affiliation: AKRF, Inc. and Pem			*
Address of Site: Liberty, Cedar,			11 N T
Block and Lot: Block 56, Lot 15	GPS Coordinates:	<u>14°0'49.248" W 40°42'37.27</u>	<u>"N</u>
Client: <u>LMDC</u> Name of Featu	re: <u>Adrian</u>		-
Artifact Name: Material:		Artifact Number: FN1	5 3-0
Material:	Condition:		
Location: Dimensions: L <u>(10 1/2"</u>			
Dimensions: L $(0'/2'')$		$D = \frac{5}{2}$	- 31
	(sided)	(molded)	7
Number and type of fasteners:			
Spikes Trunnels	Other (De	scribe:)	
Photographs: in situ	_ full details		
Detailed Illustrations?			
Associated Timbers:			
Notes			
		2	
	1 1 1		
5-13"	- 1. 9"	5/"	
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12-1	- (		
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	- R - 1 - 1		
Scale:			
Sketch by: Christian Tho	nason		
	F		

Site Number: <u>A06101.018000</u> OPRHP Project Review Number Site Name: <u>Vehicular Security C</u> Principal Investigator: <u>Warren Ri</u> Affiliation: <u>AKRF</u> , Inc. and Pem Address of Site: <u>Liberty, Cedar</u> , <u>N</u> Block and Lot: <u>Block 56</u> , Lot 15	enter at World Trade Center less and Carrie Atkins Fulton	Date: / / <u>2010</u> w York, NY "W 40°42'37.27"N
Client: <u>LMDC</u> Name of Featur Artifact Name: Material: Location: Dimensions: L42''	re: <u>Adrian</u> Artifact Condition:Artifact W4'/بـــــD (sided)	Number: <u>FN 13-3</u> <u>4"</u> (molded)
Number and type of fasteners:        Spikes      Trunnels         Photographs:      in situ         Detailed Illustrations?	Other (Describe: full details	)
Notes	10 	
25	13-1 12 <sup>3</sup> 4"	36.
<z< td=""><td>12-1</td><td></td></z<>	12-1	
Scale: Sketch by: Christian Thom	npson	

Site Number: <u>A06101.018000</u>	Date: 7 / 28 /2010
OPRHP Project Review Number: <u>05PR04753</u> Site Name: <u>Vehicular Security Center at World</u> Principal Investigator: <u>Warren Riess and Carrie</u> Affiliation: <u>AKRF</u> , Inc. and Pemaquid Art & Sec Address of Site: <u>Liberty</u> , <u>Cedar</u> , <u>Washington</u> , and Block and Lot: <u>Block 56</u> , Lot <u>15</u> GPS Coord	Trade Center Atkins Fulton cience ad West Streets, New York, NY
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u> Artifact Name: Material: Condition: Location: Dimensions: L <u>78<sup>3</sup>/4'</u> W <u>5'/</u> (s	Artifact Number: FN 13-1 2'' D $5'/2''ided) (molded)$
Number and type of fasteners:	her (Describe:) etails
< Z 14-3 12"	
13-3	
Marco -	
Scale: Sketch by:	< # :

Vehicular Security Center at World Trade Center: Vessel Inventory Form
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Site Number: <u>A06101.018000</u>		Date: 7 / 28 /2010	
OPRHP Project Review Number: 05PR047 Site Name: Vehicular Security Center at W			
Principal Investigator: <u>Warren Riess and Ca</u>			
Affiliation: AKRF, Inc. and Pemaquid Art	& Science		
Address of Site: <u>Liberty, Cedar, Washingto</u>			
Block and Lot: <u>Block 56, Lot 15</u> GPS C	20010111ales: <u>74*049.248</u>	5 W 40 42 57.27 IN	
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u> Artifact Name:	Artifact	Number FNEFS 14	· D
Artifact Name: Condition:			_
Location:	-11	13/"	
Material: Condition: Location: Dimensions: L <u>127</u> W Number and type of fosteners:	D (sided)	(molded)	
Number and type of fasteners:	(SIGCO)	(molaca)	
Spikes Trunnels	Other (Describe:	)	
SpikesTrunnels Photographs:in situfull	details		
Detailed Illustrations?	7	2	
			8
		0	
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12 59%	Q"	reil	
	×	581/2	
E	I		- North
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13% "			
13-1	1		
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Scale:			
Sketch by: Christian Thompson			76.0

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Address of Site: ] Block and Lot: <u>B</u> Client: LMDC	Liberty, Cedar, W lock 56, Lot 15 Name of Feature	GPS Coordinate	est Streets, New Yo s: 74°0'49.248"W	40°42 <b>'37.</b> 27"N	
Artifact Name:	(	Condition:	Artifact Num	iber: <u>FN 14.7</u>	-
Location: Dimensions: L	253/4"		D3¼"(m	olded)	
Number and type Spikes Photographs: Detailed Illustrat	of fasteners: Trunnels in situ ions?	full Other (I	Describe:	)	
Notes					
K		-7			
ż	Z - 14	Z'/2"			
	1	1 13-1			a
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y 8	e U				

Client: <u>LMDC</u> Name of F Artifact Name: Material:	Conditio	Artifa	act Number: KIELSCN
Location: Dimensions: L 13'3'	//	/ 0 /2 D D	6" (molded)
Number and type of fastener Spikes Trun Photographs: in situ Detailed Illustrations? Associated Timbers:	nels full		2
Notes			
- A			
5			7 ''
			Þ 5"
$\succ$ $L''$		34 104	D 5 "

Site Number: <u>A06101.018000</u> OPRHP Project Review Number: 05PR04753	Date: 7 / 28/2010
Site Name: <u>Vehicular Security Center at World Trade Cer</u> Principal Investigator: <u>Warren Riess and Carrie Atkins Fu</u> Affiliation: <u>AKRF, Inc. and Pemaquid Art &amp; Science</u> Address of Site: <u>Liberty, Cedar, Washington, and West Si</u> Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>74</u>	<u>ulton</u> treets, New York, NY
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u> Artifact Name: Material:Condition: Location: Dimensions: L W(sided)	Artifact Number: $FN \ddagger FS 12' - O$ D $5'/4''$ (molded)
Number and type of fasteners:         Spikes       Trunnels       Other (Description of the secription of the secret of t	ribe:)
< 2 $12 - 3^{2'2'}$ $12 - 3^{2'2'}$ 11 - 1 11	" <u>-49</u> "   
Scale: Sketch by: Christian Thompson	

Vehicular Security	Center at World	d Trade Center:	Vessel Inventory	Form

Site Number: A06101.018000	Date: 7 / 2010
OPRHP Project Review Number: 05PR04753	
Site Name: Vehicular Security Center at World Trade C	Center
Principal Investigator: Warren Riess and Carrie Atkins	Fulton
Affiliation: AKRF, Inc. and Pemaquid Art & Science	
Address of Site: Liberty, Cedar, Washington, and West	
Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates:	74°0'49.248"W 40°42'37.27"N
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u>	
Artifact Name: Condition:	Artifact Number: FN II-1
Material: Condition:	
Location:	2 13/11
Dimensions: L <u><math>7612^{\circ}</math></u> W <u><math>612^{\circ}</math></u>	D <u></u>
Location: Dimensions: L 7612" W 612" (sided)	(molded)
Number and type of fasteners:	
Spikes Trunnels Other (De	scribe:)
Photographs:in situfulldetails	
Detailed Illustrations?	
Associated Timbers:	
Notes	
-	
×	
L12-0	
15"	
11-5	
57	
× 73/4	1
13"	and the second s
11-3 11-0	
	×.
Scale:	
Sketch by: Christian Thompson	

Client: <u>LMDC</u>	Name of Featu	re: <u>Adrian</u>		.248"W 40°42 <b>'37</b> .2	
Material:		Condition:			
Location: Dimensions: L	13"	W53/4 (sid	" D led)	<u>3'/2"</u> (molded)	
Number and type Spikes Photographs: Detailed Illustrat	of fasteners: Trunnels in situ ions?	Oth _fulldeta	er (Describe: ails	)	
	12-5 23'2" W000000000000000000000000000000000000	23/4"	12-3		

Site Name: Vehicular Security Conter at World Trade Center         Principal Investigator: Warren Riess and Carrie Atkins Fulton         Affiliation: AKRF. Inc. and Pemaquid Art & Science         Address of Site: Liberty, Cedar, Washington, and West Streets, New York, NY         Block and Lot: Block 56, Lot 15       GPS Coordinates: 74°049.248°W 40°42'37.27°N         Client: LMDC       Name of Feature: Adrian         Artifact Name:		Site Number: <u>A06101.018000</u>		Date: 7/28/2	010
Principal Investigator: Warren Riess and Carrie Atkins Fulton         Affiliation: AKRF, Inc. and Pemaquid Art & Science         Address of Site: Liberty, Cedar, Washington, and West Streets, New York, NY         Block and Lot: Block 56, Lot 15       GPS Coordinates; 74°049,248"W 40°42'37.27"N         Client: LMDC_Name of Feature: Adrian       Artifact Number: FAJ_IL-S		OPRHP Project Review Number: 05PR04753			
Affiliation: <u>AKRF, Inc. and Pemaquid Art &amp; Science</u> Address of Site: <u>Liberty, Cedar, Washington, and West Streets, New York, NY</u> Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>74°0'49:248"W 40°42'37.27"N</u> Client: <u>LMDC</u> Name of Feature: <u>Artifact Number:</u> <u>FAI //L-S</u> Material:					
Address of Site: Liberty, Cedar, Washington, and West Streets, New York, NY         Block and Lot: Block 56, Lot 15       GPS Coordinates: 74°0'49.248"W 40°42'37.27"N         Client: LMDC_Name of Feature: Adrian       Artifact Number: FN //L-S			lton		
Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>74°049.248"W 40°42'37.27"N</u> Client: <u>LMDC</u> Name of Feature: <u>Advian</u> Artifact Number: <u>FAJ //L-S</u> Material: Condition:				X7 1 XIX7	
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u> Artifact Name: Artifact Number: <u>FN //-S_</u> Material:Condition:D <u>274/"</u> Dimensions: L <u>14//2</u> W <u>4''</u> D <u>274/"</u> (sided) D <u>274/"</u> (molded) Number and type of fasteners:) SpikesTrunnels Other (Describe:) Photographs:in situfulldetails Detailed Illustrations? Associated Timbers: Notes 12-3/1 11-1 11-3/1 11-3/1				-	T
Artifact Name:		Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>74°</u>	0.49.24	18"W 40°42'37.27"r	<u>N</u>
Location: $\_$ Dimensions: LH'/_ZWH''DZ''_H''(sided) Number and type of fasteners: $\_$ SpikesTrunnelsOther (Describe:) Photographs: details Detailed Illustrations? Associated Timbers: Notes		Client: <u>LMDC</u> Name of Feature: <u>Adrian</u>			
Location: $\_$ Dimensions: LH'/_ZWH''DZ''_H''(sided) Number and type of fasteners: $\_$ SpikesTrunnelsOther (Describe:) Photographs: details Detailed Illustrations? Associated Timbers: Notes		Artifact Name:	Artifa	ct Number: <u>FN</u> /	1-5_
State:       State:         State:       State:		Material: Condition:			
State:       State:         State:       State:		Location:		$\neg 3/1"$	
State:       State:         State:       State:		Dimensions: L $ 4'/2 $ W $4''$	_ D	214	
State:       State:         State:       State:		(sided)		(molded)	
Photographs:       in situ       full       details         Detailed Illustrations?		Number and type of fasteners:			
Photographs:       in situ       full       details         Detailed Illustrations?		Spikes Trunnels Other (Describ	ibe:	)	
Associated Timbers:		Photographs: in situ full details			
Associated Timbers:		Detailed Illustrations?			
Sele:		Associated Timbers:			-3
Sele:		Notes			<b>z</b> 1
Scale: $\frac{12 - 3/1}{12 - 3/1}$					
Scale:					24 24
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Chotab by $1/\sqrt{1/\sqrt{1/\sqrt{1/\sqrt{1/\sqrt{1/\sqrt{1/\sqrt{1/\sqrt{1/\sqrt{1/$		State.			

Sketch by: Christian Monpson

Site Number: <u>A06101.018000</u> OPRHP Project Review Number: <u>05PR04753</u> Site Name: <u>Vehicular Security Center at World Trade Cen</u> Principal Investigator: <u>Warren Riess and Carrie Atkins Fu</u> Affiliation: <u>AKRF, Inc. and Pemaquid Art &amp; Science</u> Address of Site: <u>Liberty, Cedar, Washington, and West St</u> Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>74</u>	<u>ilton</u> treets, New York, NY
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u>	The second secon
Artifact Name: Condition:	Artifact Number: $TN 11 - S/1$
Material: Condition: Location: Dimensions: L $0''$ W $4'/_2''$ (sided)	
Dimensions: L( $0''$ W4'/ <sub>2</sub> ''	$\mathbf{D}$ $\mathbf{U}$
(sided)	(molded)
Number and type of fasteners:         Spikes       Trunnels         Other (Descr         Photographs:       in situ         full       details         Detailed Illustrations?	ribe:)
Notes	
11-5	

Scale: $11-5$ 11-3 11-3 11-3 11-3 11-3 11-3 10-3 11-3 10-3
Sketch by: _ Christian Thanpson

	Site Number: A06101.018000	Date: 7 / 28/2010	
	OPRHP Project Review Number: 05PR0		
	Site Name: Vehicular Security Center at		
	Principal Investigator: Warren Riess and		
	Affiliation: AKRF, Inc. and Pemaquid A		
	Address of Site: Liberty, Cedar, Washing		
		S Coordinates: 74°0'49.248"W 40°42'37.27"N	
	Client: <u>LMDC</u> Name of Feature: <u>Adrid</u>	<u>an</u>	
	Artifact Name: Cant Frame	IN Row? Artifact Number: FS6	
	Material: Wood Condition	$\frac{an}{10^{10} \text{ Row}^{7}}  \text{Artifact Number:}  F5.6$ on: <u>when definition at this of country</u> $\frac{f^{1}}{(y'4')'}  D = 5.34y''$ (sided) (molded)	
	Location: near Bow		
	Dimensions: $L 3^{\iota} 6.5^{\iota} W$	$- \frac{641}{2} D = 5341$	
	Imae st	(sided) (molded)	
	Number and type of fasteners:		
	<u>22</u> Spikes Trunnels	Other (Describe)	
	Photographs: in situ full	details	
	Detailed Illustrations?		
	Associated Timbers:		
		( is act in the second in the	
	Notes NO FRAMO ST	- likely not there in construct	101
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Site Number: <u>A06101.018000</u>	Date: 7 / <u>18/2010</u>
OPRHP Project Review Number: 05PR04753	
Site Name: Vehicular Security Center at World Trade Center	
Principal Investigator: <u>Warren Riess and Carrie Atkins Fulton</u> Affiliation: AKRF, Inc. and Pemaguid Art & Science	
Address of Site: Liberty, Cedar, Washington, and West Streets, 1	New York, NY
Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: 74°0'49.2	
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u> Artifact Name: <u>Mandel bow 7 Frame</u> Artif Material: <u>Woold</u> Condition: <u>3003</u> Location: <u>Bow 7 South</u> Dimensions: L <u>31911</u> W <u>34</u> $f$ D_ (sided)	act Number: FS X
Material: $2000$ Condition: $200$	
Location: Bow? south	$\sim 10^{41}$
Dimensions: L $3^{1}$ W $3^{4}$ L D	<u> </u>
	(molded)
Number and type of fasteners:	
<u>Spikes</u> Trunnels Other (Describe:	)
Detailed Illustrations?	
Associated Timbers:	
Notes <u>similar shape at top</u> <u>tapens to point @ Nend.</u>	
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3 No	
No Yro	
13" ISI 12" ISI 13" ISI 13"	
No No	= 22
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Site Number: <u>A06101.018000</u> OPRHP Project Review Number: <u>05PR04753</u> Site Name: <u>Vehicular Security Center at World Trade Center</u> Principal Investigator: <u>Warren Riess and Carrie Atkins Fulton</u> Affiliation: <u>AKRF, Inc. and Pemaquid Art &amp; Science</u> Address of Site: <u>Liberty, Cedar, Washington, and West Streets, N</u> Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>74°0'49.2</u>	
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u> Artifact Name: <u>Fullvelys</u> Artifa Material: <u>Condition:</u> Location: <u>Dimensions: L</u> <u>LO</u> <u>W</u> <u>5</u> <sup>(1)</sup> <u>D</u> (sided)	tet Number: $FS - 9/1$ $- 4^{12}$ (molded)
Number and type of fasteners:         Spikes       Trunnels       Other (Describe:         Photographs:       in situ       full       details         Detailed Illustrations?       Associated Timbers:       N P39-011         Notes       appravs       have       broken of H	4 top of FS-9
1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-	
Scale: N <sup>v</sup> Sketch by:	$N \rightarrow$

OP Site Prin Aff Ade	e Number: <u>A06101.018000</u> RHP Project Review Number: <u>05PR04753</u> e Name: <u>Vehicular Security Center at World Trade Cent</u> ncipal Investigator: <u>Warren Riess and Carrie Atkins Ful</u> filiation: <u>AKRF, Inc. and Pemaquid Art &amp; Science</u> dress of Site: <u>Liberty, Cedar, Washington, and West Str</u> ock and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>74°</u>	<u>ton</u> eets, New York, NY
Art Ma	terial: Condition:	Artifact Number: $F_{5}$ $9^{-2}$ D $5^{1}$ (molded)
<u>_</u> ∂ Pho Det Ass	mber and type of fasteners: <u>+?</u> Spikes TrunnelsOther (Descriptographs:in situfulldetails tailed Illustrations? sociated Timbers: tes	be:)
-		· · · · · · · · · · · · · · · · · · ·
indentation	20 21 21 21 21 21 21 21 21 21 21 21 21 21	
	le: $N^{0}$ teh by: <u>cpubn</u>	EIT. Footon

Site Number: <u>A06101.018000</u> Date: <u>7 / 28/2010</u>	
OPRHP Project Review Number: 05PR04753	
Site Name: Vehicular Security Center at World Trade Center Bringing Investigator: Worren Biggs and Carrie Atking Fulton	
Principal Investigator: <u>Warren Riess and Carrie Atkins Fulton</u> Affiliation: <u>AKRF, Inc. and Pemaquid Art &amp; Science</u>	
Address of Site: Liberty, Cedar, Washington, and West Streets, New York, NY	
Block and Lot: Block 56, Lot 15 GPS Coordinates: 74°0'49.248"W 40°42'37.27"N	
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u>	
Artifact Name: <u>Future</u> Artifact Number: <u>FS 10-2</u>	
Artifact Name: $f_{u}+f_{u}$ Condition: $g_{u}$ Artifact Number: $FS$ [0-2. Material: $g_{u}$ Condition: $g_{u}$	
Location:	
Dimensions: L $20.5$ W $10.5$ (sided) D $277$ (molded)	
Location: Dimensions: L $3'10.5''$ W D $5''$ Nongest (sided) (molded)	
Number and type of fasteners:	
Spikes       Trunnels       Other (Describe:       )         Photographs:       in situ       full       details	
Detailed Illustrations?	
Associated Timbers:	
Notes	
	8
< 12 NI O DE NJ 63/4" Kodo	
1 9 11 0 - 1 Hels	n
- ^	
51	
Scale: NO Sketch by: / Fulton / / Sketch by:	

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Site Number: <u>A06101.018000</u> Date: <u>7 /2 &amp; /2010</u>
OPRHP Project Review Number: 05PR04753
Site Name: Vehicular Security Center at World Trade Center
Principal Investigator: Warren Riess and Carrie Atkins Fulton
Affiliation: <u>AKRF, Inc. and Pemaquid Art &amp; Science</u> Address of Site: <u>Liberty, Cedar, Washington, and West Streets, New York, NY</u>
Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>74°0'49.248"W_40°42'37.27"N</u>
Cliente IMDO News (Destroy Alsing
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u> Artifact Name: Artifact Number: <u>FS-12-47</u> Material: Condition:
Material: Condition:
Material:       Condition:         Location:
Dimensions: L $('''''' W = 5'' D = 4''$
(sided) (molded)
Number and type of fasteners:
SpikesTrunnelsOther (Describe:)
Photographs: in situ full details
Detailed Illustrations?
Associated Timbers: Notes NLAN tup of 11-2 + 12 on south rise
Notes NEAN TUP of 11-2+12 on south side
0
22
< -
Scale: No
Sketch by: ful

Site Number: <u>A06101.018000</u> OPRHP Project Review Number: <u>05PR04753</u> Site Name: <u>Vehicular Security Center at World Trade Center</u> Principal Investigator: <u>Warren Riess and Carrie Atkins Fulton</u> Affiliation: <u>AKRF, Inc. and Pemaquid Art &amp; Science</u> Address of Site: <u>Liberty, Cedar, Washington, and West Street</u> Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>74°04</u>	s, New York, NY
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u> Artifact Name: <u>MHV ALS</u> An Material: <u>Wbb</u> Condition: <u>South</u> Location: <u>South</u> <u>Mid</u> Dimensions: L <u>315</u> " W <u>5.5</u> " D (sided)	
Number and type of fasteners:         52       Spikes       Trunnels       Other (Describe:         Photographs:       in situ       full       details         Detailed Illustrations?	
X =	
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La North Carl	
Scale: NV Sketch by: (Frlf~	$N \longrightarrow$

Site Number: <u>A06101.018000</u>		Date: 7-1	<u>28 /2010</u>
OPRHP Project Review Number: 05PR04	4753		
Site Name: Vehicular Security Center at	World Trade Ce	enter	
Principal Investigator: Warren Riess and		ulton	
Affiliation: AKRF, Inc. and Pemaquid An			
Address of Site: Liberty, Cedar, Washing			
Block and Lot: <u>Block 56, Lot 15</u> GPS	Coordinates: 7	4°0'49.248"W 40°42'3	<u>7.27"N</u>
Client: <u>LMDC</u> Name of Feature: <u>Adria</u>	<u>in</u>	_	
Artifact Name: Condition		_ Artifact Number: <u>F</u>	N&FS 11-0
Material: Condition	on:		
Location:Condition:Condition: Dimensions: L3 3/4 "W	53/11	m / "	
Dimensions: $L = 11,5,74$ w	<u>(sided)</u>	(molded)	
	(sided)	(molded)	
Number and type of fasteners:			
SpikesTrunnels Photographs:in situfull	Other (Desc		
Detailed Illustrations?	details		
Detailed Illustrations?			
Notes			
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8"	1	1	
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Scale:	9		
Sketch by: Christing Thompson	n		

	Site Number: <u>A06101.018000</u> OPRHP Project Review Number: <u>05PR04753</u> Site Name: <u>Vehicular Security Center at World Trade Cen</u> Principal Investigator: <u>Warren Riess and Carrie Atkins Ful</u> Affiliation: <u>AKRF, Inc. and Pemaquid Art &amp; Science</u> Address of Site: <u>Liberty, Cedar, Washington, and West Str</u> Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>74</u>	lton reets, New York, NY
	Client: <u>LMDC</u> Name of Feature: <u>Adrian</u> Artifact Name: Material: Condition: Location:	Artifact Number: <u>FN 11-3</u>
	Material: Condition: Location: Dimensions: L W 4'/4'' (sided)	$D = \frac{4^{\prime}/4^{\prime\prime}}{(\text{molded})}$
	Number and type of fasteners:        SpikesTrunnelsOther (Description of the second se	ibe:)
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V	Scale: $0 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + $	
	Sketch by: Christian Thompson	_

(a)	FN 14-3/1
	FN 14-3/1 Below 14-3 Vehicular Security Center at World Trade Center: Vessel Inventory Form Site Number: A06101.018000 OPRHP Project Review Number: 05PR04753 Date: 7.108/2010 14-/
	Vehicular Security Center at World Trade Center: Vessel Inventory Form
	Site Name: <u>Vehicular Security Center at World Trade Center</u> Principal Investigator: <u>Warren Riess and Carrie Atkins Fulton</u> Affiliation: <u>AKRF, Inc. and Pemaquid Art &amp; Science</u> Address of Site: <u>Liberty, Cedar, Washington, and West Streets, New York, NY</u> Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>74°0'49.248"W 40°42'37.27"N</u>
	Client: <u>LMDC</u> Name of Feature: <u>Adrian</u> Artifact Name: <u>plank ?</u> <u>colling</u> Artifact Number: <u>CS - (b)</u> Material: <u>Condition:</u> Location: <u>W 6.5"</u> D 1/2" D
	(sided) (molded)
	Number and type of fasteners:        Spikes      Trunnels        Spikes      Trunnels         Photographs:      full        details         Detailed Illustrations?            Associated Timbers:
	Notes <u>Between FS4/1+</u> <u>weder J B/W?</u> <u>fell or for support 7</u> <u></u>
1	Scale: NV
• (	Sketch by:

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Vehicular Security Center at World Trade Center	: Vessel Inventory Form	abové
Site Number: <u>A06101.018000</u> OPRHP Project Review Number: <u>05PR04753</u> Site Name: <u>Vehicular Security Center at World Trade Center</u> Principal Investigator: <u>Warren Riess and Carrie Atkins Fulton</u> Affiliation: <u>AKRF, Inc. and Pemaquid Art &amp; Science</u> Address of Site: <u>Liberty, Cedar, Washington, and West Streets</u> Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>74°0'49</u>		
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u> Artifact Name: <u><math> 4' c_{LWC} </math> (Powe (Pow?</u> ) Art Material: <u>Cook</u> Condition: <u><math>6'</math></u> Location: <u><math>B''</math></u> Dimensions: L <u><math>4' 1'2''</math></u> W <u>(sided)</u>	ifact Number: $FS - 1$ 5 (molded)	
Number and type of fasteners:        Spikes      Trunnels       Other (Describe:         Photographs:      in situ       full       details         Detailed Illustrations?          Associated Timbers:	)	
Notes		*
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stor internet		
Scale: ND		
Sketch by:		

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Site Number: A06101.018000	Date: 7 17/5/2010
OPRHP Project Review Number: 05PR04753	
Site Name: Vehicular Security Center at World Trade Cen	nter
Principal Investigator: Warren Riess and Carrie Atkins Fu	
Affiliation: AKRF, Inc. and Pemaquid Art & Science	
Address of Site: Liberty, Cedar, Washington, and West St	reets. New York, NY
Block and Lot: Block 56, Lot 15 GPS Coordinates: 74	
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u>	Adiante CS 4/1 + FS 4/2
Artifact Name: Can't being bisw	Artifact Number: $F_{3}$ $f_{2}$
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u> Artifact Name: <u>Cart Feame</u> <u>b(SW</u> 7 Material: <u>Condition:</u>	
Dimensional W	D
Dimensions: L w (oided)	_ D (moldod)
Material:Condition: Location: Dimensions: L W (sided)	(morded)
Number and type of fasteners:	
Spikes Trunnels Other (Descr	ibe:)
Photographs: in situ full details	
Detailed Illustrations?	
Associated Timbers:	
Notes turned on side + Brol	len :
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Scale: NS	
Sketch by:	_

<b>OPRHP</b> Project Review Number		Date: $+/$	
OF KITT TTOJECI KEVIEW MUILIDEI	: <u>05PR04753</u>		
Site Name: Vehicular Security C		enter	
Principal Investigator: Warren R	iess and Carrie Atkins F	ulton	
Affiliation: AKRF, Inc. and Pem			
Address of Site: Liberty, Cedar,		Streets, New York, NY	
Block and Lot: Block 56, Lot 15			27"N
	-		
Client: <u>LMDC</u> Name of Featu	re: <u>Adrian</u>		E+ FS E-1
Artifact Name: <u>Cant Bow</u>	) hear	_ Artifact Number: $\underline{P}$	
Material: word	Condition: <u>press</u>	JR	
Location: <u>B61/2</u>			
Dimensions: L		- D $ (111)$	
Client: <u>LMDC</u> Name of Featu Artifact Name: <u>Cart Bow</u> ? Material: <u>word</u> Location: <u>Bow</u> ? Dimensions: L	(sided)	(molded)	
Number and type of fasteners:			
SpikesTrunnels	Other (Desc	cribe:	
Photographs: in situ	full details		
Detailed Illustrations?			
Associated Timbers:			
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Berche		in psyl2	411
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3-10- SH SH		1011 KSY2	4" 2 2 2 2 2 2 2 2 2 2 3 2 3 2 3 2 3 2 3
3. 10. 12 SIL		Star 1842	
3. 10. Beicke		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
3-10-1-2-1 Beicke	A	1. Sylan 1. Syla	
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32	A A A A A A A A A A A A A A A A A A A	2/2 1. Jon 1. 101	

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Vehicular Security Center at World Trade Center: Vessel Inventory Form
Site Number: <u>A06101.018000</u> OPRHP Project Review Number: <u>05PR04753</u> Site Name: <u>Vehicular Security Center at World Trade Center</u> Principal Investigator: <u>Warren Riess and Carrie Atkins Fulton</u> Affiliation: <u>AKRF, Inc. and Pemaquid Art &amp; Science</u> Address of Site: <u>Liberty, Cedar, Washington, and West Streets, New York, NY</u> Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>74°0'49.248"W 40°42'37.27"N</u>
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u> Artifact Name: <u>Fulfuelus</u> Artifact Number: <u>Fulfuelus</u> Material: <u>Condition:</u> Location: <u>BGW</u> Dimensions: L <u>4'</u> W <u>3'4'</u> D <u>4''</u>
Dimensions: L $4^{\prime}$ W $3^{\prime}$ D $4^{\prime}$ (sided) D (molded)
Number and type of fasteners:        Spikes      Trunnels       Other (Describe:)         Photographs:      in situ       full      details         Detailed Illustrations?
Scale:

<sup>14</sup>1090

e

	Site Number: <u>A06101.018000</u> Date	e: 7 12K/2010
	OPRHP Project Review Number: 05PR04753	
	Site Name: Vehicular Security Center at World Trade Center	
	Principal Investigator: Warren Riess and Carrie Atkins Fulton	
	Affiliation: AKRF, Inc. and Pemaquid Art & Science	
	Address of Site: Liberty, Cedar, Washington, and West Streets, New Yo	rk. NY
	Block and Lot: Block 56, Lot 15 GPS Coordinates: 74°0'49.248"W	
	Client: <u>LMDC</u> Name of Feature: <u>Adrian</u>	011-11-1
	Artifact Name:       Outen       plank       Artifact Num         Material: $4554$ Condition: $aod$ Location: $North$ $aot$ $plank$ $D$ Dimensions:       L $3'3'2''$ W $9'4''$ $D$ $[3]$ (sided)       (m)	ber: <u><u>PIV - </u></u>
	Material: 4501 Condition: 2002	
	Location: Dorth last plank to F	2, 11
	Dimensions: L $\langle \cdot \cdot \cdot \cdot \rangle$ W $\langle \cdot \cdot \cdot \rangle$ D $[\cdot \cdot \cdot ]$	11.1
	(sided) (m	olded)
	Number and type of fasteners:	
	Y Spikes       Trunnels       Other (Describe:         Photographs:       in situ       full       details	
	Photographs: in situ full details	
	Detailed Illustrations?	
	Associated Timbers:	
	Notes	FN-Z
	only near FN-14	Below
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	Scale: NO	
);	Sketch by:	

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Site Number: <u>A06101.018000</u>	Date: $7 / 28 / 2010$	
OPRHP Project Review Number: 05PR04753		
Site Name: Vehicular Security Center at World Trade C	Center	
Principal Investigator: Warren Riess and Carrie Atkins		
Affiliation: <u>AKRF, Inc. and Pemaquid Art &amp; Science</u>		
Address of Site: Liberty, Cedar, Washington, and West	Streets, New York, NY	
Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates:		
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u>	415 101 - 1 - 3	
Artifact Name: Cart Ferr	Artifact Number: <u>FN</u>	
Material: Condition:		
Dia intervention:		
Dimensions: L $(\rho, \mathcal{D})$ W $(-i d \cdot d)$		
Dimensions: $L (o^3)^{1/2} W$ (sided)	(molded)	
Number and type of fasteners:		
2 <sup>7</sup> Spikes Trunnels Other (Des	scribe:)	
Photographs: in situ full details		
Detailed Illustrations?		
Associated Timbers:		
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Sketch by: Falton		
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Site Number: <u>A06101.018000</u> OPRHP Project Review Number: <u>05PR04753</u> Site Name: <u>Vehicular Security Center at World Trade Center</u> Principal Investigator: <u>Warren Riess and Carrie Atkins Fulton</u> Affiliation: <u>AKRF, Inc. and Pemaquid Art &amp; Science</u> Address of Site: <u>Liberty, Cedar, Washington, and West Streets, I</u> Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>74°0'49.2</u>	
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u> Artifact Name: <u>MMf frame in Dow</u> Artif Material: <u>Condition:</u> Location: <u>Jimensions: L 5 1 51' W 5'4</u> D (sided)	act Number: $\underline{FN - 2}$ ( $\rho$ '' (molded)
Number and type of fasteners:        Spikes      Trunnels       Other (Describe:         Photographs:      in situ       full       details         Detailed Illustrations?          Associated Timbers:	
Notes Fits in tighting w/ AP-1;	FN-1 at Eend.
Scale: N <sup>20</sup>	
Sketch by:	

Site Number: <u>A06101.018000</u>	Date: 7 / 28 /2010
OPRHP Project Review Number: <u>05PR04753</u>	
Site Name: <u>Vehicular Security Center at World Trade Center</u> Principal Investigator: <u>Warren Riess and Carrie Atkins Fulton</u>	
Affiliation: AKRF, Inc. and Pemaquid Art & Science	
Address of Site: Liberty, Cedar, Washington, and West Streets, N	
Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>74°0'49.24</u>	
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u> Artifact Name: <u>State in</u> Brow Artifact Material: Condition:	m = m - l
Artifact Name: <u>Material</u> Artifact	ct Number: $\underline{+1}$
Location:	
Dimensions: L $4^{1}2^{1}2^{1}$ W tapers D	5"
Location: Condition: Dimensions: L $\frac{1}{2}\frac{1}{2}\frac{1}{2}$ W $\frac{1}{4}\frac{1}{2}\frac{1}{2}\frac{1}{2}$ W $\frac{1}{4}\frac{1}{2}\frac{1}$	(molded)
Number and type of fasteners:	
Spikes       Trunnels       Other (Describe:         Photographs:       in situ       full       details	)
Detailed Illustrations?	
Associated Timbers:	
Notes Nail In side at tog - fits	against API
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Site Number: <u>A06101.018000</u>	Date: <u>7 / 26 /2010</u>	
OPRHP Project Review Number: 05PR04753		
Site Name: Vehicular Security Center at World Trade Center		
Principal Investigator: Warren Riess and Carrie Atkins Fulton		
Affiliation: AKRF, Inc. and Pemaquid Art & Science		
Address of Site: Liberty, Cedar, Washington, and West Streets, N		
Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>74°0'49.24</u>	<u>48"W 40°42'37.27"N</u>	
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u>	<u> </u>	
Artifact Name: <u>Centreal Frame</u> over stem <sup>7</sup> Artifa	ct Number: $\underline{-}(\underline{)}$	
Viaterial: Condition	/	
Location: Under the contained for the co		
Dimensions: L $\underline{1^{\prime}}$ $\underline{3}$ , $\underline{5^{\prime\prime}}$ $\underline{W}$ $\underline{5}$ $\underline{5}$ $\underline{D}$	3,5	
(sided)	(molded)	
Number and type of fasteners:		
Spikes Trunnels Other (Describe:	)	
Photographs: in situ full details		
Detailed Illustrations?		
Associated Timbers:		
Notes perfectly a top ST-1.	in line a	
appon? /	AP-1	
AP-1 age	ainst FIV-1 + FS-1	
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Scale: ND		
Sketch by: C. Fultm.		

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Site Number: A06101.018000	Date: 7 / 28/2010
OPRHP Project Review Number: 05PR04753	
Site Name: <u>Vehicular Security Center at World Trade Center</u> Principal Investigator: <u>Warren Riess and Carrie Atkins Fulton</u>	
Affiliation: AKRF, Inc. and Pemaquid Art & Science	
Address of Site: Liberty, Cedar, Washington, and West Streets, N	ew Vork NV
Block and Lot: Block 56, Lot 15 GPS Coordinates: 74°0'49.24	48"W 40°42'37 27"N
Cliente IMDO NI CE	
Artifact Name: Bow cand Frame? to 2 Artifa	at Number FE 1517
Artifact Name: <u>Bow cand Frame</u> ? top? Artifact Name: <u>Bow cand Frame</u> ? top? Artifact Name: <u>Neoken</u>	
Location: <u><math>B_{1}</math></u> Condition: <u><math>D_{k0}</math> ken</u> Dimensions: L <u><math>1^{1}</math></u> $7^{1}$ W <u><math>4^{11}</math></u> D (sided)	
Dimensions: L $7''_{2''}$ W $4''_{2''}$ D	31/2"
(sided)	(molded)
rugioer and type of fastemers:	
Spikes Trunnels Other (Describe:	)
Photographs: in situ full details	
Detailed Illustrations?	
Associated Timbers:	
Notes Broken from FSG	
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Scale: NO Sketch by:	

Site Number: A06101.018000	Date: 7 / 28/2010
OPRHP Project Review Number: 05PR047	53
Site Name: Vehicular Security Center at W	orld Trade Center
Principal Investigator: Warren Riess and Ca	arrie Atkins Fulton
Affiliation: AKRF, Inc. and Pemaquid Art	
Address of Site: Liberty, Cedar, Washingto	n, and West Streets, New York, NY
Block and Lot: <u>Block 56, Lot 15</u> GPS C	Coordinates: <u>74°0'49.248"W 40°42'37.27"N</u>
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u>	
Artifact Name: Cant hearne	Artifact Number: $FN 7-0$ $G_{15}$ D $5'4$ (molded)
Material: KOO } Condition:	- Gurber
Location:	
Dimensions: L7* W	(1,1) $(molded)$
	(sided) (molded)
Number and type of fasteners:	
Spikes Trunnels	_Other (Describe:)
Photographs: in situ full	
Detailed Illustrations?	
Associated Timbers: Notes 1'St Capt	6
Notes57 Cant	theome in ison :
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K 2-8 N-1 N-1 N-1 N-1 N-1 N-1 N-1 N-1 N-1 N-1	
Scale: Nº	
Sketch by:	

Vehicular Security Center at World Trade Center: Vessel Inventory Form
Site Number: <u>A06101.018000</u> Date: <u>7/28/2010</u> OPRHP Project Review Number: <u>05PR04753</u> Site Name: <u>Vehicular Security Center at World Trade Center</u> Principal Investigator: <u>Warren Riess and Carrie Atkins Fulton</u> Affiliation: <u>AKRF, Inc. and Pemaquid Art &amp; Science</u> Address of Site: <u>Liberty, Cedar, Washington, and West Streets, New York, NY</u> Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>74°0'49.248"W 40°42'37.27"N</u>
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u> Artifact Name: <u>Fuffuctor</u> Artifact Number: <u>FN-8-0</u> Material: <u>Condition:</u> Location: <u>Jimensions: L 7'3" W 5'4"</u> D 5'4" (sided) (molded)
Number and type of fasteners:         Spikes       Trunnels       Other (Describe:       )         Photographs:       in situ       full       details         Detailed Illustrations?
R = 1

Site Number: <u>A06101.018000</u> OPRHP Project Review Number: <u>05PR04753</u> Site Name: <u>Vehicular Security Center at World Trade Center</u> Principal Investigator: <u>Warren Riess and Carrie Atkins Fulton</u> Affiliation: <u>AKRF, Inc. and Pemaquid Art &amp; Science</u> Address of Site: <u>Liberty, Cedar, Washington, and West Streets, N</u> Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>74°0'49.2</u>	
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u> Artifact Name: <u>Hobk</u> <u>holse</u> Artifa Material: <u>Condition:</u> Location: <u>Undersolution</u> <u>S.5</u> D <u>Total</u> (sided)	
Dimensions: L <u>S.S.</u> W <u>S.S.</u> D (sided)	(molded)
Number and type of fasteners:	)
Notes	
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	5'

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	Site Number: A06101.018000 Date: 7 / 2010
	OPRHP Project Review Number: 05PR04753
	Site Name: Vehicular Security Center at World Trade Center
	Principal Investigator: Warren Riess and Carrie Atkins Fulton
	Affiliation: AKRF, Inc. and Pemaquid Art & Science
	Address of Site: Liberty, Cedar, Washington, and West Streets, New York, NY
	Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>74°0'49.248"W 40°42'37.27"N</u>
	Client: <u>LMDC</u> Name of Feature: <u>Adrian</u>
	Artifact Name: FVHU CUS Artifact Number: FN 9-5
	Location:
	Dimensions: L W D
	Material:Condition: Location: Dimensions: L W D (sided) (molded)
	Number and type of fasteners:
	Spikes Trunnels Other (Describe: )
	Photographs: in situ full details
	Detailed Illustrations?
	Associated Timbers:
	Notes 2 small preces
	a sinh france
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	21 2
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	- V
	2.7
	Scale:
	Sketch by:

c	Site Number: A06101.018000IOPRHP Project Review Number: 05PR04753ISite Name: Vehicular Security Center at World Trade CenterPrincipal Investigator: Warren Riess and Carrie Atkins Fulton	Date: 7 / 28/2010
	Affiliation: AKRF, Inc. and Pemaquid Art & ScienceAddress of Site: Liberty, Cedar, Washington, and West Streets, NewBlock and Lot: Block 56, Lot 15GPS Coordinates: 74°0'49.248"	<u>York, NY</u> W_40°42'37.27"N
	Client: <u>LMDC</u> Name of Feature: <u>Adrian</u> Artifact Name: <u>Ufbulk</u> Artifact N Material: <u>W55</u> Condition: Location: <u>Dimensions: L 7' 172" W 5'4"</u> D (sided)	Tumber: FN 9-1
	Dimensions: L $7$ $17$ $W$ $514$ $D$ (sided)	<u>5 1/4 11</u> (molded)
	Number and type of fasteners:         Spikes       Trunnels         Other (Describe:         Photographs:       in situ         full       details         Detailed Illustrations?         Associated Timbers:	)
	Notes	
14	ZE	
	NE STOR	
12	ET I I I	1
	Scale: NO CAF	20,6

Site Number: <u>A06101.018000</u> OPRHP Project Review Number: <u>05PR04</u> Site Name: <u>Vehicular Security Center at V</u> Principal Investigator: <u>Warren Riess and</u> Affiliation: <u>AKRF</u> , Inc. and Pemaquid Ar Address of Site: <u>Liberty</u> , <u>Cedar</u> , <u>Washing</u> Block and Lot: <u>Block 56</u> , Lot 15 GPS	<u>World Trade Center</u> Carrie Atkins Fulton t & Science
Client: <u>LMDC</u> Name of Feature: <u>Adria</u> Artifact Name: Material: Conditio Location: Dimensions: L 103.5 <sup>III</sup> W	Artifact Number: $FN - 10 < FS - 10$
Number and type of fasteners: SpikesTrunnels Photographs:in situfull	$\frac{5^{3}}{(\text{sided})} D \underbrace{5^{1}}_{(\text{molded})}$ $\underline{Other (Describe:)}_{\text{details}}$
Detailed Illustrations?         Associated Timbers:         Notes	
<u> </u>	
FN IU.	1 treelson _FS10
Scale: NY	
Sketch by:	

Site Number: <u>A06101.018000</u>	Date: / / <u>2010</u>	
OPRHP Project Review Number: 05PR04753		
Site Name: Vehicular Security Center at World Trade Center		
Principal Investigator: Warren Riess and Carrie Atkins Fulton		
Affiliation: AKRF, Inc. and Pemaquid Art & Science		
Address of Site: Liberty, Cedar, Washington, and West Streets, N		
Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>74°0'49.24</u>	<u>18"W 40°42'37.27"N</u>	
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u>		
Artifact Name: Artifact Material: Condition: Artifact Material: Condition: Artifact Material: Condition: Artifact Material: Condition: Artifact Material: Artifact Mate	ct Number: $FN 10-5$	
Material: Condition:		
Location: Dimensions: L ' / / / W @'/4 '' D (sided)	13/1	
Dimensions: L $(' 1)$ W $(o''4'' D )$	4 "4	
(sided)	(molded)	
Number and type of fasteners:		
Spikes Trunnels Other (Describe:	)	
Photographs: in situ full details		
Detailed Illustrations?		
Associated Timbers:		
Notes		
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Scale: UV	2	1
Sketch by:		

Site Number: A06101.018000	Date: $7/25/2010$
OPRHP Project Review Number: 05PR04753	
Site Name: Vehicular Security Center at World Trade C	enter
Principal Investigator: Warren Riess and Carrie Atkins I	
Affiliation: AKRF, Inc. and Pemaquid Art & Science	
Address of Site: Liberty, Cedar, Washington, and West	Streets New York NY
Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates:	
	11 0 19.210 W 10 12 31.27 11
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u>	$ = \sum_{i=1}^{n} \sum_{j=1}^{n} \sum_{i=1}^{n} \sum$
Artifact Name: Condition:	Artifact Number: $\underline{+N}$ $10^{-1}$ $+1^{1}N$ $10^{-1}$
Material: Condition:	/
Location:	11/2.10
Dimensions: L W	Dq
Initiality       Condition:         Location:	(molded)
Number and type of fasteners:	
SpikesTrunnelsOther (Des	cribe:
Photographs: in situ full details	
Detailed Illustrations?	
Associated Timbers:	
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Scale: NO 5	
Sketch by:	

Site Number: <u>A06101.018000</u> Date:	7/28/2010
OPRHP Project Review Number: 05PR04753	
Site Name: Vehicular Security Center at World Trade Center	
Principal Investigator: Warren Riess and Carrie Atkins Fulton	÷.
Affiliation: AKRF, Inc. and Pemaquid Art & Science	
Address of Site: <u>Liberty, Cedar, Washington, and West Streets, New York, I</u> Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>74°0'49.248"W 40°4</u>	
	1231.27 11
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u>	EN1-11-0
Artifact Name: Floor Artifact Number	
Location:	2
(sided) (molde	ed)
Number and type of fasteners:	
SpikesTrunnelsOther (Describe:	)
Photographs: in situ full details	
Detailed Illustrations?	
Associated Timbers:	
Notes	
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4'G" 112" 16" ( D=54 4'1	
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Scale: NO (C. 1)	
Sketch by: Fulhov	

	Site Number: <u>A06101.018000</u> Date: $7/28/2010$	<u>)</u>
	OPRHP Project Review Number: 05PR04753	
	Site Name: <u>Vehicular Security Center at World Trade Center</u> Principal Investigator: <u>Warren Riess and Carrie Atkins Fulton</u>	
	Affiliation: AKRF, Inc. and Pemaquid Art & Science	
	Address of Site: Liberty, Cedar, Washington, and West Streets, New York, NY	
	Block and Lot: Block 56, Lot 15 GPS Coordinates: 74°0'49.248"W 40°42'37.27"N	1
24		
	Client: <u>LMDC</u> Name of Feature: <u>Adrian</u> Artifact Name: CAAL Fraction	0
	Material: ALDON Condition: QAA	
	Location: 130W	-
	Dimensions: L '86" W 5.5-6.5" D 5.5"	
	Artifact Name:Can'tFrameArtifact Number: $F_N 6 - 0$ Material:W 002Condition: $Q_N$ Location: $B_0 N$ $Q_0 - 0$ Dimensions: L $B_0''$ $W - 5.5 - 6.5''$ $D - 5.5''$ (sided)(molded)	
	Number and type of fasteners:	
	2       Spikes       Trunnels       Other (Describe:       )         Photographs:       in situ       full       details	
	Detailed Illustrations?	d =
	Associated Timbers:	
	Notes	
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	Sketch by: E Meade	Ň.

Vehic	
	ular Security Center at World Trade Center: Vessel Inventory Form
Site Number 1	A06101.018000 Date: 7 / 28/2010
	t Review Number: 05PR04753
	nicular Security Center at World Trade Center
	tigator: Warren Riess and Carrie Atkins Fulton
	RF, Inc. and Pemaquid Art & Science
	: Liberty, Cedar, Washington, and West Streets, New York, NY
	$\frac{\text{Block 56, Lot 15}}{\text{GPS Coordinates: } 74^\circ0'49.248''W 40^\circ42'37.27''N}$
,	
Client: <u>LMDC</u>	<u>Condition</u> : <u>Adrian</u> <u>UNKNOW</u> <u>OJECCS</u> IN BOW Artifact Number: <u>BP</u> PLO
Artifact Name:	Condition:
	Condition:
Dimensional I	WD (sided) (molded)
Dimensions. L	WD (sided) (molded)
Number and typ	
Spikes	
	in situ full details ations?
Associated Tim	
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Notes	Rough sketch of Bow pieces
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Scale:	38 12 12 12 12 12 14 19 11 11
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Site Name: <u>Vehicular Security Center at World Trade Center</u> Principal Investigator: <u>Warren Riess and Carrie Atkins Fulton</u> Affiliation: <u>AKRF, Inc. and Pemaquid Art &amp; Science</u>	
Address of Site: Liberty, Cedar, Washington, and West Streets, New York, NYBlock and Lot: Block 56, Lot 15GPS Coordinates: 74°0'49.248"W 40°42'37.27"N	
Client:       LMDC_Name of Feature:       Adrian         Artifact Name:       APPON       Artifact Number:         Material:       Condition:         Location:       D         Dimensions:       L         V       (sided)	<u> </u>
Number and type of fasteners:        Spikes       Trunnels        Spikes      full         Photographs:      full        details         Detailed Illustrations?            Associated Timbers:	12.
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Scale: Sketch by: KRIESS	
Sketch by: PRIES	S A

Site Number: <u>A06101.018000</u>	Date: 7/302010
OPRHP Project Review Number: 05PR04753	,
Site Name: Vehicular Security Center at World Trade Center	
Principal Investigator: <u>Warren Riess and Carrie Atkins Fulton</u> Affiliation: AKRF, Inc. and Pemaquid Art & Science	
Address of Site: Liberty, Cedar, Washington, and West Streets, N	lew York, NY
Block and Lot: Block 56, Lot 15 GPS Coordinates: 74°0'49.2	
Client: LMDC Name of Feature: Adrian	
Artifact Name: Artifa Material: Condition:	ct Number: LOG S
Material: Condition:	
Dimensions: L <u>3'6''</u> W <u>(o" dra</u> D (sided)	
Dimensions. L $3.6$ w $6.6$ (sided)	(molded)
Number and targe of foster and	
Number and type of fasteners:          Spikes        Other (Describe:Other)	)
Photographs: in situ full details	
Detailed Illustrations?	
Associated Timbers:	
Notes	
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Scale: NV	
Sketch by:	

Site Number: A06101.018000Date: 7/29OPRHP Project Review Number: 05PR04753Date: 7/29Site Name: Vehicular Security Center at World Trade Center	/2010
Principal Investigator: <u>Warren Riess and Carrie Atkins Fulton</u> Affiliation: <u>AKRF, Inc. and Pemaquid Art &amp; Science</u> Address of Site: <u>Liberty, Cedar, Washington, and West Streets, New York, NY</u> Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>74°0'49.248"W 40°42'37.27</u>	0 - 1
Client:       LMDC       Name of Feature:       Adrian         Artifact Name:       apron + plank station lines       Artifact Number:         Material:       Condition:	
Number and type of fasteners:	
Spikes Trunnels Other (Describe:)	
Photographs: in situ full details Detailed Illustrations?	
Associated Timbers:	
Notes measured perpendicular to apron	э
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	Site Number: A06101.018000	Date: $7/29/2010$
\$	OPRHP Project Review Number: 05PR04753	
	Site Name: Vehicular Security Center at World Trade Center	
	Principal Investigator: Warren Riess and Carrie Atkins Fulton	
	Affiliation: AKRF, Inc. and Pemaquid Art & Science	
9	Address of Site: Liberty, Cedar, Washington, and West Streets, Nev	v York, NY
	Block and Lot: Block 56, Lot 15 GPS Coordinates: 74°0'49.248	
	Client: <u>LMDC</u> Name of Feature: <u>Adrian</u>	
	Artifact Name: <u>Apriso + Bow planks port</u> Artifact	Number:
	Material: Condition:	
	Location:	
	Dimensions: L W D	
	(sided)	(molded)
11	Number and type of fasteners:	
	Spikes Trunnels Other (Describe:	)
	Photographs: in situ, full details	
	Detailed Illustrations?	
	Associated Timbers:	×
	Notes station lines going out from aprov	2. March call +
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Site Number: A06101.018000DOPRHP Project Review Number: 05PR04753DSite Name: Vehicular Security Center at World Trade CenterPrincipal Investigator: Warren Riess and Carrie Atkins FultonAffiliation: AKRF, Inc. and Pemaquid Art & ScienceAddress of Site: Liberty, Cedar, Washington, and West Streets, New YBlock and Lot: Block 56, Lot 15GPS Coordinates: 74°0'49.248"Y	
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u> Artifact Name: Artifact Name: Artifact Naterial: Condition: Artifact Name:	umber: <u>PN 10 - 2</u>
Naterial.     Condition.       Location:	(molded)
Number and type of fasteners: <u>2</u> Spikes Trunnels Other (Describe: Several Photographs: in situ full details Detailed Illustrations? Associated Timbers: <u>W. of 10-1</u> , <u>N. of 9-1</u> , <u>E. of 10-3</u>	(nails)
Notes	2
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Sketch by: E We de

Vehicular Securi	ty Center at W	orld Trade C	enter: Vess	el Inventory	Form	
Site Number: <u>A06101.018</u> OPRHP Project Review Nu Site Name: <u>Vehicular Secu</u> Principal Investigator: <u>War</u> Affiliation: <u>AKRF, Inc. and</u> Address of Site: <u>Liberty, C</u> Block and Lot: <u>Block 56, L</u>	Imber: <u>05PR04</u> rity Center at V ren Riess and ( 1 Pemaquid Art edar, Washingt	Vorld Trade Ce Carrie Atkins F & Science on, and West S	nter ulton			°
Client: <u>LMDC</u> Name of Artifact Name: Material:	Condition	1:	_ Artifact N	Number: <u>PN</u>	1 10 - 1	
Location: Dimensions: L HG'	W	4.5" (sided)	_ Ð	(molded)	_ 87" to kee 89""	I @ EastEn
Number and type of fastene SpikesTru Photographs:in situ Detailed Illustrations? Associated Timbers: Notes	ers: nnels full PN10-2, N	Other (Desc details	-1	)		а <sup>са</sup>
	hethered		Spitter	5		
Scale: Sketch by: <u>E. Ineade</u>		-				8

Vehicular Secu	rity Center at World T	rade Center: Vessel Invento	ory Form
	Number: 05PR04753 curity Center at World T Varren Riess and Carrie A and Pemaquid Art & Scie Cedar, Washington, and	Atkins Fulton	Ĩ
Client: <u>LMDC</u> Name of Artifact Name: Material: Location: Dimensions: L	Condition	Artifact Number:	10-3 + PN 10 - 4 + PN 10-5
Number and type of faste <u>Norf</u> Spikes T Photographs: in s Detailed Illustrations? Associated Timbers: <u>S</u> . Notes	eners: Trunnels Other itufulldeta fulldeta of PN 11-1+11-2-4 of PN 11-1+11-2-4 fulldeta	er (Describe: ils J 10-2, w of PN 10-5,	) <u>N et</u> PN 9-2 + 9-1
Jerry der 8.5" Spilos	0 0 0 0 PN 10 - 4	50" 1.75" 1.75"	Clean-cut on all Sides PN 10-3
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Site Number: A06101.018000	Date: 7 / 29/2010
OPRHP Project Review Number: 05PR0	
Site Name: Vehicular Security Center at	
Principal Investigator: Warren Riess and	
Affiliation: AKRF, Inc. and Pemaguid A	
Address of Site: Liberty, Cedar, Washing	
	Coordinates: 74°0'49.248"W 40°42'37.27"N
Client: <u>LMDC</u> Name of Feature: <u>Adria</u>	
Artifact Name:	Artifact Number: <u>PN 11 - 2</u> + 11 - 2/3
Material: Condition	on:
Location:	
Dimensions: L W	D
Material: Condition Location: Dimensions: L W	(sided) (molded)
Number and type of fasteners:	
MANY_SpikesTrunnels	Other (Describe:
Photographs: in situ full	details
Detailed Illustrations?	1 a a a a a a a a a a a a a a a a a a a
Associated Timbers: N. OF PN 10-	4, W. 06 PN 11-2-A, S. 06 PN 12-1 and 12-2, E of
Notes	)   -
Notes	
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0 0 26	Ч
• 101 PN 11-2A	PN 11-2 0 22.5' 10.5"
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69 10 24"	
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Scale:	24
Sketch by: EDM	

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Site Number: A06101.018000 Date: <u>7 / 29 /2010</u>
OPRHP Project Review Number: 05PR04753
Site Name: Vehicular Security Center at World Trade Center
Principal Investigator: Warren Riess and Carrie Atkins Fulton
Affiliation: AKRF, Inc. and Pemaquid Art & Science
Address of Site: Liberty, Cedar, Washington, and West Streets, New York, NY
Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>74°0'49.248"W 40°42'37.27"N</u>
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u> Artifact Name: <u>PN 11-3, 11-3</u> -A, 11-3-O,
Activity OpenAltions 2-11 C
Location: D
Dimensions: L         W         D           (sided)         (molded)
(Sided) (included)
Number and type of fasteners:
SpikesTrunnelsOther (Describe:)
Photographs: in situ full details
Detailed Illustrations?
Associated Timbers: $W \circ f 11 - 2A$ , $S \circ F 12 - 4 + 12 - 5$ , $F 12 - 5$
Associated Timbers: $W \circ f 11 - 2A$ , $S \circ F 12 - 4 + 12 - 3$ , $F 12 - 5$ Notes 12-4-7 73" to apon, $11 - 3 = 61$ " to apon 12-5= 68" to apon
Very Jaticiary trd
$1 = 9.25'' \qquad PN 12.5 \qquad PN 12.5 \qquad PN 12.4 \qquad PN 12.3 \qquad P$
1 = 9.25'' $1 = 7.5''w = 9.5''$
u = 8.25'' - (PH 12-5) + (U = 9.5'') + (V
5" 25 712-4 13" PN 12-3
IO' VOID
1=8" 11-3 (1020 CAMAGE? 0 9.75"
L=8" (11-3 ) 10" (1-3A 0 9.75"
13" D 8.25" 11"
(PN 10-5) Nail hole
(PN 10-4)
67.5" to apron
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V
Scale:
Sketch by: <u>FOM</u>

	venicular Security Center at work frade Center. Vesser inventory Form
	Site Number: A06101.018000       Date: 1 / 29/2010         OPRHP Project Review Number: 05PR04753       Site Name: Vehicular Security Center at World Trade Center         Principal Investigator: Warren Riess and Carrie Atkins Fulton       Affiliation: AKRF, Inc. and Pemaquid Art & Science         Address of Site: Liberty, Cedar, Washington, and West Streets, New York, NY
3	Block and Lot: Block 56, Lot 15       GPS Coordinates: 74°0'49.248"W 40°42'37.27"N         Client: LMDC_Name of Feature: Adrian       Artifact Number: 10-6 + 11-4         Artifact Name:       Condition:         Material:       Condition:         Location:       D         0       (sided)         (molded)
	Number and type of fasteners:
	$ \begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \end{array}\\ \end{array}\\ \end{array}\\ \end{array}\\ \begin{array}{c} \end{array}\\ \end{array}\\ \begin{array}{c} \end{array}\\ \end{array}\\ \begin{array}{c} \end{array}\\ \end{array}\\ \begin{array}{c} \end{array}\\ \end{array}\\ \begin{array}{c} \end{array}\\ \end{array}\\ \end{array}\\ \begin{array}{c} \end{array}\\ \end{array}\\ \begin{array}{c} \end{array}\\ \end{array}\\ \end{array}\\ \begin{array}{c} \end{array}\\ \end{array}\\ \begin{array}{c} \end{array}\\ \end{array}\\ \end{array}$ \left) \begin{array}{c} \end{array}\\ \end{array}\\ \end{array} \left) \begin{array}{c} \end{array}\\ \end{array}\\ \end{array} \left) \begin{array}{c} \end{array} \left) \end{array} \left) \begin{array}{c} \end{array} \left) \end{array} \left) \end{array} \left) \begin{array}{c} \end{array} \left) \bigg
	Scale: Sketch by: EDM

Site Number: A06101.018000	Date: 7 / 29 /2010
OPRHP Project Review Number: 05PR04753	<b>/ _</b>
Site Name: Vehicular Security Center at World Th	rade Center
Principal Investigator: Warren Riess and Carrie A	
Affiliation: AKRF, Inc. and Pemaquid Art & Scie	
Address of Site: Liberty, Cedar, Washington, and	
Block and Lot: Block 56, Lot 15 GPS Coordin	
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u>	PN
Artifact Name:	Artifact Number: /2-1 /2-2 /2-3
Artifact Name: Condition:	
Location:	
Dimensions: L W	D
Material: Condition: Location: Dimensions: L W (side	ed) (molded)
Number and type of fasteners:	r (Describe)
Spikes       Trunnels       Other         Photographs:       in situ       full       deta	
Detailed Illustrations?	115
Associated Timbers: $N \ge F \parallel -2A + \parallel -2$	
Notes	
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	""" depressed == 21.5" W= 4.75"
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	Vehicular Security Center at World Trade Ce	enter: Vessel Invento <b>ry</b> Form	
191	Site Number: <u>A06101.018000</u> OPRHP Project Review Number: <u>05PR04753</u> Site Name: <u>Vehicular Security Center at World Trade Cen</u> Principal Investigator: <u>Warren Riess and Carrie Atkins Fu</u> Affiliation: <u>AKRF, Inc. and Pemaquid Art &amp; Science</u> Address of Site: <u>Liberty, Cedar, Washington, and West St</u> Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>74</u>	ulton treets, New York, NY	
	Client: <u>LMDC</u> Name of Feature: <u>Adrian</u> Artifact Name: Material: Condition: Location:		
	Dimensions: L 1914 W (sided)	D (molded)	
	Number and type of fasteners:	ribe:)	)
1.e		30"	
	56"-1 *	SPIKE "from Wost I 30 end of timber 1'2"II	
		. 3-2	_
	39" to ICEEL	· 21/2"	
	Scale: Sketch by: L RIESS		1

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Site Number:A06101.018000Date: $7/27/2010$ OPRHP Project Review Number:05PR04753Site Name:Vehicular Security Center at World Trade CenterPrincipal Investigator:Warren Riess and Carrie Atkins FultonAffiliation:AKRF, Inc. and Pemaquid Art & ScienceAddress of Site:Liberty, Cedar, Washington, and West Streets, New York, NYBlock and Lot:Block 56, Lot 15GPS Coordinates: 74°0'49.248"W 40°42'37.27"N
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u> Artifact Name: Artifact Number: $P52-$ Material: Condition: Location: Dimensions: L <u>195<sup>11</sup></u> W <u>12<sup>3</sup>/4</u> D (sided) (molded)
Number and type of fasteners: Spikes Trunnels Other (Describe:) Photographs:in situfull details Detailed Illustrations? Associated Timbers: $1 - 1 + 1 + 1 + 2 - 1 + 3 - 2 + 5$ Notes
195" 12 <sup>3</sup> /4 12 <sup>3</sup> /4 12 <sup>3</sup> /4 12 <sup>3</sup> /4 10 <sup>5</sup> /
Scale: Sketch by: Kiess

Site Number: <u>A06101.018000</u> OPRHP Project Review Number: <u>05PR04753</u> Site Name: <u>Vehicular Security Center at World Tra</u> Principal Investigator: <u>Warren Riess and Carrie Atl</u> Affiliation: <u>AKRF</u> , Inc. and Pemaquid Art & Scien Address of Site: <u>Liberty</u> , Cedar, Washington, and Y	<u>kins Fulton</u> I <u>ce</u> West Streets, New York, NY
Block and Lot: Block 56, Lot 15       GPS Coordination         Client: LMDC_Name of Feature: Adrian         Artifact Name:         Material:       Condition:         Location:       1         Dimensions: L       2265         W	Artifact Number: $pg \cdot 3 - 2$
Number and type of fasteners: Spikes Trunnels Other Photographs: in situ full detail Detailed Illustrations? Associated Timbers: $4 - 2A$ , $5 - 3 + s$ ; $2 - 2$ Notes	(Describe:)
12	
164" 42A served	
13.5" Spille Spille	APPORT 4'5"
25" L	2'2'
Scale:	
Sketch by:	

Sketch by:

Vehicular Security	Center at	World	Trade Center:	Vessel I	[nvento	ry Form
					107	0-

	Site Number: A06101.018000		Date: 7 16	7 /2010
	OPRHP Project Review Number:			(
	Site Name: <u>Vehicular Security Cen</u> Principal Investigator: <u>Warren Rie</u>			
	Affiliation: AKRF, Inc. and Pemae			
	Address of Site: Liberty, Cedar, W	ashington, and West S		
	Block and Lot: Block 56, Lot 15	GPS Coordinates: 74	4°0'49.248"W 40°42'37	<u>.27"N</u>
	Client: <u>LMDC</u> Name of Feature	: <u>Adrian</u>	×	20 2 1
	Artifact Name: C	ondition:	_ Artifact Number:	<u> </u>
	Location:C Dimensions: L99.5	34.		
	Dimensions: L 99.5	_w13.74	D	
		(sided)	(molded)	
	Number and type of fasteners:	Other (Dese	rih a.	
	Spikes Trunnels Photographs: in situ	full details	noe)	
	Detailed Illustrations?			
	Detailed Illustrations? Associated Timbers: $2 - 1$ , N	4-162,5;	3-2W	
	Notes			
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		19'2		
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	2-		1	
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		с 15		
			1/24 3/	4 IZDEL
_	Scale:		V ~ I	- I-Let
	Sketch by:			

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	Site Number:A06101.018000Date: $7/29/2010$ OPRHP Project Review Number:05PR04753Site Name:Vehicular Security Center at World Trade CenterPrincipal Investigator:Warren Riess and Carrie Atkins FultonAffiliation:AKRF, Inc. and Pemaquid Art & ScienceAddress of Site:Liberty, Cedar, Washington, and West Streets, New York, NYBlock and Lot:Block 56, Lot 15GPS Coordinates:74°0'49.248"W40°42'37.27"N	
	Client: <u>LMDC</u> Name of Feature: <u>Adrian</u> Artifact Name: Artifact Number: <u>PS [-]</u> Material: Condition: Location: Dimensions: L <u>2/4</u> <sup>t/t</sup> W D (sided) (molded)	
	Number and type of fasteners:   Spikes   Trunnels   Other (Describe:   Photographs: in situ full details Detailed Illustrations? Associated Timbers: KEEL to NOMTH Notes	
	GOES UNDER APRON	
	314".	
1	BROKEN 12'4" B'3" Ødistance to keel APRON 2'4"	
	Scale:	21
	Sketch by: L RIESS	8

venicular Se	curity Center at World T	rade Center: Ve	essel Inventory Form
	.018000 w Number: <u>05PR04753</u> Security Center at World T	rade Center	Date: 7/29/2010
Principal Investigator:	Warren Riess and Carrie A . and Pemaquid Art & Scie	tkins Fulton	
Address of Site: Libert	y, Cedar, Washington, and 66, Lot 15 GPS Coordin	West Streets, Ne	
	e of Feature: <u>Adrian</u> Condition:	Artifac	t Number: <u>PS 6-1</u>
Location: Dimensions: L	W(side	D	(molded)
Number and type of fas			(molded)
Spikes	Trunnels Othe	er (Describe:	)
Photographs: in	situ full deta	1ls	
<b>Detailed</b> Illustrations?			
Detailed Illustrations? Associated Timbers:	ABSOC. C PS5	1 (+ o ī	HE NORTH OF
Detailed Illustrations? Associated Timbers: Notes	ABSOC. C PS5	1 (to ī	HE NORTH OF
Detailed Illustrations? Associated Timbers:	ASSOC. C PSS	( to ī	HE NORTH OF
Detailed Illustrations? Associated Timbers:	ASSOC. O PSS	( to ī	
Detailed Illustrations? Associated Timbers:	ASSOC. C PSS	( to ī	TO KEEL EDGO
Detailed Illustrations? Associated Timbers:	ASSOC. O PSS	( to ī	
Detailed Illustrations? Associated Timbers:	ASSOC. O PSS	( to ī	
Detailed Illustrations? Associated Timbers:			
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Detailed Illustrations? Associated Timbers:	BAL		
Detailed Illustrations? Associated Timbers:	BAL		
Detailed Illustrations? Associated Timbers:	BAL		

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	Site Number: A06101.018000	Date: 7 / 29/2010
	DPRHP Project Review Number: 05PR04753	
1	Site Name: Vehicular Security Center at World Trade Center	
]	Principal Investigator: Warren Riess and Carrie Atkins Fulton	
	Affiliation: AKRF, Inc. and Pemaquid Art & Science	
	Address of Site: Liberty, Cedar, Washington, and West Streets, N	
	Block and Lot: Block 56, Lot 15 GPS Coordinates: 74°0'49.24	48"W 40°42'37.27"N
(	Client: <u>LMDC</u> Name of Feature: <u>Adrian</u>	
3	Artifact Name: Artifa Material: Condition:	ct Number: $PS 6 - 2$
	Material: Condition:	
	Location:	
	Dimensions: L $//5^{\prime\prime}$ W $//2$ D	
	Material:Condition: Location: Dimensions: L75 '' W6/2 D (sided)	(molded)
	Number and type of fasteners:	
	SpikesTrunnelsOther (Describe:	)
•	Photographs: in situ full details	
•	Detailed Illustrations?	
r.	Detailed Illustrations? Associated Timbers: To NorTH	
•	Notes	
r		
	75"	
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	w 62	-
	TOKEEL	TO KEEL
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- 6	57" Saalar	~~ A
	Scale: Sketch by: $A \mid E \leq S$	
	Sketch by: 12 16 3-3	

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venicular Security Center at world	I rade Center: Vessel Inventory Form
Site Number: <u>A06101.018000</u> OPRHP Project Review Number: <u>05PR04753</u> Site Name: <u>Vehicular Security Center at World</u> Principal Investigator: <u>Warren Riess and Carrie</u> Affiliation: <u>AKRF, Inc. and Pemaquid Art &amp; Soc</u> Address of Site: <u>Liberty, Cedar, Washington, ar</u> Block and Lot: <u>Block 56, Lot 15</u> GPS Coord	Atkins Fulton cience nd West Streets, New York, NY
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u> Artifact Name: Material: Condition: Location: Dimensions: L <u>/ 6 6 ' '</u> W (st	Artifact Number: <u>ps_6-3</u>
SpikesTrunnelsOt	her (Describe:) tails
$\frac{1}{51^{\prime}2^{\prime\prime}}$	5-3
Ŷ	TO 1411_ 28"
Scale: Sketch by: $\mathcal{R} = \mathcal{E}$	

Site Number: <u>A06101.018000</u> OPRHP Project Review Number: Site Name: <u>Vehicular Security Ce</u> Principal Investigator: <u>Warren Ric</u> Affiliation: <u>AKRF</u> , Inc. and Pema Address of Site: <u>Liberty, Cedar, W</u> Block and Lot: <u>Block 56, Lot 15</u> Client: <u>LMDC</u> Name of Feature Artifact Nume:	nter at World Trade Center ess and Carrie Atkins Fulton quid Art & Science Vashington, and West Streets, Ne GPS Coordinates: 74°0'49.248 e: Adrian	<u>3"W 40°42'3<b>7.</b>27"N</u>
Artifact Name: O	Condition:	
Material: ( Location: Dimensions: L $23^{3/4}$	W 4 2 D (sided)	(molded)
Spikes       Trunnels         Photographs:       in situ         Detailed Illustrations?          Associated Timbers:	Other (Describe:	
14	Bo	
		DISTANCE TO SW CORNER OF APRON - 32"
	233/4	32" TO SW. COR APRON
*	2	32" TO BW. COR. ATTO
Scale: Sketch by: RESS		

Site Number: <u>A06101.018000</u>		Date:	7129/2010	<u>)</u>
OPRHP Project Review Number: <u>05PR0</u> Site Name: Vehicular Security Center at		lantar		
Principal Investigator: <u>Warren Riess and</u>				
Affiliation: AKRF, Inc. and Pemaquid A	rt & Science			
Address of Site: Liberty, Cedar, Washing				
Block and Lot: <u>Block 56, Lot 15</u> GPS		74°0'49.248"W 4	<u>0°42'37.27"N</u>	
Client: <u>LMDC</u> Name of Feature: <u>Adrid</u>	<u>ın</u>		pa 8	_1
Artifact Name: Condition	on:	Artifact Numb	er: 10-0-	
Material: Condition Location: Dimensions: L $\leq 0 \frac{1}{4}$ W W				-
Dimensions: $L \leq 0 \frac{1}{4} W$	10 3/4	D		
	(sided)	(mol	ded)	
Number and type of fasteners:				
Spikes Trunnels Photographs: in situ full	Other (Des details	cribe:	)	
Detailed Illustrations?				
Associated Timbers: 7-1 0N	NIRTI			
Notes				
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1	50 14	D- MARIE	H	0
		1-1-		1 ANN
		1	50 5	WPR
			10	WARRON
			21"	
Scale: Sketch by: LAESS				
Sketch by:				

Vehicular Security Center at Wo	d Trade Center:	Vessel Inventory	' Form
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Site Number: A06101.018000	Date: 7/29/2010
OPRHP Project Review Number: 05PR04753	
Site Name: Vehicular Security Center at World Tra	de Center
Principal Investigator: Warren Riess and Carrie Atl	tins Fulton
Affiliation: AKRF, Inc. and Pemaquid Art & Scien	ce
Address of Site: Liberty, Cedar, Washington, and V	
Block and Lot: <u>Block 56, Lot 15</u> GPS Coordina	tes: <u>74°0'49.248"W 40°42'37.27"N</u>
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u>	
Artifact Name:	Artifact Number: $PS - T - I$
Artifact Name: Condition:	
Material: Condition: Location: Dimensions: L <u>73 ½</u> W <u>10</u> (sided	
Dimensions: L $73^{\prime}2^{\prime\prime}$ W $10^{\prime\prime}$	D
(sided	l) (molded)
Number and type of fasteners:	
Spikes     Trunnels     Other       Photographs:     in situ     full     details	(Describe:)
Photographs: in situ full details	3
Detailed Illustrations?	
Associated Timbers: $p_{5-4}$	
Notes	
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Scale: Sketch by: KRIESS	
Sketch by:	

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	venicular Security Center at world I rade Center: Vessel Inventory Form	
C S P A	te Number: <u>A06101.018000</u> PRHP Project Review Number: <u>05PR04753</u> te Name: <u>Vehicular Security Center at World Trade Center</u> incipal Investigator: <u>Warren Riess and Carrie Atkins Fulton</u> ffiliation: <u>AKRF, Inc. and Pemaquid Art &amp; Science</u> ddress of Site: <u>Liberty, Cedar, Washington, and West Streets, New York, NY</u> ock and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>74°0'49.248"W 40°42'37.27"N</u>	
A N L	ient: <u>LMDC</u> Name of Feature: <u>Adrian</u> rtifact Name: Artifact Number: <u>P5-5-Ø</u> aterial:Condition: cocation: Q '' D imensions: L <u>24 <sup>1</sup>/2-</u> W <u>Q</u> '' D (sided) (molded)	
P	umber and type of fasteners:	
N		
S	$\frac{1}{1-24'3'} = \frac{1}{1} \frac{1}{2'}$	
	etch by: KIESS	

Site Number: <u>A06101.018000</u>	Date: <u>7129/2010</u>
OPRHP Project Review Number: 05PR04753	
Site Name: Vehicular Security Center at World Trade Center	
Principal Investigator: <u>Warren Riess and Carrie Atkins Fulton</u> Affiliation: <u>AKRF</u> , Inc. and Pemaquid Art & Science	
Address of Site: Liberty, Cedar, Washington, and West Streets, No.	ew York NY
Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: 74°0'49.24	
Client: LMDC Name of Feature: Adrian	
Artifact Name: Artifact	t Number: $PS = 5-1$
Artifact Name: Artifact Material: Condition:	
Location:	±
Material: Condition: Location: Dimensions: L WO'/4 D (sided)	
(sided)	(molded)
Number and type of fasteners.	
Spikes TrunnelsOther (Describe: Photographs: in situ full details	)
Detailed Illustrations?	
Detailed Illustrations? Associated Timbers: <u>4-1 to N.</u> T. 6-1 S.	+ 5-10 E
Notes	
	1
44	
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	3 (2)
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	27 <sup>- 4</sup>
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L 65''	
L 63	
1 TO KEEL	
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Scale:	
Sketch by:	

Site Number: <u>A06101.018000</u> OPRHP Project Review Number: <u>05PR04753</u> Site Name: <u>Vehicular Security Center at World Trade O</u> Principal Investigator: <u>Warren Riess and Carrie Atkins</u> Affiliation: <u>AKRF, Inc. and Pemaquid Art &amp; Science</u> Address of Site: <u>Liberty, Cedar, Washington, and West</u> Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates:	Fulton Streets, New York, NY
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u> Artifact Name: Material:Condition: Location: O // Dimensions: L <u>/ 2 8 3/4 //</u> W <u>/ D //</u> (sided)	Artifact Number: 55-2
Number and type of fasteners: Spikes TrunnelsOther (Dependence of the constraints) Other (Dependence of the constraints)	scribe:)
128 3/4"	
V471/2 TO KEE	
Scale: Sketch by: 4 RUESS	

Site Number: <u>A06101.018000</u>	Date: 7/29/2010
OPRHP Project Review Number: <u>05PR04753</u>	
Site Name: <u>Vehicular Security Center at World Trade Cen</u> Principal Investigator: <u>Warren Riess and Carrie Atkins Fu</u>	
Affiliation: <u>AKRF, Inc. and Pemaquid Art &amp; Science</u>	
Address of Site: Liberty, Cedar, Washington, and West St	treets, New York, NY
Block and Lot: Block 56, Lot 15 GPS Coordinates: 74	4°0'49.248"W 40°42'37.27"N
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u>	0
Artifact Name: Condition:	_ Artifact Number: <u>PS-5-3</u>
Material: Condition: Location: $I D''$ Dimensions: L $I U' U$ $W I U U$ $U U$ (sided)	
Dimensions: L $944$ w $134$	D
	(molded)
Number and type of fasteners:	× /
SpikesTrunnelsOther (Descr Photographs: in situfulldetails	ribe: )
Photographs:in situfulldetails	
Detailed Illustrations? Associated Timbers: <u>3-2, on Nj</u> 6-3 on	Q
Associated Timbers. $3 \propto 0.0 \text{ N} = 50 \text{ on}$	<u> </u>
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Scale:	
Sketch by:CNESS	_

Vehicular Security Center at World Trade Center: Vessel Inventory Forn
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Site Number: <u>A06101.018000</u>	Date: 7-129/2010	
	ter at World Trade Center s and Carrie Atkins Fulton	
Client: <u>LMDC</u> Name of Feature: Artifact Name:Co Material:Co Location: Dimensions: L <u>74 /2 "</u>	Adrian       Artifact Number: $p \leq 4 - 1$ ondition: $w = \frac{2^{3/4''}}{(sided)} D$ (molded)	
Number and type of fasteners:SpikesTrunnelsPhotographs:in situ	Other (Describe:) ull details N, 5125-2405, 4-2400	х
TH I I I I I I I I I I I I I I I I I I I		14
1	+ 1/2	
	23/4"	
.38	12" to KER	
Scale: Sketch by: 474ESS		

	Site Number: <u>A06101.018000</u> OPRHP Project Review Number: <u>05PR04753</u> Site Name: <u>Vehicular Security Center at World Trade Ca</u> Principal Investigator: <u>Warren Riess and Carrie Atkins F</u> Affiliation: <u>AKRF, Inc. and Pemaquid Art &amp; Science</u> Address of Site: <u>Liberty, Cedar, Washington, and West S</u> Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>7</u>	Fulton Streets, New York, NY
	Client: <u>LMDC</u> Name of Feature: <u>Adrian</u> Artifact Name: Material:Condition: Location: Dimensions: L V (sided)	Artifact Number: <u>PS 2-2</u>
	(sided)	(molded)
82	Number and type of fasteners:	cribe:)
	do" from Enst 31" from Enst 108" 108" 108" 108" 108" 108"	T 4341 Apron
	Sketch by: KIESS	

Site Number: <u>A06101.018000</u>	Date: 7 / 21/2010
OPRHP Project Review Number: 05PR04753	1994 J. 1997 -
Site Name: Vehicular Security Center at World Tra	
Principal Investigator: Warren Riess and Carrie At	
Affiliation: AKRF, Inc. and Pemaquid Art & Scien	
Address of Site: Liberty, Cedar, Washington, and V	
Block and Lot: <u>Block 56, Lot 15</u> GPS Coordina	ites: 74°0'49.248" W 40°42'37.27" N
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u>	
Artifact Name: Condition:	Artifact Number: PN 6-
Material: Condition:	- 4
Location:	
Dimensions: L W U	D
Material: Condition: Location: Dimensions: L W W (sided	d) (molded)
Number and type of fasteners:	
SpikesTrunnelsOther	(Describe:)
Photographs: in situ full detail	S
Detailed Illustrations?	
Associated Timbers:	
Notes	
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Scale: NO	
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# Vehicular Security Center at World Trade Center? Vessel Inventory Form Date: 1 / 27/2010 Site Number: A06101.018000 **OPRHP** Project Review Number: 05PR04753 Site Name: Vehicular Security Center at World Trade Center Principal Investigator: Warren Riess and Carrie Atkins Fulton Affiliation: AKRF, Inc. and Pemaquid Art & Science Address of Site: Liberty, Cedar, Washington, and West Streets, New York, NY GPS Coordinates: 74°0'49.248"W 40°42'37.27"N Block and Lot: Block 56, Lot 15 Client: <u>LMDC</u> Name of Feature: <u>Adrian</u> Artifact Name: \_\_\_\_\_\_ Artifact Number: PN 6-2 Material: \_\_\_\_\_ Condition: \_\_\_\_\_ Location: Dimensions: L \_\_\_\_\_ W \_\_\_\_\_ D \_\_\_\_ (sided) D \_\_\_\_\_ (molded) Number and type of fasteners: Spikes \_\_\_\_\_ Trunnels \_\_\_\_\_ Other (Describe:\_\_\_\_\_\_ Photographs: \_\_\_\_\_ in situ \_\_\_\_ full \_\_\_\_\_ details Detailed Illustrations? \_\_\_\_\_\_Associated Timbers: \_\_\_\_\_\_ et. Notes J1034 26.5 Dapron Scale: ND Sketch by: \_\_\_\_\_\_KY

Vehicula	r Security C	enter at V	Vorld Trade (	Center: V	essel Inventory F	orm
Site Number: <u>A06</u> OPRHP Project Ro Site Name: <u>Vehicu</u> Principal Investiga Affiliation: <u>AKRF</u> Address of Site: <u>Li</u> Block and Lot: <u>Blo</u>	eview Numbe ilar Security ( tor: Warren F , Inc. and Per berty, Cedar,	Center at V Riess and C naquid Ar Washing	World Trade C Carrie Atkins I t & Science ton, and West	<u>Fulton</u> Streets, N	Date: 7/29 weight for the second seco	'n
Client: <u>LMDC</u> N Artifact Name: Material: Location: Dimensions: L				Artifa	ct Number: <u>PN</u>	6-3
Dimensions: L	100 "	W	(sided)	D	(moldod)	
Number and type of	of fasteners:		(sided)		(monded)	
Spikes Photographs: Detailed Illustratio	Trunnels in situ ns?	_ full	details		) . 	
Associated Timber						
Notes						;
·						·
451					7.11'	
/ 6	pape	6			TO veel 23"	
Scale:	а. С					
Sketch by:						

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r	Site Number: A06101.018000Date: / /2010OPRHP Project Review Number: 05PR04753Date: / /2010Site Name: Vehicular Security Center at World Trade CenterPrincipal Investigator: Warren Riess and Carrie Atkins FultonAffiliation: AKRF, Inc. and Pemaquid Art & ScienceAddress of Site: Liberty, Cedar, Washington, and West Streets, New York, NYBlock and Lot: Block 56, Lot 15GPS Coordinates: 74°0'49.248"W 40°42'37.27"N
	Client: LMDC_Name of Feature:   Artifact Name: Artifact Number:   Material: Condition:   Location: D   Dimensions: L   LOW (sided)
	Dimensions: L 9 W D
	(sided) (molded)
	Number and type of fasteners:        SpikesTrunnelsOther (Describe:)         Photographs:in situfulldetails         Detailed Illustrations?         Associated Timbers:
	Notes DROY Strake
	T'N'
	11.511
	Theel in the fill
	Scale: 10 Sketch by:

Site Number: <u>A06101.01</u>	8000		Date: 7 / 29/2010	<u>0</u>
OPRHP Project Review N				
Site Name: <u>Vehicular Sec</u>		rade Center	Ŕ	
Principal Investigator: Wa	arren Riess and Carrie A	tkins Fulton		
Affiliation: AKRF, Inc. ar	nd Pemaquid Art & Scie	ence	a.	
Address of Site: Liberty, (				
Block and Lot: <u>Block 56,</u>	Lot 15 GPS Coordin	nates: 74°0'49.24	8"W 40°42'37.27"N	
Client: <u>LMDC</u> Name of	f Feature: <u>Adrian</u>			~
Artifact Name:		Artifac	t Number: <u>PN 3</u>	-2
Material:	Condition:			-
Location:				
Dimensions: L	W	D		
Material: Location: Dimensions: L	(side	ed)	(molded)	
Number and type of faster	ners:	#1		
Spikes Tr	runnels Othe	r (Describe:	)	
Photographs: in sit	tu full deta	ile		
a failed Illustrations?			0 0 1 0	
Associated Timbers: Notes	-2 + 63 toN	i x-1+	2-2 105	
NT /		1		
Notes				
Notes			• <u>•</u> ••••••••••••••••••••••••••••••••••	
Notes	/#			
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Notes	18	······································		
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	177 1/2 -	с ,	•	
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}	177 1/2 -	с ,		
}	12	с ,	-1	đ
}	177 1/2 -	с ,	1	8
}	177 1/2 -	с ,	1	8
52" 60" 1158 6'2" • •	177 2 -	с ,	-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -	đ
52" 60" 1158 6'2" • •	177 2 -	с ,	1034	8
52" 60" 1158 6'2" • •	177 1/2 -	с ,		đ
52" 60" 1158 6'2" • •	177 2 -	с ,	1034	8
52" 60" 1158 6'2" • •	177 2 -	с ,	1	8
52" 60" 1158 6'2" • •	177 2 -	с ,	$\frac{1}{10^{3/4}}$	

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el<sup>en</sup> e

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Site Number: A06101.018000	Date: $\neq 1_{c}$	<u>27/2010</u>
OPRHP Project Review Number: 05PR047		
Site Name: Vehicular Security Center at W		
Principal Investigator: Warren Riess and C		
Affiliation: AKRF, Inc. and Pemaquid Art		
Address of Site: Liberty, Cedar, Washingto		7 97"NI
Block and Lot: <u>Block 56, Lot 15</u> GPS G		<u>/.// IN</u>
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u>		
Artifact Name: Condition	Artifact Number:	10 3-1
Material: Condition Location: Dimensions: L W		
Dimensions: I I The U W	D	
Dimensions. L _ 155 22	(sided) (molded)	
	(sheet) (morace)	
Number and type of fasteners:	Other (Deceribe)	
SpikesTrunnels Photographs:in situfull	Other (Describe)	
Detailed Illustrations?		
Detailed Illustrations? Associated Timbers: $3 - 2 + \omega$ ;	- 2-1 to 3: 4-1 to K	7
Notes		
		X
A		
A		
· ]* .		÷:
1	1	
155	12	
120		
3	SPIKE	1.5
	SPIKE	110
TOS		1
	57"	
	3	
	2"	
V24" to K 126" 108"		V24/2 to
Scale:		
Sketch by: $\mathbb{R}/ES$		

	Site Number: A06101.018000	Date: 7 / 29/2010
	OPRHP Project Review Number: <u>05PR04753</u> Site Name: <u>Vehicular Security Center at World Trade Cent</u> Principal Investigator: <u>Warren Riess and Carrie Atkins Fult</u> Affiliation: <u>AKRF, Inc. and Pemaquid Art &amp; Science</u> Address of Site: <u>Liberty, Cedar, Washington, and West Stro</u> Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>74°</u>	on eets, New York, NY
	Client: <u>LMDC</u> Name of Feature: <u>Adrian</u> Artifact Name: Material:Condition: Location: Dimensions: L30 V2 '' W0 3/4 (sided)	Artifact Number: <u>PN 4-1</u> D (molded)
1	Number and type of fasteners: Spikes Trunnels Other (Descrift Photographs: in situ full details Detailed Illustrations? Associated Timbers: $5-1 \neq N$ ; $3-1 \neq S$ ; Notes	be:)
,	86" 53 35" 19"-	
10	34 Spikes	
		and have a
	1352 tok	
	Scale: Sketch by: <u> L RIESS</u>	5

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	ehicular Securit	ry Center at Wo	rld Trade Center	: Vessel Inventor	y Form
OPRHP P	er: <u>A06101.0180</u> oject Review Nu	mber: 05PR0475		Date: 7/	<u>29 /2010</u>
			orld Trade Center rrie Atkins Fulton		
Affiliation	AKRF, Inc. and	Pemaquid Art 8		Source NV	
			oordinates: 74°0'49		7.27"N
	MDC_Name of F ame:		Art	ifact Number:	ON 1-2
Location: Dimensior	s: L 1903/	411 W	— D		4)
			(sided)	(molded)	•
	d type of fastener tes Trur		Other (Describe:		
Photograp	ns:in situ		_details	)	
Associated	ustrations? Timbers:	2+2-1+	-0 N		
Notes					
				2	
			x		
		3.	· · · · · · · · · · · · · · · · · · ·	-9	
		190 3/	+		
- f					
					T
APRON		- SALISE			11"
APRONS	49"				<u>]</u> µ″
in provident	49"			A BUTS	II" Keel
17PRONS	49"			A BUTS	
APRONS	49"			A BUTS	

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and a start of the start of the

	v		Vessel Inventory Form	
Site Name: <u>Vehic</u> Principal Investig Affiliation: <u>AKR</u> Address of Site: <u>I</u>	Review Number: <u>05PR0</u> sular Security Center at ator: <u>Warren Riess and</u> F, Inc. and Pemaquid An Liberty, Cedar, Washing	World Trade Center Carrie Atkins Fulton rt & Science ton, and West Streets,	Date: <u>7/27/2010</u> <u>New York, NY</u> .248"W 40°42'37.27"N	<u>0</u>
Artifact Name:	Name of Feature: <u>Adria</u> Conditio	Arti	fact Number: <u>PN</u>   -	1
Location: Dimensions: L	Conditio	D (sided)	(molded)	
Spikes Photographs:	of fasteners: Trunnels in situ full ons? 2-1 + N	Other (Describe: details	)	
				s> 17
			21 21	
11'4	54'		- ABUTS	_
11'4	54"		- ABUTS ILEEL	
114	54'		- ABUTS ILEEL	

a." \*

	Site Number: <u>A06101.018000</u> Date: <u>7 / 29 /2010</u> OPRHP Project Review Number: <u>05PR04753</u> Date: <u>7 / 29 /2010</u>
23	Site Name: <u>Vehicular Security Center at World Trade Center</u> Principal Investigator: <u>Warren Riess and Carrie Atkins Fulton</u> Affiliation: <u>AKRF, Inc. and Pemaquid Art &amp; Science</u> Address of Site: <u>Liberty, Cedar, Washington, and West Streets, New York, NY</u> Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>74°0'49.248"W 40°42'37.27"N</u>
	Client: <u>LMDC</u> Name of Feature: <u>Adrian</u> Artifact Name: Artifact Number: <u>PN 2-1</u> Material:Condition: Location: Dimensions: L <u>223''</u> W <u>13'2''</u> D (sided) (molded)
2	Number and type of fasteners: Spikes Trunnels Other (Describe:) Photographs:in situfulldetails Detailed Illustrations? Associated Timbers: $1 - 1 + 1 - 2 + 5 + 3 - 1 + 3 - 2 + 5 = N$ Notes
	$\frac{223''}{56'}$
1	SPINE I BY
	Scale: Sketch by: $\underline{K} = \underline{K} = \underline{SS}$

Client: <u>LMDC</u> Name of Feature: <u>Adrian</u> Artifact Name: Artifact Number: <u>PN 2-2</u> Material:Condition: Location: Dimensions: L <u>1074</u> W D (sided) (molded) Number and type of fasteners: Other (Describe:) Photographs: in situ full details Detailed Illustrations? Associated Timbers: <u>3-2 to N 11-2 b S</u> Notes
Spikes       Trunnels       Other (Describe:       )         Photographs:       in situ       full       details         Detailed Illustrations? $3-2$ $-2$ $5$ Notes $-2$ $5$
FI - 16"
Scale: Sketch by: K RIESS

* 		. N.	ni Aliment	1.1
Vehicular Security Ce	nter at World Trade	Center: Vessel In	ventory Form	8
Site Number: <u>A06101.018000</u> OPRHP Project Review Number Site Name: <u>Vehicular Security C</u> Principal Investigator: <u>Warren R</u> Affiliation: <u>AKRF</u> , Inc. and Pem Address of Site: <u>Liberty</u> , <u>Cedar</u> , Block and Lot: <u>Block 56</u> , Lot 15	Center at World Trade C iess and Carrie Atkins aquid Art & Science Washington, and West	<u>Center</u> Fulton Streets, New Yor		<u>0</u>
Client: <u>LMDC</u> Name of Feature Artifact Name: <u>outer plan</u> Material: <u>Location</u> :	King	Artifact Numb	oer: <u>70</u> 8-	3
Material:     Location:     Dimensions: L     54.5'	$w_{5}$	D(mo	lded)	
Number and type of fasteners:        Spikes      Trunnels         Photographs:      in situ         Detailed Illustrations?          Associated Timbers:	Other (Des	scribe:	)	
Notes		- 14 C	-	
			TN	
5-3 120" to apron	-	1. 10	aprim	
Scale:				<u>.</u>

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Sketch by:

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Vehicul	ar Security C	enter at W	Vorld Trade (	Center: Ve	ssel Inventor	y Form	
Site Number: <u>A(</u> OPRHP Project F Site Name: <u>Vehic</u> Principal Investig Affiliation: <u>AKR</u> Address of Site: <u>J</u> Block and Lot: <u>B</u>	Leview Number sular Security ( ator: <u>Warren I</u> F, Inc. and Per Liberty, Cedar.	Center at V Riess and ( naquid Ar Washing	Vorld Trade C Carrie Atkins I t & Science ton, and West	<u>Fulton</u> Streets, Ne	Date:	,	
Client: <u>LMDC</u> Artifact Name: _ Material:				Artifac	t Number:	DN 7-2	
Material: Location: Dimensions: L	275"	W	<u> </u>	D	(molded)		
Number and type Spikes Photographs: Detailed Illustrat Associated Timb	of fasteners: Trunnel in situ ons?	s full	Other (Des details	scribe:	)		
Notes						x <sup>a</sup>	
						T	
51 20 7-5	2 20	5			2		
Ser JP						Jreel 59.5	Ĭ.
							in the second se
Scale: 00 Sketch by:	(AF						9 8
			- بر احد بر	5			

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Site Number: <u>A06101.018000</u>		Ľ	Date: 7 / 2°	1 / <u>2010</u>	
OPRHP Project Review Number: 05PR0475					
Site Name: Vehicular Security Center at Wor					
Principal Investigator: Warren Riess and Car		ton			
Affiliation: AKRF, Inc. and Pemaquid Art &					
Address of Site: Liberty, Cedar, Washington,					
Block and Lot: <u>Block 56, Lot 15</u> GPS Co	ordinates: 74°	<u>°0'49.248"\</u>	<u>V 40°42'37.2</u>	<u>27"N</u>	
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u>				-	
Artifact Name:		Artifact N	umber: M 9	-2	
Artifact Name: Condition:					
Location: Dimensions: L <u>151</u> W &	<u> </u>	_			
Dimensions: L <u>151</u> W &	<u></u>	D	/ 11 1		
	(sided)		(molded)		
Number and type of fasteners:					
SpikesTrunnels	Other (Descri	be:	)		
Photographs:in situ full	details				
Detailed Illustrations? Associated Timbers: w& 9-1, Sok 10-4					
Associated limbers: war 9-1, Sor 10-9	1+10-5, NOF	8-2			
Notes					
4					
		9			
χ.					
(L)					
very devensioned trunk!					
ad from				Frame remnark a	obscu
1 Jeri					gona
			51	·	
				9 25"	
-P N5	2				
			D	•	
				1	
Spike				11 heel	
42" to head				71.5" to heel	
42 00					
				N	
Scale:					
Scale: Sketch by:EDM					

.

	Site Number: <u>A06101.018000</u> OPRHP Project Review Number: <u>05PR04753</u> Site Name: <u>Vehicular Security Center at World Trade Cen</u> Principal Investigator: <u>Warren Riess and Carrie Atkins Fu</u> Affiliation: <u>AKRF, Inc. and Pemaquid Art &amp; Science</u> Address of Site: <u>Liberty, Cedar, Washington, and West St</u> Block and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>74</u>	<u>ilton</u> treets, New York, NY
	Client: <u>LMDC</u> Name of Feature: <u>Adrian</u> Artifact Name: <u>Condition:</u> Location:	Artifact Number: <u>M9-3</u>
	Location: U	_ D(molded)
	Number and type of fasteners:	ribe:)
<b>1</b>	PN 9-3 9.3 1.5 1.5 51.5 Scale:	Jerry deteriorated 7.25" JOID PN9-2 JG <sup>11</sup> do aprov
	Sketch by: EDM	

	ite Number: <u>A06101.018000</u> Date: <u>7 / 29 /2010</u> DPRHP Project Review Number: 05PR04753
	ite Name: <u>Vehicular Security Center at World Trade Center</u> rincipal Investigator: <u>Warren Riess and Carrie Atkins Fulton</u> ffiliation: <u>AKRF, Inc. and Pemaquid Art &amp; Science</u> ddress of Site: <u>Liberty, Cedar, Washington, and West Streets, New York, NY</u> lock and Lot: <u>Block 56, Lot 15</u> GPS Coordinates: <u>74°0'49.248"W 40°42'37.27"N</u>
23	elient: LMDC_Name of Feature:   Artifact Name: Artifact Number:   PN 8-)   Interial:   Condition:   ocation:   imensions:   L   146 "   W   8.25"(wside)   9"(tast)   0   (sided)   (molded)
	Tumber and type of fasteners: $a \sim 1$ Spikes TrunnelsOther (Describe:) hotographs: in situ full details etailed Illustrations? ssociated Timbers: S of 9-1, E of 8-2, N of 7-1 Gnd 7-2 otes
	• • • • •
1	67.25" io heed
1	
	ale:
	etch by: EDM

.

Site Number: <u>A06101.018000</u> OPRHP Project Review Number: <u>05PR04</u> Site Name: <u>Vehicular Security Center at V</u> Principal Investigator: <u>Warren Riess and A</u> Affiliation: <u>AKRF, Inc. and Pemaquid An</u> Address of Site: <u>Liberty, Cedar, Washing</u> Block and Lot: <u>Block 56, Lot 15</u> GPS	<u>World Trade Center</u> <u>Carrie Atkins Fulton</u> <u>rt &amp; Science</u> ton, and West Streets, New York, NY	
Client: <u>LMDC</u> Name of Feature: <u>Adria</u> Artifact Name: <u>Guto planking</u> Material: <u>Condition</u> Location: <u>N</u> Dimensions: L <u>191.5"</u> W	Artifact Number:	PN - 8 - 2
Number and type of fasteners:        Spikes      Trunnels         Photographs:      in situ      full         Detailed Illustrations?          Associated Timbers:	Other (Describe:) details	
25 cu		Ho Keel G7''
Scale: NU Sketch by:		-

~

N.1

Site Number:A06101.018000Date:OPRHP Project Review Number:05PR04753Site Name:Vehicular Security Center at World Trade CenterPrincipal Investigator:Warren Riess and Carrie Atkins FultonAffiliation:AKRF, Inc. and Pemaquid Art & ScienceAddress of Site:Liberty, Cedar, Washington, and West Streets, New York, NBlock and Lot:Block 56, Lot 15GPS Coordinates:	<u>NY</u> 42'37.27"N
Client: <u>LMDC</u> Name of Feature: <u>Adrian</u> Artifact Name: <u>outer</u> <u>planking</u> Artifact Number: Material: <u>Condition:</u> Location: <u>Dimensions: L 16 W 9<sup>1/</sup>9<sup>11</sup> D</u> (molde Number and type of fasteners:	: <u>PN 7-1</u>
(sided)       (molde         Number and type of fasteners:	
Notes	
PN-7-1 @	T N
8	3 fragmented
V 60" tokeel	Lol'Eto Keel
Scale: No Sketch by:	

	at World Trade Center nd Carrie Atkins Fulton
Client: <u>LMDC</u> Name of Feature: <u>Ad</u> Artifact Name: Material:Cond Location: Dimensions: L <b>128</b> <sup>t</sup> W	
Number and type of fasteners:         Spikes       Trunnels         Photographs:       in situ       full         Detailed Illustrations?       Associated Timbers:	Other (Describe:) details
rabbet	
5	MN.
Scale: NC Sketch by:	

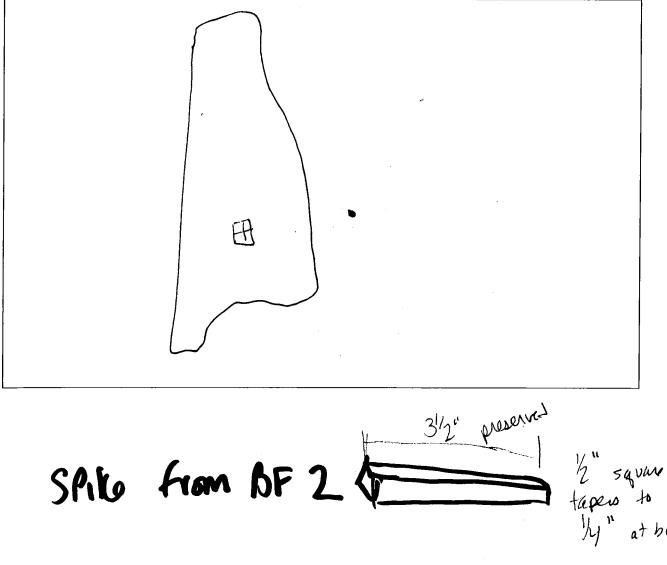
	Security Center at W	orld I rade Cent	ter: Vessel Inventory	' Form
Site Name: Vehicula Principal Investigate	view Number: <u>05PR04</u> ar Security Center at W pr: <u>Warren Riess and C</u>	Vorld Trade Cente Carrie Atkins Fulte		<u>9/2010</u>
Address of Site: Lib	Inc. and Pemaquid Art erty, Cedar, Washingto k 56, Lot 15 GPS	on, and West Stre		.27"N
Client: LMDC N	ame of Feature: <u>Adrian</u> Conditior	· · · · · · · · · · · · · · · · · · ·		
Location: Dimensions: L			D(molded)	
Number and type of Spikes	fasteners: Trunnels _in situ full			
Detailed Illustration	s?			
				_
Sifficult				1
1912"			10/2	P
10 apron			35' to kee	0
191	й 1		, <b>an</b>	r:e <sup>€</sup> e
Scale: Sketch by:		A		

	> 3	
Vehicular Securit	y Center at World Trade Center: Vessel Inven	tory Form
Site Number: <u>A06101.0180</u>		1 29/2010
OPRHP Project Review Nu	mber: 05PR04753	
	ren Riess and Carrie Atkins Fulton	( <b>3</b> €:1
Affiliation: AKRF, Inc. and		V
	edar, Washington, and West Streets, New York, Not 15 GPS Coordinates: 74°0'49.248"W 40°4	
Chent: LMDC Name of H	Feature: Adrian	
Artifact Name:	Artifact Number:	ST-24 CAPR
Material:	Condition:	$\neq PSI = 1$
Dimensions: L	Condition: D W D (sided) (molded	1)
	(sided) (molded	1)
Number and type of fastene Spikes True	nnels Other (Describe)	)
Photographs: in situ	full details	
Detailed Illustrations?		я.
i i		
SIDE VIEN	N OF APRON APRON	HAS RABBET
11		HAS RABBET ERNEATH NEAR
T IN IN		DON POST
T IN IN		HAS RABBET ERNEATH NEAR STEM POST 3" × 34" depot
T IN IN		DON POST
T IN IN	AGEN SPIKE HOLES .	DON POST
T IN IN		DON POST
T IN IN	AGEN SPIKE HOLES .	DON POST
T IN IN	AGEN SPIKE HOLES .	DON POST
T IN IN	AGEN SPIKE HOLES .	DON POST
T IN IN	AGEN SPIKE HOLES .	DON POST
E	PSI-1	DON POST
T IN IN	Sibby SPIKE HOLES	DON POST

Artifact Name BP CO # IA	Date Photographed: 08//11
Length 7" Sided (Width) 2"2	Molded (Thickness)341'
Fragment Number	
Nails (number and purpose)	
Marine Growth	
Notes	
·	

.

Artifact Name $BPCDB$	Date Photographed: 08//11
Length	Molded (Thickness) <b>2^^</b>
Fragment Number	
Nails (number and purpose)	
Marine Growth $\underline{S}$	
Notes	
	· · · · · · · · · · · · · · · · · · ·



at bottom

Artifact Name BC	Date Photographed: 08//11
Length Sided (Width) $3^3/4^{1}$	Molded (Thickness)
Fragment Number3	Ň
Nails (number and purpose)	
Marine Growth SW	· · · · · · · · · · · · · · · · · · ·
Notes	
· · · · · · · · · · · · · · · · · · ·	

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Artifact Name <u>BC - 2</u> Date Photographed: 08/\_\_\_/11 Length 18.25 Sided (Width) 6" Molded (Thickness) 75" wax to 36" min Fragment Number 3 large \$5 small 53 tiny - 16 total Nails (number and purpose) <u>2 pos. vails in one group; 2 pos. naîls in other group</u> Marine Growth UNKNOWN WORM Notes unknown How fit together - which bottom goes together 8)18 1 large + 3 small surviving WORM Growth \* 7/8-\* 3/8 min Poss ral L

Artifact Name <u>BC3</u> Date Photographed: 08/\_\_\_/11 Length  $18^{\prime\prime}$  Sided (Width)  $5.75^{\prime}$  Molded (Thickness)  $\frac{7/8^{\prime\prime}}{2}$ Fragment Number 3 large 5 small = 8 ; 8/19 - now 7 Nails (number and purpose) Marine Growth aysty Bryozan on France si Le Notes 1 nail Impression MULLING BUSh Z

· · ·	
Artifact Name <u>BC4</u>	Date Photographed: 08//11
Length 12" Sided (Width) 6'2"	Molded (Thickness) <u>14</u>
Fragment Number 4 -> 6 as •F	
	<b>,</b>
Nails (number and purpose)	
	<u></u>
Marine Growth $\underline{SW}$	
Notes	
$\wedge$	
, Frag: 17	
$2^{n}$	

e Sue - A

Artifact Name <u>BC 5</u> \_\_\_\_\_ Date Photographed: 08/\_\_\_/11 Length  $10\frac{1}{12}$  Sided (Width)  $\frac{4\frac{1}{2}}{12}$  Molded (Thickness)  $\frac{3\frac{1}{4}}{12}$ Fragment Number <u>3 large</u> (small = 4 Nails (number and purpose)  $\bigcirc$ 5WMarine Growth \_ Notes growth Bryozoan 4 Bry ontop 400 BNELDAN pomnand this frag.

Artifact Name <u>BC6</u> Date Photographed: 08/\_\_/11 Length \_\_\_\_\_\_ Sided (Width) \_\_\_\_\_\_ Molded (Thickness) \_\_\_\_\_\_\_ Fragment Number <u>4</u> -> 8/19 w/ 6 Nails (number and purpose) Marine Growth SW small oysta, byozean Notes

.

Artifact Name	BC 7	_ Date Photographed: 0	8//11
Length _ {1/2	Sided (Width)4"	Molded (Thickness) _	7/8 "
Fragment Number	4		
Nails (number and	mt.		
Marine Growth	SW		
Notes	very fragments	my	
		· · · · · · · · · · · · · · · · · · ·	

Artifact Name $BF \not (B2.2)$ Date Photographed: $08/_/11$
Length <u>8</u> " Sided (Width) <u>3</u> " Molded (Thickness) <u>2</u> " Fragment Number <u>1 large</u> <b>5</b> small = <b>6</b> total
Nails (number and purpose)
Marine Growth
Notes
+ 4 small piecess

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				N Color Day No
• • • • • • • • • • • • • • • • • • •				
Artifact Name	BFI	Date Photog	graphed: 08//11	
Length $_29$	Sided (Width)	4 1/2_ Molded (Thi	ckness) <b>5<sup>11</sup></b>	
Fragment Number	r <u>3</u> (lang	e 2small)	-> only 2	treag. Su
Nails (number and 4- ceili	d purpose)			
<u> </u>	ser planking			
Marine Growth	SW; Bryozoan og	with on side		
Notes	ludes BF	1A - 1 no	il to certing	٩
				<b></b>
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	•			
		BEIA		
	E			
\$		, ,		

Artifact Name BFI	Date Photographed: 08//11
Length Sided (Width)	2 Molded (Thickness) 13/4
Fragment Number <u>3</u>	
Nails (number and purpose)	
Marine Growth SW	
Notes	
<u> </u>	

,

Artifact Name <u>BF2</u>	Date Photographed:	08//11	
Length 31 % Sided (Width) 5 %	_ Molded (Thickness)	G ``	
Fragment Number			
Nails (number and purpose) <u>2- ailing</u> <u>5-outa</u> planking			-
Marine Growth <u>SN not many</u>			
Notes part of outer plant	ing attached	-1'4" thick.	_ ы Ґ′́2"
			- -
		· · · · · · · · · · · · · · · · · · ·	-

Artifact Name <u>B</u>	F	_ Date Photographed: 08//11
Length <u>22'/2</u>	Sided (Width) 4"	Molded (Thickness) 3/4 - 13/4 "
Fragment Number	2	
Nails (number and pur	Tan tu unat	underside z
Marine Growth	None	
Notes Botardon Of	>1 - BF2	·
Notes Botoreon Bf		n away
Botaten St	>/ -BF2 also buste 1 tool marl	
Botaren 37 Junderside		

Broken & / / / /

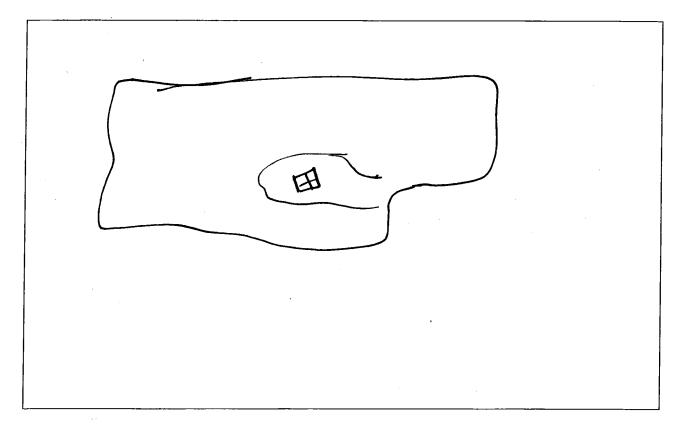
. •

Artifact Name <u>BF 3</u>	Date Photographed: 08//11
Length <u><math>3U</math></u> Sided (Width) <u><math>5'/2</math></u>	Molded (Thickness) <u>5</u>
Fragment Number	
Nails (number and purpose) <u>3-ceiling &gt; one sticks</u> <u>3 outer plankrig</u>	three to outer planking side
Marine Growth <u>Bryo Zow</u>	
Notes <u>tapers to point</u> . <u>Many rings visible</u>	
· · · · · ·	· · · · · · · · · · · · · · · · · · ·
	Brjorean growth J E sides near certis Nail

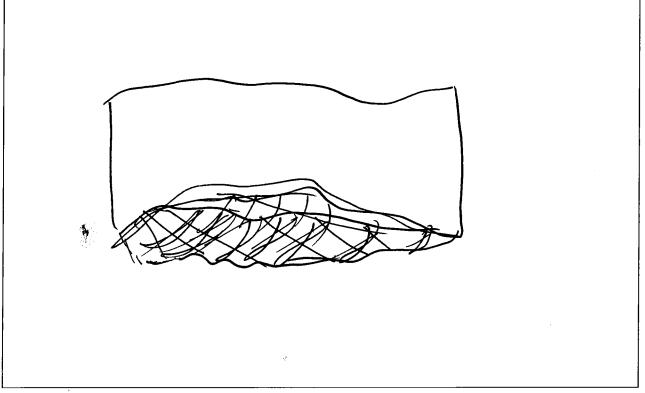
Artifact Name <u>B</u> Length <u>17'2</u> Fragment Number _	F 4 _ Sided (Width		Date Photograp Molded (Thickn reacing		
Nails (number and pu Nails m all t Marine Growth	urpose) sides NM	BOTTAM - SIDE 2-	2 3 (m) (265	TOP Side	- ) r   -
Notes Taper S	astrally				
		• •			
		·			

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Artifact Name <u>BF5</u>	Date Photographed: 08//11
Length 15 314 Sided (Width) 7 1/4"	Molded (Thickness)4"
Fragment Number	
Nails (number and purpose) - 3/8" square (Cei	ling?)
Marine Growth <u>SW</u>	
Notes BCP7 atlach	ed - Broken since
NOT photographed in NY	



Artifact Name <u>BF IIA</u>	Date Photographed: 08//11
Length 4 <sup>11</sup> / <sub>14</sub> '' Sided (Width) 8 <sup>11</sup> / <sub>2</sub>	Molded (Thickness) <u>3<sup>3</sup>4</u>
Fragment Number	
Nails (number and purpose)	
Marine Growth SW	
Notes	

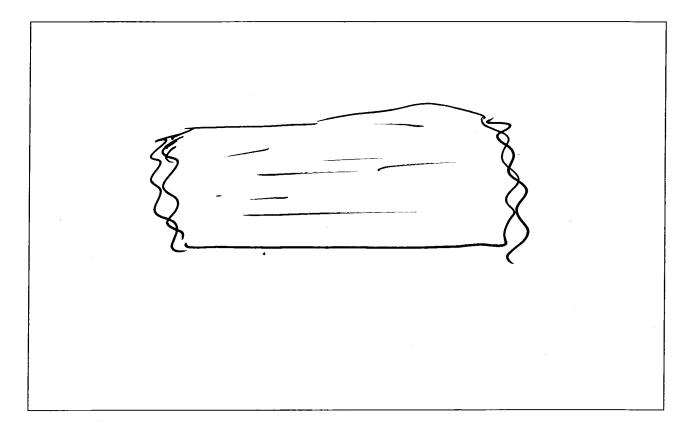


Length $\gamma^{3}4$ Sided (Width) $\mathcal{E}^{l}4'$ Molded (Thickness) $\underline{3}^{"}$ Fragment Number   Mails (number and purpose)   Marine Growth $SW$ Marine Growth $SW$ Notes $\gamma^{3}4$ Marine Growth $SW$ Notes $\gamma^{3}$ Marine Growth $SW$ Marine Growth $SW$ Marine Growth $SW$ Marine Growth $SW$ Marine Growth Marine Gro		//11	Date Photographed: 08/			Artifact Name 🔥	
Nails (number and purpose)	-	3 "	Molded (Thickness)	8'14"	_ Sided (Width) _	Length <b>7<sup>3</sup>4</b>	
Marine Growth SW					4	Fragment Number	
Notes					urpose)	Nails (number and pur	
					W	Marine Growth	
				IIB	w BF		
							-
							-
						$\mathbf{\Lambda}$	
					P		
						ľ	
							: <b>(</b>

Artifact Name BF 11B	Date Photographed: 08//11
Length <u>4</u> <sup><math>\prime</math></sup> Sided (Width) <u>4</u> <sup><math>\prime/4^{\prime\prime}</math></sup>	Molded (Thickness) _ 2 "
Fragment Number	
Nails (number and purpose)	
Marine Growth $SW$	
Notes	

,

Artifact Name <u>BF 12</u>	Date Photographed: 08//11
Length <u>12</u> " Sided (Width) <u>434</u> "	_ Molded (Thickness)4 ``
Fragment Number	
Nails (number and purpose)	
Marine Growth	
Notes only original surface is	top; Rest is splintened



Mush
Artifact Name <u>B6W</u> Port Garboard Date Photographed: 08/11
Length $\underline{6}^{\prime}$ Sided (Width) $\underline{3^{\prime}4}$ Molded (Thickness) $\underline{2^{\prime}}$
Fragment Number 3
Nails (number and purpose)
Marine Growth $SW$
Notes 8/19 - completely disintgrated, no physmiddler
THE WAND

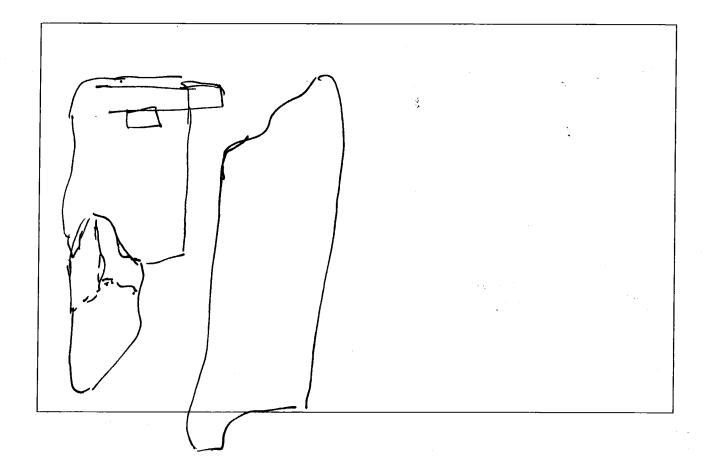
ŧ

Artifact Name <b>BOP</b>	garboard strake D	Date Photographed: 08//11			
Length <u>10 '4</u> Side	d (Width) <u>4<sup>1</sup>4</u> M	lolded (Thickness) 13/4			
Fragment Number	Fragment Number $2 \rightarrow 4$ as of $8/19$				
Nails (number and purpose)					
	pos. tack				
Marine Growth $\sum$	<u> </u>				
Notes	Frogmented				
	)				
$\sim$					
	· · ·				
	, ,				
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Artifact Name BOP Date Photographed: 08/\_\_\_/11 Length  $2!''_2$  Sided (Width)  $8''_4$  Molded (Thickness)  $!''_3/_4$ Fragment Number Nails (number and purpose) Marine Growth oyster on outs, Le south - most outerplank Notes outside ebris Ð

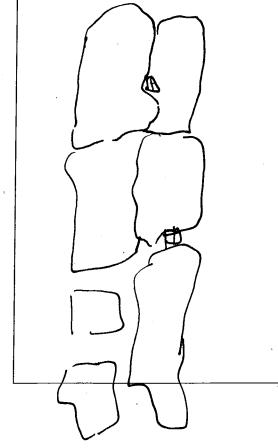
Artifact Name	BOP	2	· · · · · · · · · · · · · · · · · · ·	Date Photographed: 08//1	1
Length 4	Side	ed (Width)	5"	_ Molded (Thickness)	r
Fragment Num	ber <u>2</u> 1	ange 1	Ismall	$+2 \tan y = 5$	
Nails (number		-			
Marine Growth	L				
Notes	. 11	-		a stand	
d	Sanest	ing -	WOOd	n outside	
	1 impres	a ron 8	fream	J	
		·			



Artifact Name <u>BOP 2</u>	Date Photographed: 08//11
Length 12'2 Sided (Width) 4''	Molded (Thickness) <sup>3</sup> /4"
Fragment Number	by Laten
Nails (number and purpose)	
Marine Growth SW	
Notes beam	
unders de	
4" 4" 4" prie?	Imflession 5"

\* Entered into database as BOP 2.2 since BOP 2 already existed

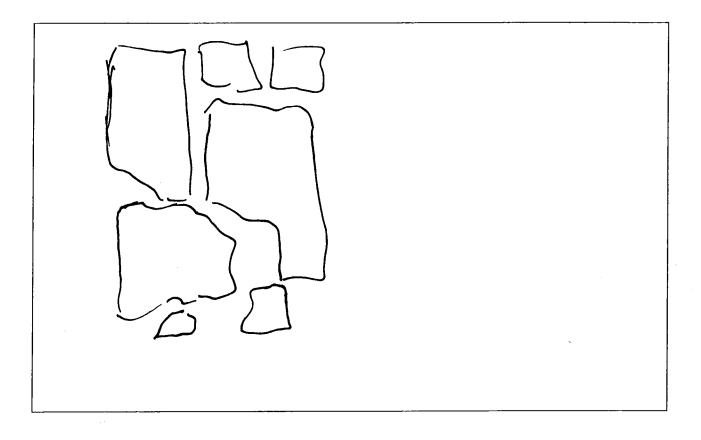
Artifact Name B OP 3	Date Photographed: 08//11
Length 15 Sided (Width) 5 <sup>1/2</sup>	Molded (Thickness) <u>した</u>
Fragment Number <b>7</b>	
Nails (number and purpose)	
Marine Growth SW	
Notes	
	· · · · · · · · · · · · · · · · · · ·



Artifact Name BOP 3 #2\_\_\_ Date Photographed: 08/\_\_/11 Fragment Number 1 large ; 3 medicin , 3 small = 7 frag as of 8/19 fragment Number 1 large ; 3 medicin , 3 small = 7 frag 4 fix aymore Nails (number and purpose) <u>4 pos</u> - to frames Marine Growth 5W pos. I rail Notes

Length 16" Sided (Width)	<u>4'2"</u> M	olded (Thickness) _	
Fragment Number <u>3</u>			
Nails (number and purpose)			
Marine Growth $SW$			 
Notes			
		· · · · ·	 
		· ·	 
		:	

Artifact Name <u>B</u>	OP	6A	Date Photograp	ohed: 08//11	
Length <u>91/2</u>	Sided (Wid	lth) 71/2	Molded (Thickr	ness) <b>  "</b>	
Fragment Number _	3 large	+ 45N	rall		
Nails (number and I	ourpose)				
Marine Growth					
Notes					



y it.

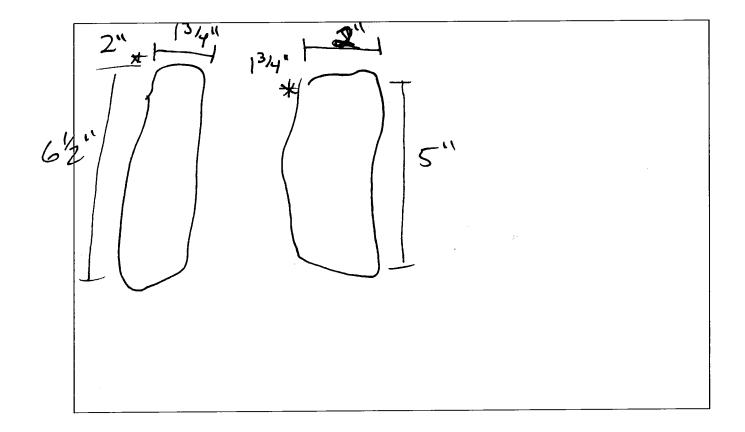
Artifact Name BOP 5B	I	Date Photographed: (	08//11
Length <u>12'4</u> Sided (Width)	<u> </u>	Aolded (Thickness)	13/y11
Fragment Number			
Nails (number and purpose)			
Marine Growth SW			
Notes Fragile	Ł		.ख्री 
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<u> </u>			
			•
Breatures A. L.		· · · · · · · · · · · · · · · · · · ·	Ϋ́β.

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Marine Growth SW			
Notes looks lile a prece	of garboard	starbord	
			· · · · · · · · · · · · · · · · · · ·
	$\bigcap$		
	4		

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Artifact Name <b>B</b>	Nedges	Date Photographed: 08/	/11
Length	Sided (Width)	Molded (Thickness)	
Fragment Number	2		
Nails (number and pur	pose)		
Marine Growth	٢		
Notes (Found	blw BF3+	BFF + lor	BF2)"



	Sided (Width)	2'4' Molded (	Thickness) <u> </u>	
Fragment Nur	nber			
Nails (number	r and purpose)			
Marine Grow	thO			
Notes				
	· · · · · · · · · · · · · · · · · · ·			
			· · · · · · · · · · · · · · · · · · ·	
	pry marks			
	pry			
			shight 's"	sevel
4	/			

Length S	ided (Width)	Molded (Th	ickness)	
Fragment Number 🚽	14 5			
Nails (number and purpo	ose)			
			· · · · · · · · · · · · · · · · · · ·	
Marine Growth				
Notes				
71 88				
T	Tre	34		
Bryth	500			
2"4"		, 1 <sup>1</sup>	14 . 4	24
21	e i	8	<u> </u>	
	1341			
31/2 / 10	prim #		_	5341"
314 000	644		14	

`. `\*

	Artifact Name       Misc. 2       Date Photographed: 08//11         Length       Sided (Width)       Molded (Thickness)
	Fragment Number $14 (5 + 14)$
	Nails (number and purpose)
	Marine Growth SW
њ. <sup>4</sup>	
	$\frac{2^{1/2} \times 3/4^{1}}{11^{1/2}} = 10^{11}$
<sup>−1</sup> αβλάσι σο 1	$7_{8} \times 4^{3/4'}$
	2"4"
	$+ (-) + (1^{3}/4)^{(1)} + (2^{-})$

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14

Artifact Name	M18. , 3	Date Photographed: 08//11
		Molded (Thickness)
Fragment Num	ber <u>14 (4 of</u> )	
Nails (number		
Marine Growth	5W	
Notes		
	<u>, ('</u>	
	1	1/2 <sup>1</sup> /2 <sup>1</sup>
	14 <sup>4</sup>	
, IT		H 13/4
	444	1 '4 Xe 13/
	son Tryal (s	kl and
		43/4
		F 642" -1
		67 -

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Artifact Name North Side	Unknown   Date	e Photographed: 08	//11	
Length $13''$ Sided (W	idth) 43/4 Mole	ded (Thickness)	13/4"	
Fragment Number				
Nails (number and purpose)				, 
Marine Growth Non				
Questionable	strip			
;				

Artifact Name North side VNKNown 2_Date Photogr	aphed: 08/ /11
Length 15'2" Sided (Width) 5" Molded (Thic	
Fragment Number	
Nails (number and purpose)	
Marine Growth	
Notes - Hair sample taken	
- pos. outer planking	

 $\frac{1}{\sqrt{d}} \frac{d}{dr}$ 

ragment Number ails (number and purpose) O - not hing Lis tingushurg		<u>H SIJe unknown</u> <sup>3</sup> Date Photographed: 08//11 Sided (Width) <u>4</u> <sup>**</sup> Molded (Thickness) <u>12<sup>**</sup></u>
arine Growth None		
arine Growth None	ails (number and p	nothing dis tinguishing
	otes	

cut ausey	

Artifact Name North Side unknown 4 Date Photographed: 08/\_\_/11 Length <u>13'4''</u> Sided (Width) <u> $3^{3'4''}$ </u> Molded (Thickness) <u> $7/8^{1}$ </u> 1 Fragment Number Nails (number and purpose) 2 - facto Marine Growth SW Notes g planking? >> deck planking b/c small tacks "4" square hair on underide; sample taken ceiling f DINC orguel D Broken

Length Sided (Width)	Molded (Thickness)	
Fragment Number 3		
Nails (number and purpose)		
Marine Growth Barnacy 5W	1	
Notes		
······································	¥1'4"	
.44		1
34		
3/4 2 7 7 4	(1214)	
81 ( )		
	Bay much	
		$\searrow$
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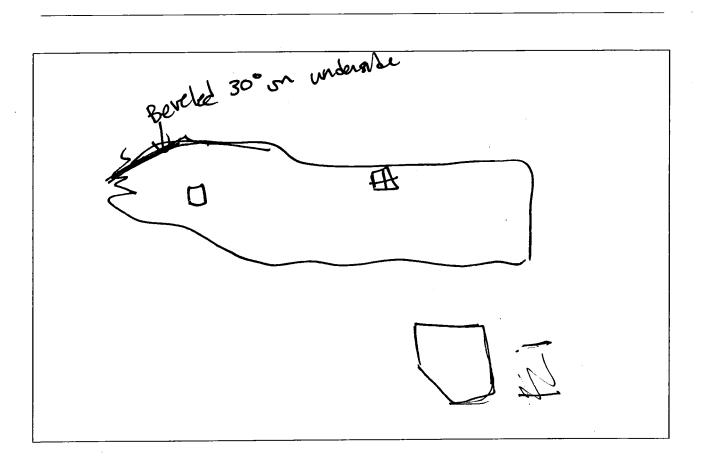
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Length Sided			
Fragment Number			
Nails (number and purpose)	vsible		
Marine Growth	· · · ·		*
Notes			
	•		
	· · · · ·		
.N.	MAT	TN	J h
1/4 1	400		
3			21/2"
		54 7	
	117 6	V2*	
pust 1/2	11/2]	13/4	

Artifact Name Unknown North side 12Date Photographed: 08//11
Length <u>10</u> Sided (Width) <u>3</u> Molded (Thickness) <u>1'5</u>
Fragment Number
Nails (number and purpose) 2 * <sup>3</sup> /3" Square
Marine Growth $SW$
Notes <u>tag as unknown 12</u>



	nd purpose)	
	unknown worm underside, 5W, 1'8" oysters	(3),6
Notes	60	
	TNON	
	$\square \land$	

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Artifact Name South side unknowpate Photographed: 08/\_\_/11 Length <u>32</u> Sided (Width) <u>4</u><sup>4</sup> Molded (Thickness) <u>6</u><sup>\*</sup> Fragment Number \_\_\_\_ Nails (number and purpose) inknown 7 Marine Growth Barnaele Remnants, Bryozoan south side - disarticulated from forward of stanpost - collected prior to excavation Notes with the back 0 Q ۵ ۵ 0 0 notch

Artifact Name <u>south side unknown</u> Date Photographed: 08/\_\_\_/11 Length <u>3!'4''</u> Sided (Width) <u>3 - 7'4''</u> Molded (Thickness) <u>1'4 - 1'2''</u> Fragment Number Nails (number and purpose) Inside - 3 def. , 2 por. Marine Growth Barnacle & oyster Inside from Libertrand forward of vow very fragule canvas pièce - sample taken pristle hau ontside Notes Por completing textile OUTSIDE 5" 13" Bisner oyster Bamaelenst pust nail Ð 0 Æ 6 smalloster ₽ 

SFIL
Artifact Name <u>Soluth Side unknown 3</u> Date Photographed: 08/_/11 Length <u>29</u> Sided (Width) <u>5<sup>1</sup>/8</u> Molded (Thickness) <u>1<sup>1</sup>/4"</u>
Length <u>29</u> Sided (Width) <u>5<sup>1</sup>8</u> Molded (Thickness) <u>1<sup>1</sup>4<sup>1</sup></u>
Fragment Number/
Nails (number and purpose) <u><u><u>4</u></u> nauls</u>
Marine Growth Barnack Joyster, Bryozoan
Caulking
disarticulated from forward of BOW
pails 3/8" square.

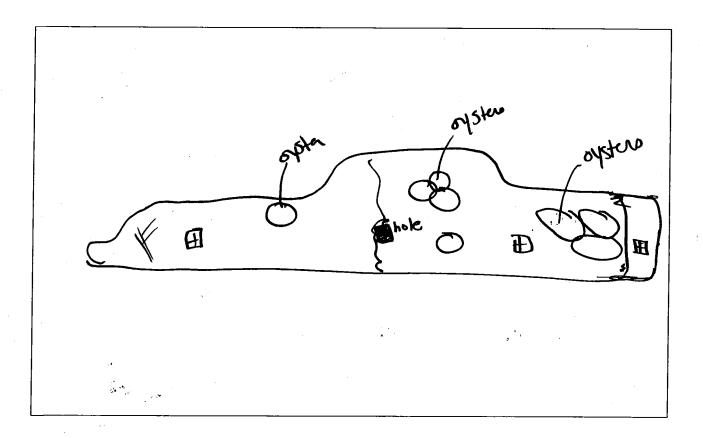
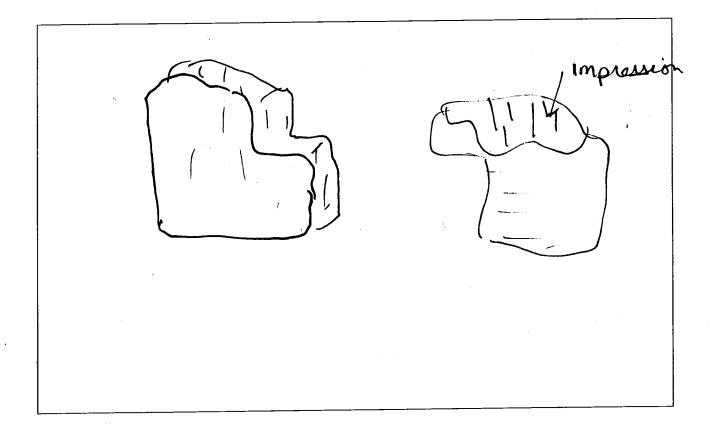


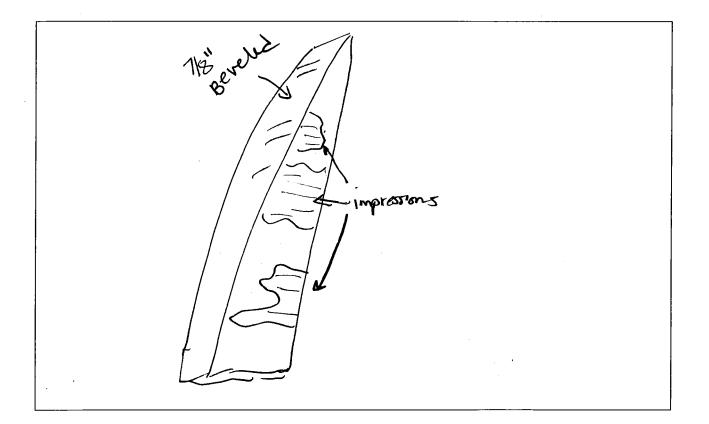
photo - Both rides
Artifact Name South Side Unknown 5   Date Photographed: 08/11 Length Sided (Width) Molded (Thickness) (muc) Fragment Number
Nails (number and purpose) 2 to frames ?
Marine Growth SW Notes pos. order planking
debris on outside jinside () impression of frame
2"2" E 2"2" E 2"1" E 2"1" E 1 E 2"1" E 1 E 1 E 1 E 1 E 1 E 1 E 1 E 1

Artifact Name B? 1 51/2(tor) Date Photographed: 08/\_\_\_/11 Length <u>**43**</u> Sided (Width) <u>**1**</u> Molded (Thickness) <u>**Max**</u> Fragment Number / -> Broke mits 2 Nails (number and purpose) Marine Growth Bamacles, Bryozan, shipworm Notes Barnacle approxim on broken side -> Broken in 17005? Sipe 1 B. YOZOANS avna with 11. " 34 714 Bryozo BAMado Broxen nail holes 34 peust pus 34" dia trunnel holes ? TOP Broken in 1/2

Artifact Name <u>B72</u>	Date Photographed: 08//11
Length 44 Sided (Width) 344"	_ Molded (Thickness)3"
Fragment Number	
Nails (number and purpose)	
Marine Growth <u>SW</u>	
Notes impression on Bottom	2



Artifact Name <u>B</u> ? 3	Date Photographed: 08//11
Length 17" Sided (Width) 2.5"	_ Molded (Thickness)
Fragment Number	
Nails (number and purpose)	·
Marine Growth	· · · · · · · · · · · · · · · · · · ·
Notes	
· · · · · · · · · · · · · · · · · · ·	
· · · · · · · · · · · · · · · · · · ·	



penamua to A Artifact Name <u>B?3A</u> Date Photographed: 08/ /11 Length <u>14 '2</u>" Sided (Width) <u>2"2"</u> Molded (Thickness) <u>1'2"</u> Fragment Number Nails (number and purpose) 0 Marine Growth \_\_\_\_ 5W back from Stank Notes NO significant markings original surface photopaphol Side

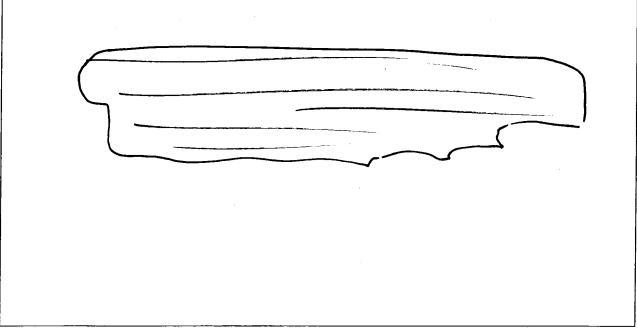
# Photos of nail side up

	Artifact Name <u>64+5+e</u> Date Photographed: 08//11
Ņ	Length <u>23<sup>*</sup>/4</u> <sup>"</sup> Sided (Width) <u>5'2</u> <sup>"</sup> Molded (Thickness) <u>3'2</u>
	Fragment Number
	Nails (number and purpose) <u>3 - to Deek?</u> + 1 nail hole
	Marine Growth
	Ton marks on side + top
	Deck Beam Impressions on top

.

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	outside 2	Date Photographed: 08//11	
Length 18 34	<b>1</b> Sided (Width) <u>3</u> <sup>4</sup> / <sub>2</sub> <sup>**</sup>	Molded (Thickness) <b>1'4, "</b>	
Fragment Numb	ber		
Nails (number as	nd purpose)	······	
Marine Growth	SW		
Notes	criginal site - re	st butten	
	· · · · · · · · · · · · · · · · · · ·		



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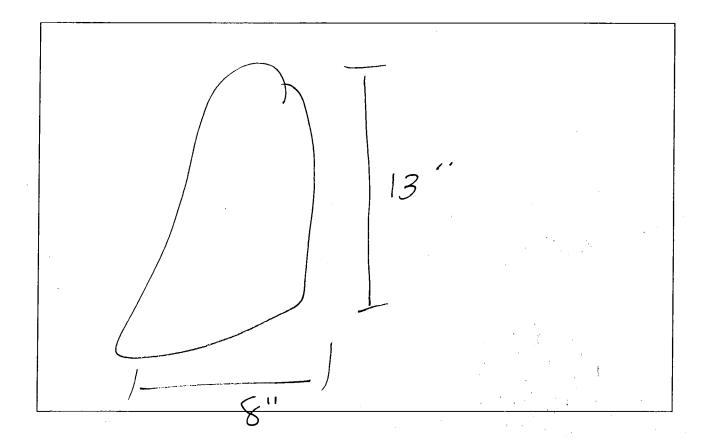
. 2	
Artifact Name <u>OUTSI de 3</u>	Date Photographed: 08//11
Length 22''g Sided (Width) 2 <sup>3</sup> /1	_ Molded (Thickness) _ <b>2'2</b>
Fragment Number/	
Nails (number and purpose)	
Marine Growth SW	
Notes	
	tack hole?
	$-\gamma$
E in the second	0

Length	5 1/4" Sided (Width) 2"	Molded (Thickness)	2314 "
Fragment	Number		
Nails (nur	mber and purpose)		
Marine G	rowth SW		
Notes			
	· · · · · · · · · · · · · · · · · · ·	· · · · · ·	
	$\left( \left( \left$	$\lambda$	

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Artifact Name		Date Photographed: 08//11 Molded (Thickness)				
	<u>2</u> - l large					
Nails (number and j	purpose)					
	SW, concreta	'n				
Notes		·				
	<u>.</u>					

Artifact Name	A #2_	Date Photographed: 08//11
Length	Sided (Width)	Molded (Thickness)/ / / /
Fragment Number	1	
Nails (number and	purpose)	
Marine Growth	SW	
Notes		
		· · · · · · · · · · · · · · · · · · ·



m Roman numeral I 1612" up fream Bottom Artifact Name Stem Pieces 1-2 Date Photographed: 08/\_/11 Length \_\_\_\_\_ Sided (Width) \_\_\_\_\_ Molded (Thickness) \_\_\_\_\_ Fragment Number 2 held together wy spike Nails (number and purpose) 1 3 spikes to how recorder apron to stem Marine Growth SW growth - Xuit Notes\_ Fits in w Al - AZ back is deteriorating st a complete NAT Caulking Feom Rabbet ¥ YN  $\overline{\mathcal{A}}^{\mathcal{O}}$ es, es d'v H"Z9. 101/2 W Stern 2 Stern  $\odot$ 3 Ω 由 'Ħ stock Ð AB trad 田 B the BBC Raddik

Date Photographed: 08/17/11 Artifact Name <u>ST - 2</u> Length 4412 Sided (Width) Molded (Thickness) Fragment Number \_\_\_\_\_ Nails (number and purpose) Marine Growth  $\leq W$ Notes Re photo + measure to note change photo all way or bund strap 22's inch. From tip to Euclideon gudgeon 13/4" thick inon hole is 2'4" caultures remnant 6 1/7 11/2 13 23 TO tenon is 5'4" Impression

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# Artifact Inventory and Index to Field and Laboratory Proveniences

Context	Ship Context	Lab Provenience	Count	Group	Class	Туре	Artifact	Ware Type	Artifact TPQ	Material	Function	Parts	Notes
	Context	Landfill - 30-60 feet	1	Activities	Specialized Activities	ship part	anchor			cast iron	anchor	whole	conserved
		northwest of ship	1	Activities	Storage item	Storage item	barrel			wood	barrel	whole	conserved
		Ship Vicinity	1	Activities	Faunal	natural	shell			shell	horseshoe crab?		
		Ship Vicinity - between outer ends of FN3 and FN6, NW corner of ship	1	Activities	Specialized Activities	shoe/ clothing	shoe			leather	shoe	sole	shoe nails present
			1	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	peach?		
			1	Activities	Faunal	food related	bone			bone	med. mammal	rib	chopped
			1	Activities	Faunal	food related	bone			bone	pig	femur	young; cut marks
			1	Activities	Faunal	food related	bone			bone	pig	tibia	chopped
			1	Activities	Faunal	food related?	fish scale			scale	Unident. fish	scale	
	n/a	Ship Vicinity - clearing north of ship during initial discovery	1	Activities	Specialized Activities	shoe/ clothing	shoe			leather	shoe		
			2	Furniture	Decorative Furnishings	ceramic	tile or dish	delft		ceramic	tile or dish	base	tin-glazed, blue and white; person; glaze on back of tile or dish; mends
			1	Tobacco	Pipe	personal item	tobacco pipe		1680	ball clay	smoking	stem	5/64" bore
Landfill			1	Activities	Specialized Activities	cooking/ heating?	charcoal			charcoal			
			1	Activities	Faunal	food related	bone			bone	cow	cervical vertebrae	cleaved
			1	Activities	Faunal	food related	bone			bone	COW	humerus	sawed, cut
			1	Activities	Faunal	food related	bone			bone	COW	phalange	
			1	Activities	Specialized Activities	shoe/ clothing	shoe			leather	shoe	seam	has stitching holes in it
			1	Tobacco	Pipe	personal item	tobacco pipe		1710	ball clay	smoking	stem	4/64" bore; stem is burned on exterior
			1	Activities	Faunal	food related	bone			bone	COW	carpus	
		Ship Vicinity - east side of ship	1	Activities	Faunal	food related	bone			bone	COW	rib	dark stained
			1	Unident.	Lithic	natural	stone			stone			natural?
		Ship Vicinity – imm. south of poss. cask above orlop deck	1	Activities	Specialized Activities	shoe/ clothing	shoe			leather	shoe	front	top portion
		Ship Vicinity - misc.	1	Activities	Faunal	food related	bone			bone	COW	femur	sawed; slice mark
		surface find in northeast corner	1	Activities	Faunal	food related	bone			bone	cow	maxilla	left side, mild dental hypoplasi
			1	Activities	Specialized Activities	cooking/ heating?	coal/slag			coal			
		Ship Vicinity - south side of ship	1	Activities	Specialized Activities	cooking/ heating?	coal/slag			slag/clinker			
			1	Activities	Faunal	food related	bone			bone	COW	radius	cleaved
			1	Activities	Faunal	food related	bone	1	1	bone	COW	tibia	chopped

# Appendix B:

												Tabl	e B-1: Artifact Inventory
Context	Ship Context	Lab Provenience	Count	Group	Class	Туре	Artifact	Ware Type	Artifact TPQ	Material	Function	Parts	Notes
			1	Activities	Botanical	natural	plant			seaweed			
			2	Activities	Faunal	natural	shell			shell	oyster	fragments	
			1	Activities	Specialized Activities	shoe/ clothing	shoe			leather	shoe	bottom part of shoe and heel	composed of several parts: inner and outer sole, seam and heel
		Ship - east of orlop deck above ceiling	8	Activities	Specialized Activities	shoe/ clothing	shoe			leather	shoe	fragments	
		layer	5	Architectural	Construction Materials	cooking/ heating?	brick	terracotta		brick			Brick sample: red bricks, all burnt; only one whole brick
			3	Architectural	Construction Materials	cooking/ heating?	brick	terracotta		brick			"Mortar sample:" red bricks, burnt; one attached to mortar & wood; perhaps stove?
			1	Architectural	Window Glass	Window Glass	window pane			glass	window pane	fragment	Light aqua, devitrified
		Ship Vicinity - clearing dark clay	1	Activities	public utilities	sewer pipe	sewer pipe	earthen- ware		ceramic	sewer pipe	fragments	
		from port side of ship during initial discovery	2	Kitchen	Dishes	food storage/ service	dish fragment	white earthen- ware		ceramic		body	1 pale yellow lead glazed; 1 white lead glazed
			1	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	chestnut hull?		
			1	Activities	Faunal	food related	bone			bone	sheep	radius	
			4	Activities	Faunal	food related	bone			bone	sm. mammal	calvar	possible partial cat cranium
		ip-	2	Activities	Faunal	food related	bone			bone	COW	radius	gnawed by carnivore; charred
	Dessible		1	Activities	Faunal	food related	bone			bone	COW	rib	sawed, cut
Landfill/	Possibly ship-		1	Activities	Faunal	food related	bone			bone	sheep	radius	cut marks
Ship	related		1	Activities	Faunal	food related	bone			bone	Turkey	tibiotarsus	cut marks; gnawed by carnivore
			1	Activities	Faunal	food related	bone			bone	COW	proximal phalange	
			1	Activities	Faunal	food related	bone			bone	COW	femur	cleaved
			1	Activities	Faunal	natural	shell			shell	mussel		
			1	Activities	Faunal	natural	shell			shell	oyster		
			1	Activities	Faunal	natural	shell			shell	oyster		
		Ship Vicinity -	1	Activities	Faunal	natural	shell			shell	horseshoe crab		
		clearing during initial discovery	15	Activities	Specialized Activities	shoe/ clothing	shoe			leather	shoe	parts	includes 2 soles, 1 heel and scraps
			1	Activities	Specialized Activities	shoe/ clothing	shoe			leather	shoe	complete	Conserved
			13	Activities	Specialized Activities	shoe/ clothing	shoe			leather	shoe	heels, soles, seams, tongue?	Many parts including what looks like a child's shoe
			1	Activities	Specialized Activities	shoe/ clothing	shoe			leather	shoe	sole	
			1	Activities	Specialized Activities	shoe/ clothing	shoe			leather	shoe	fragments	Conserved
			9	Activities	Specialized Activities	shoe/ clothing	shoe			leather	shoe	soles, heels	One complete shoe set aside for conservation; in heels are several pegs <i>in situ</i>
			1	Architectural	Construction Materials	Construction Materials	brick	terracotta		brick			fragment

												Tabl	e B-1: Artifact Inventor										
Context	Ship Context	Lab Provenience	Count	Group	Class	Туре	Artifact	Ware Type	Artifact TPQ	Material	Function	Parts	Notes										
			2	Architectural		Construction Materials	brick			red clay			2 bricks one is covered with mortar on one side 8.5 x 4 x 2.25" and burned on one side one is also glazed probably from heat on one side										
			1	Architectural		Construction Materials	lug			iron	lug												
			3	Architectural		Construction Materials	lug			iron/wood	lug												
			1	Architectural		Construction Materials	metal plate			iron	reinforcing plate		Probably ship-related										
			2	Architectural		Construction Materials	mortar			mortar	mortar		associated with the bricks										
			1	Architectural	Construction Materials	Construction Materials	unident. iron			iron	unident.												
			1	Architectural		fastener	bolt?			iron	bolt?												
			2	Architectural		fastener	rod			iron	rods												
			1	Architectural		fastener	spike			iron	spike												
			1	Architectural		fastener	unident. iron			wood/iron	wood with large nail through it												
			4	Architectural		fastener	rod?			iron/wood	tie rod holding ship together?		includes 2 fragments worn eaten wood										
			2	Architectural		ship part	unident. wood			wood	, i i i i i i i i i i i i i i i i i i i												
	Possibly	Ship Vicinity -	6	Architectural		ship part	wood fragment			wood			2 are worm eaten										
Landfill/ Ship	ship- related	clearing during initial discovery	2	Architectural		Construction Materials	lug			iron	lug												
	Telateu	initial discovery	1	Architectural		fastener	spike			iron	spike												
			1	Arms	Arms Accessories	Arms Accessories	cannon vent plate			lead	vent plate		for cannon										
			-	1	Furniture	Decorative Furnishings	ceramic	flowerpot	red earthen- ware		ceramic	flowerpot	body	plain									
				1							1	Furniture	Decorative Furnishings	ceramic	flowerpot?	red earthen- ware		ceramic	flowerpot?	rim	looks like interior was once slipped		
																			1	Kitchen	Containers	food storage/ service	bottle
					1	Kitchen	Dishes	food storage/ service	dish fragment	cream- ware	1762	ceramic	dish	body									
			1	Kitchen	Dishes	food storage/ service	dish fragment	oriental porcelain		ceramic	saucer	rim	blue hand painted int. rim										
			1	Kitchen	Dishes	food storage/ service	dish fragment	buff- bodied earthen- ware		ceramic		body	cobalt blue decoration on exterior										

												Tabl	e B-1: Artifact Inventory
Context	Ship Context	Lab Provenience	Count	Group	Class	Туре	Artifact	Ware Type	Artifact TPQ	Material	Function	Parts	Notes
			1	Kitchen	Dishes	food storage/ service	dish fragment	grey salt- glazed stoneware		ceramic		body	combed, brown on yellow slip int., unglazed exterior
		Ship Vicinity - clearing during	1	Kitchen	Dishes	food storage/ service	dish fragment	red earthen- ware		ceramic		base	clear lead glazed
		initial discovery	1	Kitchen	Dishes	food storage/ service	dish fragment	unident.		ceramic		base/body	olive glazed interior; poorly fired
			1	Kitchen	Dishes	food storage/ service	dish fragment	white salt- glazed stoneware		ceramic		rim	
			1	Activities	Faunal	food related	bone			bone	COW	rib	chopped
		Ship Vicinity - clearing of soils east of orlop deck and above ceiling	4	Architectural	Construction Materials	fastener	nail			iron	nails		square cut; possibly ship- related; also metal cast with iron rust and mud that once held a nail
		layer	3	Architectural	Construction Materials	ship part	wood fragment			wood			
			1	Activities	Specialized Activities	cooking/ heating?	charcoal			charcoal			
			1	Activities	Specialized Activities	cordage	rope			rope	rope		conserved
Landfill/	Possibly		2	Activities	Faunal	food related	bone			bone	sheep	lumbar vertebrae	cleaved
Ship	ship- related		1	Activities	Specialized Activities	shoe/ clothing	shoe			leather	shoe	scrap	
		Ship Vicinity -	1	Architectural	Construction Materials	fastener	nail			iron	Mostly rust with large square cut nail in the center		
		clearing of soils from starboard side	3	Architectural	Construction Materials	ship part	wood fragment			wood		fragments	
		of ship east of orlop deck and above	2	Architectural	Construction Materials	ship part	wood fragment			wood			stripped branch, possibly for making a trunnel?
		ceiling layer	1	Kitchen	Containers	food storage/ service	bottle			glass	bottle		devitrified
			1	Kitchen	Dishes	food storage/ service	dish fragment	delft or majolica		ceramic	possible saucer or plate	base	sulfite stains; base has dab of cobalt blue
			2	Kitchen	Dishes	food storage/ service	dish fragment	cream- ware	1762	ceramic		1 body; 1 handle fragments	
			1	Tobacco	Pipe	personal item	tobacco pipe			ball clay	smoking	bowl	decorated with fluting and floral decoration; 5/64" bore; utilized
		Ship Vicinity - clearing of west half of stern during initial discovery	1	Activities	Storage item	storage item	barrel lid			wood	barrel lid	part	
		Ship Vicinity - east side of ship	1	Architectural	Construction Materials	fastener	iron bar			iron	iron bar		

												Tabl	e B-1: Artifact Inventor
Context	Ship Context	Lab Provenience	Count	Group	Class	Туре	Artifact	Ware Type	Artifact TPQ	Material	Function	Parts	Notes
		River Bottom - below outer	4	Activities	Specialized Activities	shoe/ clothing	shoe			leather	shoe	soles and shoe scraps	1@ 8"; 1 @ 9 1/8"
		planking in SE corner of ship	1	Activities	Faunal	food related	bone			bone	unidentified		
			2	Activities	Faunal	natural	shell			shell	dwarf surf clam; oyster		1 clam; 1 oyster
			10	Activities	Specialized Activities	shoe/ clothing	shoe			leather	shoe	fragments	includes 1 heel with many sho pegs, 1 sole and many scraps
		River Bottom - below outer	2	Activities	Specialized Activities	shoe/ clothing	shoe			leather	shoe	soles	1 child's shoe only 6 1/2" long the other is apx. 8 1/2"
		planking in vicinity of stern knee	1	Kitchen	Dishes	food storage/ service	dish fragment	cream- ware	1762	ceramic	bowl; possible sugar bowl	rim/body	beading on exterior; probably same set as saucer below
			10	Kitchen	Dishes	food storage/ service	dish fragment	cream- ware	c. 1762- 1820	ceramic	saucer	whole	mends; decorated with beading in cavetto; shallow bowl or saucer; same set as sugar bow
			1	Activities	Faunal	food related	bone		1	bone	med. mammal	vertebrae	· · · · · · · · · · · · · · · · · · ·
			1	Activities	Faunal	food related	bone			bone	med. mammal	unident.	chopped
			1	Activities	Faunal	food related	bone			bone	sheep	carpus	
			1	Activities	Faunal	food related	bone			bone	sheep	femur	
			75	Activities	Faunal	natural	bone			bone	Bay Anchovy	partial skeleton missing the head	
River Bottom	n/a		17	Activities	Faunal	natural	shell			shell	snail, clam, whelk, oyster		2 clams, 1 oyster, 1 whelk, 3 soft shell clams, 3 unident.,7 snail; maybe river bottom
			2	Activities	Faunal	natural	shell			shell	unident.		
			1	Activities	public utilities	sewer pipe	sewer pipe	coarse earthen- ware?		ceramic	sewer pipe or very heavy storage vessel		lead glazed with incised decoration on exterior
		River Bottom -	7	Activities	Specialized Activities	shoe/ clothing	shoe			leather	shoe	fragments	maybe river bottom
		below outer planking on east	2	Architectural	Construction Materials	Construction Materials	brick			brick		fragments	1 burned; 1 water-worn
		side of the ship	1	Architectural	Construction Materials	Construction Materials	mortar			mortar		fragment	
			1	Architectural	Construction Materials	Construction Materials	stone			slate		fragment	
			16	Architectural	Construction Materials	Construction Materials	wood fragment			wood			some worm eaten are probabl ship-related; 3 look like twigs, one is a piece of cut wood; bar
			3	Architectural	Construction Materials	fastener	rust			iron	rust by-products		
			1	Kitchen	Dishes	food storage/ service	dish fragment	buff- bodied earthen- ware		ceramic	bowl?	base	yellow glazed on interior
			1	Kitchen	Dishes	food storage/ service	dish fragment	earthen- ware?		ceramic	unident.	unident.	unglazed; possible delft tile?

												Table	e B-1: Artifact Inventory
Context	Ship Context	Lab Provenience	Count	Group	Class	Туре	Artifact	Ware Type	Artifact TPQ	Material	Function	Parts	Notes
			2	Activities	Specialized Activities	cooking/ heating?	coal/slag			slag			
		River Bottom - below outer planking on east	6	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	2 peach, 2 cherry, 1 poss. coffee bean, I unident. nut shell		
		side of the ship	1	Activities	Faunal	food related	bone			bone	chicken	coracoid	fragment
			152	Activities	Faunal	food related	bone			bone	horse	calvar	horse between 18 and 20 years old; was probably pole-axed
			1	Activities	Faunal	food related	bone			bone	COW	tibia	cleaver mark
			1	Activities	Faunal	food related	bone			bone	med. mammal	rib	
			2	Activities	Faunal	food related	bone			bone	suckling pig	calvar	
			2	Activities	Faunal	food related	bone			bone	fish	operculum	Possible porgy
			2	Activities	Faunal	food related	bone			bone	med. mammal	rib	
			1	Activities	Faunal	food related	bone			bone	med. mammal	sternum	unfused
			1	Activities	Faunal	food related?	fish scale			scale	Unident. fish	scale	fish scale
			7	Activities	Faunal	natural	shell			shell	snail, clam, jingle, dwarf surf clam		1 jingle?, 3 snail, 1 clam, 2 whole dwarf surf clams
			2	Activities	Faunal	natural	shell			shell	mussel	fragments	
			1	Activities	Specialized Activities	shoe/ clothing	shoe			leather	shoe	part	
			2			_	brick	terracotta		brick			
River	n/a		1				mortar			mortar			
Bottom			1	Architectural	Construction Materials	Construction Materials	stone			slate			
		D'	3		Waterials	Materials	wood fragment			wood			
		River Bottom - below outer	5				wood fragment			wood			
		planking on north side of keel	1	Arms	Arms Accessories	Arms Accessories	Belt or strap			iron/leather	probably part of a carryall or ammunition carrying bag	buckle and strap	conserved
			1	Kitchen	Dishes	food storage/ service	dish fragment	red earthen- ware	late 18th century	ceramic	unident.	rim	yellow, green & brown clouded ware; probably mends with large vessel below in "from under outer planking on north half of ship under keel"; possibly local potter; probably mends with pint mug (below)
			13	Kitchen	Dishes	food storage/ service	dish fragment	red earthen- ware		ceramic		base and body	mottled lead glazed interior
			40	Kitchen	Dishes	food storage/ service	pint mug	red earthen- ware	late 18th to early 19th century	ceramic	pint mug	half of vessel	clouded? Green, brown, yellow, many different motifs; possibly NY or Phila. Potter copying British late 18th century wares; all mend and probably mends with rim sherd above

												Tabl	e B-1: Artifact Inventory
Context	Ship Context	Lab Provenience	Count	Group	Class	Туре	Artifact	Ware Type	Artifact TPQ	Material	Function	Parts	Notes
		River Bottom - below outer	3	Activities	Specialized Activities	cooking/ heating?	coal/slag			slag			
		planking on north side of keel	5	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	peach, melon/squash	fragments	
			1	Activities	Faunal	food related	bone			bone	cow	rib	cleaved
			3	Activities	Faunal	food related	bone			bone	pig	rib	chopped
			1	Activities	Faunal	food related	bone			bone	chicken	tibiotarsus	cut above joint
			1	Activities	Faunal	food related	bone			bone	COW	cervical	bisected vertically
			1	Activities	Faunal	food related	bone			bone	COW	tibia	chopped; young
			1	Activities	Faunal	food related	bone			bone	pig	humerus	young; cleaved
			1	Activities	Faunal	food related	bone			bone	sheep	radius	cut marks
			1	Activities	Faunal	food related	bone			bone	sheep	metatarsus	
			1	Activities	Faunal	food related	bone			bone	sheepshead	Preoperculum	dark stained
			1	Activities	Faunal	food related	bone			bone	COW	metacarpus	
			7	Activities	Faunal	food related	bone			bone	3 fish bone, 2 fish scales, 1 tooth, 1 crab claw		
			26	Activities	Faunal	food related	bone			bone	COW	calvar (skull)	fragments
			1	Activities	Faunal	food related	bone			bone	COW	innominate	neonate; chopped
			3	Activities	Faunal	food related	bone			bone	fish	Branchiostegal	fragment; unident.
			1	Activities	Faunal	food related	bone			bone	fish	thoracic vert.	unidentified
			1	Activities	Faunal	food related	bone			bone	fish	unident.	
			1	Activities	Faunal	food related	bone			bone	horse	mid phalange	
			1	Activities	Faunal	food related	bone			bone	lg. mammal	long bone	fragment; charred
River	n/a		4	Activities	Faunal	food related	bone			bone	med. mammal	unident.	one is charred
Bottom		River Bottom -	1	Activities	Faunal	food related	bone			bone	med. mammal	rib	
		below outer	1	Activities	Faunal	food related	bone			bone	med. mammal	long bone	fragment
		planking on south side of keel	1	Activities	Faunal	food related	bone			bone	piq	scapula	chopped
		Side of keel	1	Activities	Faunal	food related	bone			bone	pig	humerus	
			2	Activities	Faunal	food related	bone			bone	sheep	tibia	chopped; one fragment gnawe by carnivore
			1	Activities	Faunal	food related	bone			bone	Sheepshead	vertebra	
			1	Activities	Faunal	food related	bone			bone	sm. mammal	rib	
			1	Activities	Faunal	food related	bone			bone	turtle	tibia	
			1	Activities	Faunal	food related	bone			bone	unidentified		calcined
			1	Activities	Faunal	food related	bone			bone	cow	pelvis	chopped; shells growing on bone
			1	Activities	Faunal	food related	bone			bone	cow	cervical vertebrae	chopped
			1	Activities	Faunal	food related	bone			bone	COW	thoracic v.	chopped
			1	Activities	Faunal	food related	bone			bone	COW	rib	chopped
			1	Activities	Faunal	food related	bone			bone	goat	horn core	chopped; right
			1	Activities	Faunal	food related	bone			bone	cow	rib	chopped; slice mark on shaft
			1	Activities	Faunal	food related	bone			bone	horse	metacarpus	
			1	Activities	Faunal	food related	bone			bone	lg. mammal	Unident.	
			1	Activities	Faunal	food related	bone			bone	pig	humerus	chopped
			1	Activities	Faunal	food related?	fish scale			scale	Unident. fish	scale	fragment
			2	Activities	Faunal	natural	shell			shell	dwarf clam; Ig whelk		~
			1	Activities	Faunal	natural	shell			shell	oyster		

						-						Table	e B-1: Artifact Inventory
Context	Ship Context	Lab Provenience	Count	Group	Class	Туре	Artifact	Ware Type	Artifact TPQ	Material	Function	Parts	Notes
			3	Activities	Faunal	natural	shell			shell	1 hard shell clam & 2 dwarf clams		
			1	Activities	Faunal	natural	shell			shell	whelk		
			50	Activities	Faunal	natural	shell			shell	16 oyster, 3 dwarf surf clam, 2 hard shell clam, 28 snails, 1 mussel		
			1	Activities	Faunal	natural	shell			shell	snail		
			28	Activities	Specialized Activities	shoe/ clothing	leather			leather		fragments	
			1	Activities	Specialized Activities	shoe/ clothing	shoe			leather	shoe	almost complete	
			3	Activities	Specialized Activities	shoe/ clothing	shoe			leather	shoe	heel and scraps	
			1	Architectural	Construction Materials	Construction Materials	brick	terracotta		brick		fragments	water-worn
			8	Architectural	Construction Materials	Construction Materials	brick			brick			7 red; 1 yellow Dutch
			1	Architectural	Construction Materials	Construction Materials	concrete			concrete			
			1	Architectural	Construction Materials	Construction Materials	conglomerate			conglomerate : metal, wood			
			3	Architectural	Construction Materials	Construction Materials	mortar			mortar			
River	n/a	River Bottom - below outer	1	Architectural	Construction Materials	Construction Materials	stone			Sandstone?			
Bottom		planking on south side of keel	5	Architectural	Construction Materials	Construction Materials	wood fragment			wood			d ninge lande lite it minkt have
			10	Architectural	Construction Materials	Construction Materials	wood fragment			wood			1 piece looks like it might have been trim because it has small nails in it.
			35	Architectural	Construction Materials	Construction Materials	wood fragment			wood			
			3	Architectural	Construction Materials	Construction Materials	wood fragment			wood			
			2	Kitchen	Containers	food storage/ service	drinking glass; bottle			glass	drinking glass; bottle		
			3	Kitchen	Dishes	food storage/ service	dish fragment	cream- ware	1762	ceramic	plate	rims and base	Queens ware pattern
			3	Kitchen	Dishes	food storage/ service	dish fragment	oriental porcelain		ceramic	shallow bowl		Mends; hand painted blue ext. and int.; appears faded colors
			1	Kitchen	Dishes	food storage/ service	dish fragment	buff- bodied earthen- ware		ceramic	slipware		yellow and brown
			6	Kitchen	Dishes	food storage/ service	dish fragment	white salt- glazed stoneware	1740	ceramic	small bowl	rim, base, body	all from the same vessel
			1	Kitchen	Dishes	food storage/ service	dish fragment	red earthen- ware		ceramic	small bowl?	base	dark brown lad glaze on interior; unglazed exterior

												Table	e B-1: Artifact Inventory
Context	Ship Context	Lab Provenience	Count	Group	Class	Туре	Artifact	Ware Type	Artifact TPQ	Material	Function	Parts	Notes
			1	Kitchen	Dishes	food storage/ service	dish fragment	porcelain		ceramic			
			1	Kitchen	Dishes	food storage/ service	dish fragment	red earthen- ware		ceramic		base	dark brown lead glaze
			1	Kitchen	Dishes	food storage/ service	Storage vessel	gray/buff bodied salt- glazed stoneware		ceramic	Storage vessel	body	
			2	Tobacco	Pipe	personal item	tobacco pipe		1680	ball clay	smoking	stems	5/64" bore
		River Bottom - below outer	1	Kitchen	Dishes	food storage/ service	dish fragment	porcelain	17th or 18th century	ceramic	small bowl	half vessel	hand-painted blue with dragor motif; possibly southeast Asia (Janowitz 2010)
		planking on south	1	Activities	Faunal	food related	bone			bone	pigeon	ulna	cut
		side of keel	1	Activities	Faunal	natural	shell			shell	horseshoe crab?		
			1	Activities	Specialized Activities	cooking/ heating?	coal/slag			coal			anthracite
			1	Activities	Specialized Activities	cooking/ heating?	coal/slag			slag			
			8	Activities	Specialized Activities	cooking/ heating?	coal/slag			slag	slag		
			1	Activities	Specialized Activities	cordage	rope			rope	rope		should be conserved
River	n/a		25	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	12 peach, 1 hickory 9 cherry, 1		
Bottom			1	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	cherry		
			2	Activities	Faunal	food related	bone			bone	sheep	rib	chopped
		River Bottom -	1	Activities	Faunal	food related	bone			bone	unidentified		
		below outer	2	Activities	Faunal	natural	shell			shell	oyster	whole	
		planking on west	4	Activities	Faunal	natural	shell			shell	snails		
		side of ship	6	Activities	Faunal	natural	shell			shell	unident.		
		River Bottom -	2	Activities Kitchen	Botanical Containers	food related food storage/	seed/pit/nut bottle?			seed/pit/nut glass	cherry pit bottle?		aqua; sent from MAC Lab
		below PN10-2 River Bottom - clays	3	Activities	Faunal	service natural	shell			shell	snails, limpet		2 snails, 1 limpet
		below ship	1	Activities	Faunal	food related	bone			bone	cow	lumbar	cleaved
												vertebrae	
			1	Activities	Faunal Faunal	food related food related	bone			bone	sheep	metacarpus	chewed by carnivore; neonate
			1	Activities Activities	Faunal	food related	bone bone			bone bone	cow	right mandible Atlas	chopped chopped
			1	Activities	Faunal	food related	bone			bone	cow	rib	chopped; neonate
		River Bottom -	1	Activities	Faunal	food related	bone	ł		bone	cow	rib	chopped, neonate
		pedestal below ship	1	Activities	Faunal	food related	bone	1		bone	cow	innominate	sawed; slice mark
			1	Activities	Faunal	food related	bone	1		bone	cow	calcaneus	cut marks
			4	Activities	Faunal	food related	bone			bone	med. mammal	long bone fragment	outmand
			1	Activities	Faunal	natural	shell			shell	horseshoe crab?	nayment	
			3	Activities	Faunal	natural	shell	+		shell	oyster		

												Tabl	e B-1: Artifact Inventory
Context	Ship Context	Lab Provenience	Count	Group	Class	Туре	Artifact	Ware Type	Artifact TPQ	Material	Function	Parts	Notes
			2	Activities	Specialized Activities	shoe/ clothing	leather			leather		fragments	
			8	Activities	Specialized Activities	shoe/ clothing	shoe			leather	shoe	fragments	
			1	Architectural	Construction Materials	Construction Materials	brick			brick	Dutch brick	whole	
			4	Architectural	Construction Materials	Construction Materials	wood fragment			wood			
			1	Architectural	Construction Materials	fastener	bolt			iron/wood			wooden block with large bolt through it
			1	Kitchen	Dishes	food storage/ service	dish fragment	cream- ware or whiteware		ceramic	saucer		hand painted blue
			7	Kitchen	Dishes	food storage/ service	dish fragment	buff- bodied		ceramic			crude paste; dark brown glaze
		River Bottom - pedestal below ship	1	Kitchen	Dishes	food storage/ service	dish fragment	cream- ware?		ceramic			blue hand-painted; possibly whiteware
			1	Kitchen	Dishes	food storage/ service	jar?	grey salt glazed stoneware		ceramic	jar?		
			2	Tobacco	Pipe	personal item	tobacco pipe			ball clay	smoking		5/64" bore
			1	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	cherry pit		
River	n/a		1	Activities	Faunal	natural	shell			shell	snail		
Bottom	1/a		2	Activities	Sanitary	ceramic	chamber pot	white salt glazed stoneware	c. 1720- 1805	ceramic	chamber pot	rim & body	cobalt blue decoration on exterior; small vessel
			1	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	cherry		
			2	Architectural	Construction Materials	Construction Materials	brick	terracotta		brick	·		1 burnt; 1 has mortar
			1	Architectural	Construction Materials	fastener	nail			iron	Nails	shaft	
			2	Activities	Botanical	natural	plant			eel grass	eel grass		
			1	Activities	Botanical	natural	plant			sea grass	sea grass		
			2	Activities	Faunal	natural	shell			shell	barnacle		
			10	Activities	Faunal	natural	shell			shell	clam		
		River Bottom - shell	3	Activities	Faunal Faunal	natural	shell shell			shell	clam		
		rich sample below		Activities		natural				shell	clam		
		outer planking on	1 5	Activities Activities	Faunal Faunal	natural natural	shell shell			shell shell	clam mussel		
		west side of stern	5 1	Activities	Faunal	natural	shell			shell	mussel	+	
		post	5	Activities	Faunal	natural	shell			shell	oyster	1	1
			14	Activities	Faunal	natural	shell			shell	snail		
			4	Activities	Faunal	natural	shell			shell	unident.		
			1	Activities	Botanical	food related	seed/pit/nut	1		seed/pit/nut	unident.	<u> </u>	
			1	Activities	Botanical	food related	seed/pit/nut	1		seed/pit/nut	cherry	1	
		River Bottom - below east side of hull	1	Activities	Specialized Activities	fastener	wooden pin			wood	pin		

												Tabl	e B-1: Artifact Inventory
Context	Ship Context	Lab Provenience	Count	Group	Class	Туре	Artifact	Ware Type	Artifact TPQ	Material	Function	Parts	Notes
		River Bottom - below	1	Architectural	Construction Materials	Construction Materials	brick	terracotta		brick			
		outer planking in SE corner of ship	1	Architectural	Construction Materials	Construction Materials	mortar			mortar		fragments	
		comer or ship	1	Architectural	Construction Materials	ship part	wood fragment			wood			
		River Bottom - below outer planking on east side of the ship	1	Activities	Specialized Activities	fastener	wooden pin			wood	pin		
		River Bottom - pedestal below ship	1	Architectural	Construction Materials	fastener	rod?			iron/wood	iron through a piece of wood		wood is worm-eaten
		River Bottom -	1	Activities	Faunal	natural	shell			shell	oyster		
River	Possibly ship-	around stem post	1	Tobacco	Pipe	personal item	tobacco pipe			ball clay	stem		
Bottom	related	River Bottom - below east side of hull	7	Activities	Faunal	food related	bone			bone	unident.		possibly torn apart
			1	Activities	Faunal	natural	shell			shell	horseshoe crab?	body	covered in tar; possibly leather
			1	Activities	Specialized Activities	shoe/ clothing	shoe			leather	shoe	parts	
		River Bottom - below outer hull in	1	Architectural	Construction Materials	fastener	nail			iron	Nails	fragment	badly corroded
		vicinity of stern knee	1	Furniture	Decorative Furnishings	ceramic	flower pot	red earthen- ware		ceramic	flower pot		
			1	Kitchen	Containers	food storage/ service	wine bottle		18th century	glass	wine bottle	lip/neck	dark green
		Ship - attached to F0	1	Personal	Coin	personal item	coin			cu alloy	coin		illegible writing/date; badly corroded, very thin; MAC LAB attempted to X-Ray with negligible results
			4	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	hickory nut		
			2	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	peach		
			1	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	unident. shell		
			6	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	cherry		peach, cherry, nut
			1	Activities	Faunal	food related	bone			bone	bird	long bone frag	very dark stain; unident. bird
			1	Activities	Faunal	food related	bone			bone	bird	radius	very dark stain; unident. bird
Ship	А		2	Activities	Faunal	food related	bone			bone	cow	humerus	gnawed by rodent; vy dark stain
		Ship - between cant frames and FNFS10	1	Activities	Faunal	food related	bone			bone	cow	rib	gnawed by rodent; vy dark stain
			2	Activities	Faunal	food related	bone			bone	med. mammal	scapula	very dark stain; unident. bird
			1	Activities	Faunal	food related	bone			bone	med. mammal	sacrum	fragment; very dark stain
			1	Activities	Faunal	food related	bone			bone	med. mammal	long bone	fragment; very dark stain
			1	Activities	Faunal	food related	bone			bone	pig	cervical vert.	Rodent-gnawed; vy dark stain
			1	Activities	Faunal	food related	bone			bone	pig	femur	Rodent-gnawed; vy dark stain
			1	Activities	Faunal	food related	bone			bone	Sheepshead	vertebrae	very dark stain; unident. bird

												Tabl	e B-1: Artifact Inventor
Context	Ship Context	Lab Provenience	Count	Group	Class	Туре	Artifact	Ware Type	Artifact TPQ	Material	Function	Parts	Notes
			1	Activities	Faunal	food related	bone			bone	Yellow Perch	preoperculum	very dark stain; unident. bird
			4	Activities	Faunal	natural	shell			shell	clam and snail		1 clam; 3 snail
			1	Architectural			conglomerate			Iron oxide/lead/ wood	concretion		contains 11 pcs. Birdshot inventoried separately;
			1	Architectural			conglomerate			Iron oxide/lead/ wood	concretion		includes 6 birdshot and 1 buckshot inventoried separately;
			1	Architectural		Construction Materials	conglomerate			iron/iron oxide/lead/ glass	concretion		Included: 1 grapeshot, 3 birdshot, 1 window glass, 1 wood, 1 pc. of lead, inventorie separately
			1	Architectural	Construction Materials	Watenais	conglomerate			lead/iron oxide/wood	concretion		includes 6 bird shot inventorie separately
			1	Architectural			conglomerate			rust/lead/ glass	concretion		3 square nail holes; 8 birdsho & 1 frag. glass attached inventoried separately
			5	Architectural			unident. iron			iron/wood	concretion		
			1	Architectural			unident. lead			lead		fragments	triangular piece of lead; in concretion
			1	Architectural		-	wood fragment			wood	fragments		in concretion
			1	Architectural		fastener	nail			iron?	nail		
			1	Architectural		fastener	spike			iron	spike		
		Ship - between cant	1	Architectural	Window Glass	Window Glass	window pane			glass	window pane		aqua
Ship	A	frames and FNFS10	1	Architectural	Window Glass	Window Glass	window pane			glass	window pane		in concretion
			1	Architectural	Window Glass	Window Glass	window pane			glass	window pane		in concretion
			1	Arms	Arms Accessories	Arms Accessories	gun spall			Dover flint	gun spall		black; slightly utilized; American
			62	Arms	Projectiles	Projectiles	Bird shot			lead	Bird shot		made from shot tower
			18	Arms	Projectiles	Projectiles	Bird shot			lead	Bird shot		
			11	Arms	Projectiles	Projectiles	Bird shot			lead	Bird shot		in concretion
			8	Arms	Projectiles	Projectiles	Bird shot			lead	Bird shot		in concretion
			6	Arms	Projectiles	Projectiles	Bird shot			lead	Bird shot		in concretion
			6	Arms	Projectiles	Projectiles	Bird shot			lead	Bird shot		1
			6	Arms	Projectiles	Projectiles	Bird shot			lead	Bird shot		in concretion
			3	Arms	Projectiles	Projectiles	Bird shot			lead	Bird shot		in concretion
			2	Arms	Projectiles	Projectiles	Buck shot			lead	Buck shot		in conception
				Arms	Projectiles	Projectiles	Buck shot			lead	Buck shot		in concretion
			1	Arms Arms	Projectiles Projectiles	Projectiles Projectiles	Grape shot Grape shot			iron iron	Grape shot Grape shot		made for 3 pounder cannon; concretion
			3	Arms	Projectiles	Projectiles	Musket ball			lead	Musket ball		chewed by a rat
			37	Arms	Projectiles	Projectiles	Musket ball			lead	Musket ball		
			1	Clothing	Fasteners	shoe/ clothing	cufflinks?			copper alloy	cufflinks?		

												Tabl	e B-1: Artifact Inventor
Context	Ship Context	Lab Provenience	Count	Group	Class	Туре	Artifact	Ware Type	Artifact TPQ	Material	Function	Parts	Notes
			1	Clothing	Fasteners	shoe/ clothing	hook from hook and eye			copper alloy	hook from hook and eye		Conserved
			2	Kitchen	Containers	food storage/ service	bottle fragment			glass	bottle	body	1 olive green; 1 devitrified
			1	Kitchen	Dishes	food storage/ service	dish fragment	stoneware		ceramic		body	brown glazed int. & ext. and incised decoration on exterior
			4	Kitchen	Dishes	food storage/ service	dish fragment	red earthen- ware		ceramic		body	clear lead glazed w/ dk. Brown mottling; unglazed exterior; interior slip?
		Ship - between cant frames and FNFS10	1	Kitchen	Dishes	food storage/ service	dish fragment	white salt- glazed stoneware	1720- 1805	ceramic		body	white salt-glazed, very thin
			1	Kitchen	Dishes	food storage/ service	dish fragment	red earthen- ware	1740- 1850	ceramic		body	unglazed w/interior slip? jackfield type
			1	Kitchen	Dishes	food storage/ service	dish fragment	red earthen- ware		ceramic		body	jackfield-style
			1	Personal	Coin	personal item	coin			silver	Coin		silver; coin is attached to a number of pieces of birdshot counted separately
Ship	А		3	Tobacco	Pipe	personal item	tobacco pipe		1680	ball clay	smoking	stems	5/64"
			4	Activities			charcoal				Carya spp.		Hickory
			8	Activities	Specialized	cooking/	charcoal			wood	Pinus spp.		Pine
			8	Activities	Activities	heating?	charcoal			charcoal	Quercus spp.		Oak
			28	Activities			charcoal				Unident.		Unidentifiable
			4	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	Rubus sp.	whole	blackberry/raspberry
			1	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	Sambucus canadensis	fragments	Elder
			1	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	Vitus sp.	whole	Grape
			1	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	Cucumis sp.		Melon or Cucumber
		Ship - between	1	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	Prunus persica	fragments	Peach
		frames FN2 and	1	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	Carya illinoensis	fragments	Pecan
		FN3	1	Activities	Botanical	natural	plant			grass	Poaceae	fragments	stem fragment
			1	Activities	Botanical	natural	seed/pit/nut			seed/pit/nut	Potentilla sp.		Cinquefoil
			5	Activities	Botanical	natural	seed/pit/nut			seed/pit/nut	Datura stramonium		Jimsonweed
			1	Activities	Botanical	natural	seed/pit/nut			seed/pit/nut	Panicum/Setaria		Panic/Foxtail grass
			1	Activities	Botanical	natural	seed/pit/nut			seed/pit/nut	Amaranthus spp.		Pigweed
			1	Activities	Specialized Activities	block and tackle?	wooden block			wood	block		Ship-related
			1	Activities	Faunal	food related	bone			bone	sm. mammal	vertebra	
			3	Architectural	Construction Materials	ship part	wood fragment			non- carbonized wood	Pinus spp.	fragments	Pine

												Tabl	e B-1: Artifact Inventory
Context	Ship Context	Lab Provenience	Count	Group	Class	Туре	Artifact	Ware Type	Artifact TPQ	Material	Function	Parts	Notes
			17	Architectural	Construction Materials	ship part	wood fragment			non- carbonized wood	Pinus spp.	fragments	Pine
		Ship - between frames FN2 and	3	Architectural	Construction Materials	ship part	wood fragment			non- carbonized wood	Quercus spp.	fragments	Oak
		FN3	709	Architectural	Construction Materials	ship part	wood fragment			non- carbonized wood	Unident.	fragments	
			1	Architectural	Construction Materials	Construction Materials	wood fragment			wood			
			3	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	cherry		
			2	Activities	Faunal	natural	shell			shell	snail		Brick Sample: red brick has black glaze and mortar
		Ship - between frames FN4 and	1	Activities	Specialized Activities	shoe/ clothing	shoe			leather	shoe		excellent leather preservation
		FN5	1	Architectural	Construction Materials	cooking/ heating?	brick	terracotta		brick			
			1	Architectural	Construction Materials	ship part	wood fragment			wood			worm eaten chunk of wood, probably ship-related
			1	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	seed coat	fragments	Unidentifiable
			2	Activities	Botanical	natural	plant			deciduous leaf		fragments	
			4	Activities	Botanical	natural	seed/pit/nut			seed/pit/nut	Datura stramonium		Jimsonweed
Ship	А		1	Activities	Botanical	natural	seed/pit/nut			seed/pit/nut	Phyltolacca americana		Poke
		Ship - between frames FN5 and	20	Architectural	Construction Materials	ship part	wood fragment				Quercus spp.	fragments	White oak group
		FN6	159	Architectural	Construction Materials	ship part	wood fragment			non- carbonized		fragments	Unidentified
			3	Architectural	Construction Materials	ship part	wood fragment			wood	Pinus spp.	fragments	Pine
			2	Architectural	Construction Materials	ship part	wood fragment				Quercus sp.	shavings or chips	Oak
			1	Arms	Projectiles	Projectiles	Bird shot			lead	Bird shot		
		Ship - between frames FN6 and FN7	1	Arms Activities	Projectiles Faunal	Projectiles food related	Buck shot bone			lead bone	Buck shot		
			6	Activities	Specialized Activities	cooking/ heating?	charcoal			wood charcoal	Pinus spp.	fragments	Pine
			6	Activities	Specialized Activities	cooking/ heating?	charcoal			wood charcoal	Quercus spp.	fragments	White Oak group
		Ship - between	2	Activities	Botanical	food related	seed/pit/nut	1		seed/pit/nut	Rubus sp.	whole	blackberry/raspberry
		frames FN7 and FN8	1	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	Umbelliferae	fragments	carrot family

												Tabl	e B-1: Artifact Inventory
Context	Ship Context	Lab Provenience	Count	Group	Class	Туре	Artifact	Ware Type	Artifact TPQ	Material	Function	Parts	Notes
			2	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	unident. non- carbonized botanical	fragments	
			1	Activities	Botanical	natural	plant			deciduous leaf		fragments	
			1	Activities	Botanical	natural	plant			non carbonized plant	moss	fragments	
			2	Activities	Botanical	natural	seed/pit/nut			seed/pit/nut	Datura stramonium		Jimsonweed
			1	Activities	Botanical	natural	plant			non carbonized plant	moss	fragments	
		Ship - between frames FN7 and	1	Activities	Specialized Activities	shoe/ clothing	unident. leather			leather		fragments	
		FN8	8	Architectural	Construction Materials	ship part	wood fragment			non- carbonized wood	Pinus spp.	fragments	Pine
			6	Architectural	Construction Materials	ship part	wood fragment			non- carbonized wood	Quercus spp.	fragments	Red Oak group
			551	Architectural	Construction Materials	ship part	wood fragment			non- carbonized wood	Unident.	fragments	
Ship	А		6	Architectural	Construction Materials	ship part	wood fragment			non- carbonized wood	unident.	fragments	Ring porous
			1	Arms	Projectiles	Projectiles	Buck shot			lead	Buck shot		
			1	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	Unident.		
			1	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	Unident.		
			2	Activities	Faunal	natural	shell			shell	snail		
		Ship - between frames FN8 and	1	Architectural	Construction Materials	fastener	nail			Iron			possibly large bolt
		FN9	1	Kitchen	Tableware	tool	utensil handle			metal	utensil handle	handle	Britannia metal: tin, antimony & zinc. Similar to "London" spoon recovered under stern pieces further aft. Unident. square hallmark on the front of knop.
		Ship - between frames FS1 and FS7	2	Architectural	Construction Materials	cooking/ heating?	brick	terracotta		brick		whole	red bricks, burnt
		Ship - between	1	Activities	Faunal	natural	shell			shell	snail		
		frames FS6 and FS7	1	Activities	Specialized Activities	personal item	pouch			leather	possible pouch		
		Ship - between frames FS6 and FS8	1	Architectural	Construction Materials	fastener	trunnel			wood	trunnel	fragment	pin?
		Ship - between frames FS7 and FS9	2	Activities	Specialized Activities	block and tackle?	wooden block			wood	block and pin that goes thru the sheave		

												Tabl	e B-1: Artifact Inventory
Context	Ship Context	Lab Provenience	Count	Group	Class	Туре	Artifact	Ware Type	Artifact TPQ	Material	Function	Parts	Notes
			1	Activities	Specialized Activities	block and tackle?	wooden sheave			wood	sheave?		sheave
			1	Activities	Specialized Activities	block and tackle?	wooden sheave			wood	sheave w/ pin through it		2 objects: rod and sheave
			1	Activities	Specialized Activities	block and tackle?	wooden sheave			wood	sheave?		marked with a tree-like decoration; possibly the shipwright's mark; appears to be the edge of something, possibly a sheave; Conserved.
		Ship - between frames FS7 and	1	Activities	Specialized Activities	block and tackle?	wooden sheave			wood	sheave		block & tackle; ironwood (lignum vitae)
		FS9	9	Activities	Specialized Activities	block and tackle?	wooden sheave			wood	sheave parts		this might be the outer part of the sheave but it is in fragments
Ship	А		1	Activities	Specialized Activities	fastener	wooden pin			wood	pin		half of sheave
			1	Activities	Faunal	natural	shell			shell	clam		
			1	Architectural	Construction Materials	cooking/ heating?	brick			brick			
			3	Architectural	Construction Materials	cooking/ heating?	brick	terracotta		brick			red bricks, only 1 is whole, all are burnt
	-	Ship - between frames in southwest corner Ship - found in lab adhered to FN7	1	Architectural	Construction Materials	cooking/ heating?	brick	terracotta		brick			red brick, burnt
			1	Tobacco	Pipe	personal item	tobacco pipe			ball clay	Pipe stem	fragments	Undecorated, 5/64" bore diameter; rust stained; Sent from MAC Lab
		Ship - supporting CS-0 amidst frames at west end of ship	1	Architectural	Construction Materials	cooking/ heating?	brick	terracotta		brick		fragment	Brick sample: 1 red brick fragment, burnt and with mortar
		Ship - adjacent to FN13	1	Activities	Faunal	natural	shell			shell	snail		
			1	Activities	Specialized Activities	cooking/ heating?	charcoal			wood charcoal	Diffuse porous	fragments	Unident.
			11	Activities	Specialized Activities	cooking/ heating?	charcoal			wood charcoal	Pinus spp.	fragments	Pine
			6	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	Pyrus malus	fragments	Apple: seed coat fragments
			7	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	Rubus sp.	whole & fragments	Blackberry/Raspberry: 6 whole; 1 fragment
Ship	В	Ship - below CS 2/5	13	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	Prunus sp.	whole, nearly whole and fragments	Cherry pit: 1 whole, 6 nearly complete, 6 fragments
		east of orlop deck	2	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	Vitis sp.	whole	Grape
			1	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	Curcubita sp.		Squash
			1	Activities	Botanical	natural	seed/pit/nut			seed/pit/nut	Poaceae		Grass family
			5	Activities	Botanical	natural	seed/pit/nut			seed/pit/nut	Datura stramonium		Jimsonweed
			1	Activities	Botanical	natural	seed/pit/nut			seed/pit/nut	Polygonaceae		Knotweed family
			20	Architectural	Construction Materials	ship part	wood fragment			non- carbonized wood	Pinus spp.	fragments	Pine

												Tabl	e B-1: Artifact Inventory
Context	Ship Context	Lab Provenience	Count	Group	Class	Туре	Artifact	Ware Type	Artifact TPQ	Material	Function	Parts	Notes
		Ship - below CS 2/5 east of orlop deck	1085	Architectural	Construction Materials	ship part	wood fragment			non- carbonized wood	Unident.	fragments	
			1	Arms	Projectiles	Projectiles	Bird shot			lead	Bird shot		made by drop tower;
			1	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	Prunus sp.		cherry half
			4	Activities	Faunal	natural	shell			shell	shell		includes snail, clam, worm, possible barnacle
		Ship - below CS 2/6A east of orlop	6	Architectural	Construction Materials	Construction Materials	mortar			mortar	mortar		
		deck	2	Architectural	Construction Materials	Construction Materials	wood fragment			wood	wood	fragments	
			1	Architectural	Construction Materials	cooking/ heating?	brick	terracotta		brick			
			2	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	cherry		
			2	Activities	Faunal	natural	shell			shell	snail, oyster		1 snail, 1 oyster
		Ship - between	1	Activities	Specialized Activities	ship part	caulking?			hair	caulking?	clump	grease-contaminated
		frames FN10 and FN11	2	Architectural	Construction Materials	Construction Materials	wood fragment			wood			
			2	Architectural	Construction Materials	fastener	spike			iron	spike		
			1	Arms	Projectiles	Projectiles	Bird shot			lead	Bird shot		
			1	Arms	Projectiles	Projectiles	Musket ball			lead	Musket ball		
			9	Activities	Specialized Activities	cooking/ heating?	coal/slag			coal			
Ship	В		2	Activities	Specialized Activities	cooking/ heating?	coal/slag			Coal?		anthracite?	Possibly leather?
			23	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	19 cherry, 1 pecan, 1pea		squash/melon seed is probably Watermelon
			1	Activities	Faunal	food related	bone			bone	chicken	Tarso- metatarsus	
			2	Activities	Faunal	food related	bone			bone	cow	thoracic vert.	very dark stain
			1	Activities	Faunal	food related	bone			bone	COW	cervical vert.	very dark stain; chopped
			1	Activities	Faunal	food related	bone			bone	COW	lumbar vert.	very dark stain; chopped
			1	Activities	Faunal	food related	bone			bone	COW	rib	rodent gnawed; chopped
		Ship - between	1	Activities	Faunal	food related	bone			bone	COW	premolar	very dark stain
		frames FN10 and FN14	2	Activities	Faunal	food related	bone			bone	Eastern Grey Squirrel	tibia	very dark stain
			6	Activities	Faunal	food related	bone			bone	horse	calvar (skull)	
			5	Activities	Faunal	food related	bone			bone	lg. mammal	unident.	2 very dark stain; 1 gnawed by a rodent
			1	Activities	Faunal	food related	bone			bone	lg. mammal	mandible	very dark stain
			1	Activities	Faunal	food related	bone			bone	lg. mammal	vertebra	very dark stain
		[	1	Activities	Faunal	food related	bone			bone	lg. mammal	humerus	Poss. cattle; very dark stain
			4	Activities	Faunal	food related	bone			bone	med. mammal	unident.	calcined
		[	3	Activities	Faunal	food related	bone			bone	med. mammal	rib	fragments; very dark stain
			1	Activities	Faunal	food related	bone			bone	med. mammal	costal rib	
			1	Activities	Faunal	food related	bone			bone	med. mammal	vertebra	calcined; sawed
			1	Activities	Faunal	food related	bone			bone	med. mammal	long bone	
			1	Activities	Faunal	food related	bone			bone	pig	rib	cut marks; very dark stain

												Tabl	e B-1: Artifact Inventory					
Context	Ship Context	Lab Provenience	Count	Group	Class	Туре	Artifact	Ware Type	Artifact TPQ	Material	Function	Parts	Notes					
			1	Activities	Faunal	food related	bone			bone	pig	humerus	chopped; gnawed by rodent; very dark stain					
			1	Activities	Faunal	food related	bone			bone	pig	tibia	Calcined					
			1	Activities	Faunal	food related	bone			bone	Sheepshead	vertebrae	very dark stain					
			2	Activities	Faunal	food related	bone			bone	unident. bird	long bone	very dark stain					
			7	Activities	Faunal	natural	shell			shell	4 oyster, 3 unident. shell c		1 oyster has 3 others on its back					
			2	Activities	Leisure Activities	toy	marble			marble	marbles							
			2	Architectural	Construction Materials	Construction Materials	brick	terracotta		brick		fragments	burned					
			1	Architectural	Construction Materials	Construction Materials	plaster			plaster	plaster							
			1	Architectural	Construction Materials	Construction Materials	unident. iron			iron/rust	concretion							
			9	Architectural	Construction Materials	Construction Materials	wood fragment			wood			Nella accession describer					
			6	Architectural	Construction Materials	fastener	nail			iron/wood			Nails, some going through wood, probably ship related					
			1	Arms	Arms Accessories	Arms Accessories	gun spall			Dover flint	gun spall		black; Dover Flint					
			7	Arms	Projectiles	Projectiles	Bird shot			lead	Bird shot							
Ship	В	Ship - between frames FN10 and	1	Arms Arms	Projectiles Projectiles	Projectiles Projectiles	Buck shot conglomerate			lead iron	Buck shot concretion		iron concretion with musket ball and anthracite coal; musket ball inventoried individually					
Omp	D	FN14	7	Arms	Projectiles	Projectiles	Musket ball			lead	Musket ball		Round, sprue cut					
			2	Arms	Projectiles	Projectiles	Musket ball			lead	Musket ball		possibly impacted					
			1	Arms	Projectiles	Projectiles	Musket ball			lead	Musket ball		1					
			1	Clothing	Fasteners	shoe/ clothing	button			leather	button		Conserved					
			1	Clothing	Fasteners	shoe/ clothing	button		c. 1776	Pewter	button	whole	embossed "52"; British 52nd Regiment of Foot; private's uniform button					
			1	Kitchen	Containers	food storage/ service	unident. glass			glass	flat							
			2	Kitchen	Dishes	food storage/ service	dish fragment	creamwar e	1762	ceramic	cup	handle and body sherd						
			1	Kitchen	Dishes	food storage/ service	dish fragment	tin-glazed red earthen- ware	pre-1770	ceramic	pot/bowl	unident.	tin-glazed, possibly English; probably a lid for a chocolate pot, sugar bowl, covered bowl or small posset pot (Janowitz 2012)					
		-						2	Kitchen	Dishes	food storage/ service	dish fragment	white salt- glazed stoneware	1740	ceramic	plate	rim and body	rim decorated with bead and reel; the other sherd plain
			2	Kitchen	Dishes	food storage/ service	dish fragment	Oriental	1790	ceramic	plate/saucer	rims	blue on white decorated; one is thicker and might be later					

												Tabl	e B-1: Artifact Inventory
Context	Ship Context	Lab Provenience	Count	Group	Class	Туре	Artifact	Ware Type	Artifact TPQ	Material	Function	Parts	Notes
			1	Kitchen	Dishes	food storage/ service	dish fragment	delft		ceramic	saucer	base	sulfite-stained black
		Ship - between frames FN10 and FN14	2	Kitchen	Tableware	tool	utensil handle			bone	utensil handle	handle	incised; calcined and possibly burnt; 2 pcs from same object but do not mend; identical to utensil handle found around Stern Knee.
			5	Tobacco	Pipe	personal item	tobacco pipe			ball clay	stems	stems	all 5/64" bores
			2	Activities	Specialized Activities	cooking/ heating?	coal/slag			coal			anthracite
			5	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	Cherry		
			1	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	olive		
			2	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	peach		
		Ship - between	1	Activities	Faunal	food related?	feather			feather	feather		underlayer; not a flight feather
		frames FN12 and	1	Activities	Faunal	natural	shell			shell	unident.	fragments	shattered during processing
		FN13 -	3	Architectural	Construction Materials	Construction Materials	mortar			mortar			
			3	Architectural	Construction Materials	Construction Materials	wood fragment			wood			1 is unident.
			6	Architectural	Construction Materials	fastener	nail			iron			conglomerate iron with nail bits and 2 square cut nails
			1	Arms	Projectiles	Projectiles	Musket ball			lead	Musket ball		
Ship	В		1	Activities	Specialized Activities	cooking/ heating?	charcoal			wood charcoal	Diffuse porous	fragments	Unident.
		_	19	Activities	Specialized Activities	cooking/ heating?	charcoal			wood charcoal	Carya spp.	fragments	Hickory
			41	Activities	Specialized Activities	cooking/ heating?	charcoal			wood charcoal			Unident.
			7	Activities	Botanical	natural	seed/pit/nut			seed/pit/nut	Datura stramonium		Jimsonweed
			1	Activities	Specialized Activities	block and tackle?	wooden sheave			wood	sheave		Partial and deteriorating
			10	Activities	Specialized Activities	cooking/ heating?	coal/slag			coal			anthracite
		Shin - between	1	Activities	Faunal	food related	bone			bone	lg. mammal	calvar (skull)	
		Ship - between frames FN14 and FN15	20	Activities	Faunal	natural	shell			shell	7 possibly soft shell clams, 7 dwarf clams, 1 oyster, 5 fragments	whole and fragments	
			1	Activities	Specialized Activities	shoe/ clothing	leather			leather		scrap	
			1	Activities	Storage item	Storage item	barrel bung			wood	barrel bung		
			2	Activities	Specialized Activities	tool	wooden handle			wood	handle?		Wooden objects have been worked, possibly to make a too or utensil handle; both are incised; Conserved
			1	Activities	Specialized Activities	tool	wooden tool			wood	whittling		Conserved

												Tabl	e B-1: Artifact Invento
Context	Ship Context	Lab Provenience	Count	Group	Class	Туре	Artifact	Ware Type	Artifact TPQ	Material	Function	Parts	Notes
			2	Architectural	Construction Materials	ship part	wood fragment			non- carbonized wood	Pinus spp.	fragments	Pine
			18	Architectural	Construction Materials	ship part	wood fragment			non- carbonized wood	Quercus spp.	fragments	White oak group
		Ship - between	317	Architectural	Construction Materials	ship part	wood fragment			non- carbonized wood	Unident.	fragments	
		frames FN14 and FN15	1	Architectural	Construction Materials	fastener	nail			iron		rust casing	
		11113	1	Architectural	Construction Materials	ship part	plank			wood	plank		
			4	Architectural	Construction Materials	ship part	wood fragment			wood			1 is worm eaten
			1	Architectural	Construction Materials	tool	wooden handle?			wood			possibly a utensil handle pa
			1	Kitchen	Containers	food storage/ service	bottle			glass	bottle	body	olive green; devitrified
			1	Activities	Specialized Activities	cooking/ heating?	coal/slag			coal	anthracite		
			1	Activities	Specialized Activities	cordage	rope			rope	rope		Part of a hair & rope samp
			3	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	melon/squash		watermelon?
			3	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	Cherry		
Ship	В		1	Activities	Botanical	natural	plant			seaweed			
			1	Activities	Botanical	natural	plant			sponge	Halichondria bowerbankia	dark green, brittle	
			5	Activities	Faunal	natural	shell			shell	Dwarf surf clam	whole	
		Ship - between	3	Activities	Faunal	natural	shell			shell	Eastern oyster	whole and fragments	
		frames FN16 and FN17	1	Activities	Faunal	natural	shell			shell	Hard clam, <i>Mercenaria</i> <i>mercenaria</i>	fragments	
			5	Activities	Faunal	natural	shell			shell	mud snail	whole	
			15	Activities	Faunal	natural	shell			shell	6 soft shell clam, 1 hard shell clam, 3 oysters, 5 snails		
			1	Activities	Storage item	Storage item	barrel bung			wood	barrel bung		
			1	Architectural	Construction Materials	fastener	nail			Iron	square-cut nail		Rusted
			7	Architectural	Construction Materials	ship part	wood fragment			wood		fragments	
			1	Activities	Specialized Activities	cooking/ heating?	charcoal			wood charcoal	Carya spp.		Hickory
		Ship - between frames FN17 and	1	Activities	Specialized Activities	cooking/ heating?	charcoal			wood charcoal	Pinus spp.		Pine
		FN18	7	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	Rubus sp.	whole	Blackberry/Raspberry
			1	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	Prunus sp.	fragments	Cherry
			6	Activities	Botanical	natural	seed/pit/nut			seed/pit/nut	Datura stramonium		Jimsonweed

												Tabl	e B-1: Artifact Inventory
Context	Ship Context	Lab Provenience	Count	Group	Class	Туре	Artifact	Ware Type	Artifact TPQ	Material	Function	Parts	Notes
			7	Architectural	Construction Materials	ship part	unident. wood			non- carbonized wood	Pinus spp.	shavings or chips	
			12	Architectural	Construction Materials	ship part	wood fragment			non- carbonized wood	Quercus spp.	fragments	Oak
		Ship - between frames FN17 and FN18	5	Architectural	Construction Materials	ship part	wood fragment			non- carbonized wood	Quercus spp.		White Oak group
			3	Architectural	Construction Materials	ship part	wood fragment			non- carbonized wood	Quercus spp.		Red Oak group
			221	Architectural	Construction Materials	ship part	wood fragment			non- carbonized wood	Unident.	fragments	Unident.
		Ship - between frames FS10 and FS11	1	Unident.	Unident.	Unident.	unident.			clayey soil conglomerate	unident.		possible caulking
			1	Activities	Specialized Activities	cooking/ heating?	coal/slag			coal			anthracite
			1	Activities	Botanical	natural	plant			seaweed			
			1	Architectural	Construction Materials	Construction Materials	mortar			mortar	mortar	fragments	
	В	Ship - between frames FS12 and FS13	1	Architectural	Construction Materials	Construction Materials	wood fragment			wood		_	
Ship			5	Architectural	Construction Materials	fastener	nail			iron			1 square nail fragment and rust casts of some others
Ship	С		1	Kitchen	Containers	food storage/ service	wine glass			glass	wine glass	base	possible bottle fragment; dark green devitrified and beveled
			1	Activities	Specialized Activities	block and tackle?	wooden sheave			wood	sheave	fragment	
			1	Activities	Faunal	natural	shell			shell	snail		
		Ship - between frames FS14 and	2	Activities	Specialized Activities	tool	wooden tool			wood	handle		Mend; possibly ship-related; Conserved
		FS15	5	Architectural	Construction Materials	Construction Materials	wood fragment			wood		fragments	
			1	Architectural	Construction Materials	fastener	bolt?			iron/mud	nut or bolt?		outer layer of rust & mud covering what was once a screw, bolt, or lug nut
		Ship - between frames FS15 and FS16	1	Architectural	Construction Materials	Construction Materials	unident. iron			iron			
		Ship - north side near west end of keelson	1	Activities	Specialized Activities	cordage	rope			rope	rope		
		Ship - adjacent to FNFS23	1	Activities	Specialized Activities	cordage	rope			rope	rope		Conserved
		Ship - between	1	Activities	Specialized Activities	cordage	rope			rope	rope		Conserved
		frames FN18 and FN19	2	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	peach, squash/melon		
			1	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	peach		

								1				Tabl	le B-1: Artifact Inventory	
Context	Ship Context	Lab Provenience	Count	Group	Class	Туре	Artifact	Ware Type	Artifact TPQ	Material	Function	Parts	Notes	
		Ship - between frames FN18 and FN19	3	Activities	Faunal	natural	shell			shell	1 snail, 2 soft shell clams			
			4	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	2 peach, 1 pine cone, 1 unident.			
		Ship - between	9	Activities	Faunal	natural	shell			shell	5 clam, 1 oyster, 2 snail, 1 dwarf surf clam			
		frames FN20 and FN21	1	Activities	Specialized Activities	ship part	caulking?			hair	caulking?	clump		
			4	Architectural	Construction Materials	ship part	wood fragment			wood			1 worm eaten with shell casings	
			3	Clothing	Fasteners	shoe/ clothing	button			wood	button		mends; Conserved	
			7	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	Rubus sp.	whole	Blackberry/Raspberry	
			1	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	Sambucus canadensis		Elder	
			1	Activities	Botanical	food related	seed/pit/nut		1	seed/pit/nut	Cucurbitaceae		Squash family	
			2	Activities	Botanical	natural	seed/pit/nut			seed/pit/nut	Potentilla sp.		Cinquefoil	
			4	Activities	Botanical	natural	seed/pit/nut			seed/pit/nut	Datura stramonium		Jimsonweed	
	с		4	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	Squash/melon, black walnut, unident. nut, cherry pit			
Ship			25	Activities	Faunal	natural	shell			shell	20 snail, 1 soft shell or dwarf surf clam, 1 oyster			
			1	Activities	Specialized Activities	shoe/ clothing	shoe			leather	shoe fragments	scrap		
		Ship - between frames FN22 and FN23	1	Architectural	Construction Materials	ship part	wood fragment			non- carbonized wood	Deciduous taxa	fragments	Unidentifiable	
			13	Architectural	Construction Materials	ship part	wood fragment			non- carbonized wood	Quercus spp.	fragments	White oak group	
		-		6	Architectural	Construction Materials	ship part	wood fragment			non- carbonized wood	Quercus spp.	fragments	Oak
			772	Architectural	Construction Materials	ship part	wood fragment			non- carbonized wood	unident.	fragments	Unidentified	
			2	Architectural	Construction Materials	Construction Materials	hinge			iron			1 is possible hinge	
			2	Architectural	Construction Materials	Construction Materials	stone			Sandstone?				
			2	Architectural	Construction Materials	ship part	wood fragment			wood			cut wood	
	Orlop Deck	Ship - below east edge of Orlop Deck above ceiling layer	1	Clothing	Fasteners	shoe/ clothing	button		18th century	cu alloy	button		from a woman's dress or men' underwear; Conserved	

												Tabl	e B-1: Artifact Inventor
Context	Ship Context	Lab Provenience	Count	Group	Class	Туре	Artifact	Ware Type	Artifact TPQ	Material	Function	Parts	Notes
			3	Activities	Specialized Activities	cooking/ heating?	charcoal			charcoal			burnt wood
			1	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	peach	fragments	
			3	Activities	Faunal	food related	bone			bone	med. mammal	long bone	fragments; calcined
			1	Activities	Faunal	food related	bone			bone	sheep	rib	chopped
			1	Activities Activities	Botanical Faunal	natural	plant shell			clay w/ leaf shell		fan	
			7	Activities	Faunal	natural natural	shell	-		shell	clam oyster	fragments fragments	burned
			1	Activities	Faunal	natural	shell			shell	snail	fragments	builled
			2	Activities	Faunal	natural	shell			shell	whelk	fragments	
			1	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	peach	whole	
			6	Architectural	Construction Materials	cooking/ heating?	brick	terracotta		brick	podon	Whole	red brick (1 whole; all burnt)
			3	Architectural	Construction Materials	Construction Materials	conglomerate			iron & wood	includes one nail	fragments	mostly conglomerate rust by- products with one nail fragmen and some mortar
			1	Architectural	Construction Materials	Construction Materials	nail			iron	nail	complete	
			10	Architectural	Construction Materials	Construction Materials	nail			iron		fragments	includes nail fragments, rust byproducts, and a tubular form with what appears to be a na
			8	Architectural	Construction Materials	cooking/ heating?	brick			brick		fragments	
Ship	Orlop	Ship - below Orlop Deck above ceiling	21	Architectural	Construction Materials	cooking/ heating?	mortar			mortar			some fragments appear to be burnt
Onip	Deck	layer	25	Architectural	Construction Materials	ship part	wood fragment			wood	fragments		
			1	Architectural	Window Glass	Window Glass	window pane			glass	window pane		light aqua
			1	Architectural	Construction Materials	Construction Materials	conglomerate			Iron conglomerate		fragments	mostly rust, some wood, mu
			5	Architectural	Construction Materials	cooking/ heating?	mortar			mortar		fragments	some parts seem to be part of a form
			1	Arms	Arms Accessories	Arms Accessories	gun spall			Dover flint	gun spall		American
			4	Arms	Projectiles	Projectiles	Bird shot			lead	Bird shot	complete	
			1	Clothing	Fasteners	shoe/ clothing	button			cu alloy	button	complete	decorated with floral motif
			2	Kitchen	Dishes	food storage/ service	dish fragment	pearlware	1780	ceramic	unident.	sherds	Mend; hand-painted polychrome flowers with brow band below rim on interior
			1	Kitchen	Dishes	food storage/ service	dish fragment	earthen- ware		ceramic		body	stained
			1	Tobacco	Pipe	personal item	tobacco pipe		1680	ball clay	smoking	stem	5/64" bore
			5	Activities	Specialized Activities	cooking/ heating?	charcoal			wood charcoal	Pinus spp.		Pine
			5	Activities	Specialized Activities	cooking/ heating?	charcoal			wood charcoal	Quercus spp.		White Oak Group

												Tabl	e B-1: Artifact Inventory
Context	Ship Context	Lab Provenience	Count	Group	Class	Туре	Artifact	Ware Type	Artifact TPQ	Material	Function	Parts	Notes
			1	Activities	Specialized Activities	cooking/ heating?	charcoal			wood charcoal	Ring porous		
			1	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	Solaceae		Nightshade
			1	Activities	Faunal	natural	shell			shell	barnacle	whole	
	Orlop Deck	Ship - below Orlop Deck above ceiling layer	20	Architectural	Construction Materials	ship part	wood fragment			non- carbonized wood	Pinus spp.	fragments	Pine
			415	Architectural	Construction Materials	ship part	wood fragment			non- carbonized wood	Unident.	fragments	
			4	Architectural	Construction Materials	cooking/ heating?	brick	terracotta		brick		fragment	4 red brick fragments (3 are burnt, some have mortar)
			1	Activities	Specialized Activities	cooking/ heating?	charcoal			wood charcoal	Quercus spp.	fragments	White oak group
			1	Activities	Specialized Activities	cooking/ heating?	charcoal			wood charcoal	Ring porous	fragments	Unidentified
			3	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	Pyrus malus	fragments	Apple
			3	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	Rubus sp.	whole	Blackberry/Raspberry
			7	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	Prunus sp.	fragments	Cherry
			2	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	Prunus sp.	nearly complete	Cherry
			13	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	Vitis sp.	whole	Grape
			6	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	Vitis sp.	fragments	Grape
			1	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	Curcubita sp.	fragments	Squash
Ship			1	Activities	Botanical	natural	seed/pit/nut			seed/pit/nut	Polygonum	,	Knotweed
			1	Activities	Faunal	food related	bone			bone	chicken	femur	
			1	Activities	Faunal	food related	bone			bone	lg. mammal	unident.	for any other share and mark he
			2	Activities	Faunal	food related	bone			bone	med. mammal	lumbar vert.	fragments; chopped; may be sheep
	Stern	Ship - around stern	1	Activities	Faunal	food related	bone			bone	med. mammal	humerus	
	Knee	knee	1	Activities	Faunal	food related	bone			bone	sheep	radius	
	14100	Niloo	1	Activities Activities	Faunal Faunal	natural natural	shell shell			shell shell	worm shell clam		
						naturai				Shell	worm shell and		
			8	Activities	Faunal Specialized	natural shoe/	shell			shell	snails		
			4	Activities	Activities	clothing	shoe			leather	shoe-making scraps		
			1	Activities	Storage item	Storage item	bung			wood	bung		barrel bung
			1	Activities	Specialized Activities	tool	whetstone			Sandstone?	whetstone		
			3	Activities	Specialized Activities	fastener	wooden pin			wood	pin	for sheave?	shows evidence of work/rope wear
			12	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	1 peach, 8 cherry, 1 hickory, 1 squash/melon, 1 unident		
			2	Activities	Faunal	food related	bone			bone	COW	cuneiform	cleaved
			1	Activities	Faunal	food related	bone			bone	COW	rib	chopped
			1	Activities	Faunal	food related	bone			bone	lg. mammal	long bone	

Table B-1: Artifact Inventory													
Context	Ship Context	Lab Provenience	Count	Group	Class	Туре	Artifact	Ware Type	Artifact TPQ	Material	Function	Parts	Notes
			8	Activities	Faunal	food related	bone			bone	med. mammal	unident.	calcined
			1	Activities	Faunal	food related	bone			bone	med. mammal	rib	
			1	Activities	Faunal	food related	bone			bone	med. Mammal	long bone	fragment
			1	Activities	Faunal	food related	bone			bone	rat	right mandible	Brown Rat
			1	Activities	Faunal	food related	bone			bone	pig	humerus	chopped
			1	Activities	Faunal	food related	bone			bone	sheep	pelvis	chopped
			1	Activities Activities	Faunal Faunal	food related food related	bone			bone	unident. bird unident. bird	radius unident.	weathered
			1	Activities	Faunal	food related	bone bone			bone bone	chicken	sacrum	weathered
			5	Activities	Faunal	natural	shell			shell	3 clam, 2 oyster	fragments	
			4	Activities	Storage	Storage	bungs			wood	bungs	whole	some marked with incised "X"
			1	Activities	House- keeping	tool	wooden tool			wood	scrub brush		Conserved
			4	Architectural	Construction Materials	ship part	wood fragment				Deciduous taxa	fragments	Unidentified
			2	Architectural	Construction Materials	ship part	wood fragment			non- carbonized	Pinus spp.	fragments	Pine
			14	Architectural	Construction Materials	ship part	wood fragment			wood	Quercus spp.	fragments	White Oak group
			571	Architectural	Construction Materials	ship part	wood fragment					fragments	Unidentified
			2	Architectural	Construction Materials	Construction Materials	stone			slate			
Ship	Stern Knee	Ship - around stern knee	1	Architectural	Construction Materials	Construction Materials	mortar			mortar			
	Knee		1	Architectural	Construction Materials	cooking/ heating?	brick			yellow clay		fragments	Dutch brick fragment
			10	Architectural	Construction Materials	fastener	nail			iron			nail fragments, rust fragments, lug nuts?
			5	Architectural	Construction Materials	ship part	wood fragment			wood		fragments	some have evidence of metal fasteners and worm holes
			1	Architectural	Construction Materials	Construction Materials	plaster			plaster			
			1	Architectural	Construction Materials	Construction Materials	washer			iron?	washer?		has a square hole in middle
			3	Architectural	Construction Materials	cooking/ heating?	brick	terracotta		brick		fragments	
			1	Architectural	Construction Materials	fastener	nail			iron	nail	fragment	
			7	Architectural	Construction Materials Construction	ship part	wood fragment			wood			1 has hole for a fastener
			1	Architectural	Materials Misc.	tool	knife			lead		fragments	possible knife
			1	Architectural	hardware	tool	hook Bird abot			iron	hook Bird abot		
			116 3	Arms	Projectiles	Projectiles	Bird shot			lead	Bird shot		
			3	Arms	Projectiles	Projectiles	Buck shot			lead	Buck shot		
			1	Arms	Projectiles	Projectiles	Musket ball			lead	Musket ball		

												Tabl	e B-1: Artifact Inventory									
Context	Ship Context	Lab Provenience	Count	Group	Class	Туре	Artifact	Ware Type	Artifact TPQ	Material	Function	Parts	Notes									
			1	Arms	Arms Accessories	Arms Accessories	cannon vent plate			lead	vent plate		covers cannon vent holes									
			1	Arms	Projectiles	Projectiles	Bird shot			lead	Bird shot											
			1	Arms	Projectiles	Projectiles	Buck shot			lead	Buck shot											
			1	Arms	Projectiles	Projectiles	cannon ball			iron	cannon ball	whole	4 pounder									
			2	Arms	Projectiles	Projectiles	Musket balls			lead	Musket balls											
			1	Clothing	Fasteners	shoe/ clothing	button			brass	button											
			1	Clothing	Fasteners	shoe/ clothing	button			cu alloy	button		back missing									
			1	Clothing	Fasteners	shoe/ clothing	button			wood	button	1	Conserved									
			2	Clothing	Making and Repair	shoe/ clothing	glove			leather	glove	fragments	possible musket frizzen cover									
			4	Clothing	Making and Repair	shoe/ clothing	pouch			leather	pouch		pouch or wallet; divided into 3 compartments via stitching									
			1	Kitchen	Dishes	food storage/ service	dish fragment	light gray salt-glazed stoneware		ceramic	bowl?	body	thin with cobalt incised lines on exterior									
			1	Kitchen	Dishes	food storage/ service	dish fragment	cream- ware	1762	ceramic	cup or bowl	rim	very thin									
Ship	Stern	Ship - around stern	3	Kitchen	Dishes	food storage/ service	dish fragment	red earthen- ware		ceramic		body	1 dark brown mottle grazed int. and ext.; 2 clear lead glaze int.									
Omp	Knee	knee	2	Kitchen	Tableware	tool	utensil handle			bone	utensil handle	handle	Mend; diamond-scored									
			knee	1	Kitchen	Tableware	tool	spoon		18th century	pewter	spoon	bowl w/ bit of handle	Conserved; square hallmark on front near knop; spoon is very heavy as if made of lead; possibly Britannia metal; almost identical to "London" spoon								
			1	Kitchen	Tableware	tool	utensil handle			metal	utensil handle; small spoon?		Decorated with "sun rays" at knop and dots in relief down the sides; has a circular cartouche or hallmark below the rays									
			1	Kitchen	Containers	food storage/ service	bottle			glass	bottle	fragment	olive green									
									_			5	Kitchen	Dishes	food storage/ service	dish fragment	cream- ware	1762	ceramic	unident.	body	plain
			1	Kitchen	Dishes	food storage/ service	dish fragment	porcelain		ceramic	unident.	body	blue hand-painted floral									
			3	Kitchen	Tableware	tool	utensil handle			bone	utensil handle		badly burned; probably all pcs. from same handle but do not mend; bone is scored as a decoration; Identical item was in fill between F10 and F14.									

												Tabl	e B-1: Artifact Inventory
Context	Ship Context	Lab Provenience	Count	Group	Class	Туре	Artifact	Ware Type	Artifact TPQ	Material	Function	Parts	Notes
			1	Kitchen	Tableware	tool	spoon			metal	spoon	whole	marked "London" on handle. Decorated ribbons w/floral; cartouche hallmark has letter "P"; Conserved; cast pieces soldered together; very simila to handle from between frame FN 8 and FN 9.
	Stern	Ship - around stern	1	Kitchen	Tableware	tool	utensil handle?			wood	utensil handle?		
	Knee	knee	1	Personal	Grooming & Hygiene	personal item	mirror			glass & silver	mirror		pale aqua because devitrified
			1	Tobacco	Pipe	personal item	tobacco pipe		1680	ball clay	smoking	stem	5/64" bore
			1	Tobacco	Pipe	personal item	tobacco pipe		1680	ball clay	smoking	stems	5/64" bore
			1	Activities	Specialized Activities	block and tackle?	wooden sheave			wood	sheave and cheeks		
			1	Activities	Specialized Activities	block and tackle?	wooden sheave			wood			
		Artifacts from MAC Lab	1	Activities	Specialized Activities	cordage	rope			rope	rope		
			1	Activities	Specialized Activities	fastener	Trunnel or pin			wood			
			1	Activities	Specialized Activities	ship part	metal			metal			
Ship			1	Activities	Specialized Activities	ship part	gudgeon			metal			
			1	Activities	House- keeping	tool	wooden tool			wood			
			1	Architectural	Construction Materials	Construction Materials	mortar			mortar			
			2	Architectural	Construction Materials	fastener	nail			metal			
	Unident. Ship		4	Activities	Specialized Activities	cooking/ heating?	coal/slag			coal			anthracite
			1	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	squash/melon		possible watermelon seed
			7	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	cherry		
			1	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	hickory nut	shell	
			2	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	peach	pit	
			1	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	peach		
		Ship - cleaning of	1	Activities	Faunal	food related	bone			bone	COW	femur	chopped
		inner surface of	1	Activities	Faunal	food related	bone			bone	COW	thoracic vert.	chopped
			1 12	Activities Activities	Botanical Faunal	natural natural	plant shell			seaweed	4 oyster, 1 worm shell, 2 soft shell clam, 1 dwarf surf clam, 4 snail		possible watermelon seed
			5	Activities	Faunal	natural	shell			shell	1 oyster, 3 clam, 1 snail		

												Tabl	e B-1: Artifact Inventor
Context	Ship Context	Lab Provenience	Count	Group	Class	Туре	Artifact	Ware Type	Artifact TPQ	Material	Function	Parts	Notes
			1	Activities	Specialized Activities	ship part	caulking?			hair	caulking?		in very bad condition; advised by conservator to discard.
			10	Activities	Specialized Activities	shoe/ clothing	shoe			leather	shoe	heels and scraps; wood shoe nails	6 shoe nails, 2 scraps, 2 heels
			5	Architectural	Construction Materials	Construction Materials	conglomerate			conglomerate, metal, wood			some had imprints of nails
			1	Architectural	Construction Materials	Construction Materials	mortar			mortar			
			2	Architectural	Construction Materials	Construction Materials	stone			slate			
			1	Architectural	Construction Materials	fastener	nail			metal	nail		square iron nail fragment; tip i curled back; white metal
			4	Architectural	Construction Materials	fastener	spike			iron	spike and "lug" nut		3 spike fragments that probabl mend and one "luggy" top
			7	Architectural	Construction Materials	tool	wooden tools?			wood			two rounded pcs mend; 1 add rounded piece, 1 worm eaten fragment; some of these migh be "tools" or have some ship- board use
		Ship - cleaning of	1	Architectural	Unident.	Unident.	unident.			plastic/ asbestos?	unident.		pre-bakelite; possible modern oil filter
			1	Arms	Projectiles	Projectiles	Grape shot			iron	Grape shot		Service 4 pounder iron grape shot - poor quality iron
			1	Arms	Projectiles	Projectiles	Grape shot			iron	Grape shot		For sea service 3 pounder;
Ship	Unident. Ship		1	Arms	Projectiles	Projectiles	Musket ball			lead	Musket ball		out of round with flat spot, possibly impacted
			1	Clothing	Ornamentati on	shoe/ clothing	shoe buckle		18th century	cu alloy w/ gilt	shoe buckle		Conserved
			1	Kitchen	Containers	food storage/ service	unident. glass			glass	unident.	body	clear
			2	Kitchen	Containers	food storage/ service	wine bottle		18th century	glass	wine bottle	neck	dark green
			7	Kitchen	Dishes	food storage/ service	dish fragment	red earthen- ware		ceramic	unident.	body	at least 2 mend; probably sam vessel; dark reddish brown mottle glaze
			1	Kitchen	Dishes	food storage/ service	dish fragment	delft/ majolica		ceramic	unident.	body	hand painted blue line on exterior, plain white interior; heavily rust-stained
			2	Tobacco	Pipe	personal item	tobacco pipe		1680	ball clay	smoking	bowls	Heeled, undecorated; heavily utilized; one is 5/64" bore; the other could not be measured
		Ship - immediately below PN10-4	1	Activities	Specialized Activities	ship part	caulking?			hair	caulking?	clump	some straw attached; sent from MAC Lab
		Ship - near starboard amidships	1	Activities	Specialized Activities	fastener	Trunnel or pin			wood	Trunnel or pin		
			1	Activities	Botanical	food related	seed/pit/nut	1		seed/pit/nut	Amaranthus spp.	fragments	Pine
		Ship - outer surface of outer hull	1	Activities	Specialized Activities	ship part	caulking?			hair	caulking?	-	clump of grease-contaminated hair
			1	Activities	Faunal	natural	bone	İ		bone	cat	mandible	

#### **Appendix B: Artifact Inventory**

												Tabl	e B-1: Artifact Inventory
Context	Ship Context	Lab Provenience	Count	Group	Class	Туре	Artifact	Ware Type	Artifact TPQ	Material	Function	Parts	Notes
			2	Activities	Specialized Activities	tool	wooden tool			wood	tools		1 looks like a shuttle and the other the handle of a tool, Conserved
			1	Architectural	Construction Materials	fastener	rod			iron	rod or tie bar		possibly ship-related
Ship	Unident.	Ship Vicinity - clearing during	1	Architectural	Construction Materials	fastener	spike			iron	spike	whole	tapered, possibly ship-related
	Ship	initial discovery	2	Architectural	Construction Materials	ship part	wood fragment			wood		fragments	
			2	Kitchen	Dishes	food storage/ service	dish fragment	red earthen- ware		ceramic		fragments	dark brown lead glazed int. & ext.
			1	Kitchen	Tableware	tool	utensil handle			bone, metal	utensil handle		
			1	Activities	Specialized Activities	block and tackle?	wooden sheave			ironwood (Lignum vitae)	sheave	whole	8.25"x8.25"
		Misc. find by contractor	1	Activities	Specialized Activities	shoe/ clothing	shoe		c.1790- 1810s	leather	shoe	whole	analyzed by Colonial Williamsburg; well-made man's shoe
			1	Activities	Specialized Activities	shoe/ clothing	shoe			leather	shoe	soles	
		Misc. find on or near ship	1	Activities	Botanical	food related	seed/pit/nut			seed/pit/nut	squash/melon		watermelon?
		Ship Vicinity	1	Architectural	Construction Materials	fastener	bolt			iron	fastener		possible bolt head
Unknown	n/a	Ship Vicinity - clearing south of ship during initial discovery	1	Architectural	Construction Materials	Construction Materials	conglomerate			iron/wood	iron conglomerate surrounding a pointed spike?		Conglomerate includes bits of mortar, wood, peach pit, stones
		Ship Vicinity - discovered while clearing off ship	1	Arms	Arms Accessories	Arms Accessories	cannon vent plate			lead	vent plate		Conserved
			1	Activities	Faunal	food related?	shell			shell	clam		complete clam
		Ship Vicinity - within 10 feet of north side	1	Architectural	Construction Materials	fastener	nail			iron	nail/screw		
		of ship	1	Kitchen	Dishes	food storage/ service	mug?	gray salt- glazed stoneware		ceramic	possible mug or container	rim and handled side	undecorated

		I	ndex to Field an	d Laboratory Pro	Table B-2 veniences
Field Provenience	Lab Provenience	Context	Analytical Unit	Collection Method	Date
Artifacts under BP: Leather	Ship - around stern knee	Ship	Stern Knee		7/28/2010
Under BP [bow pieces] Leathers	Ship - around stern knee	Ship	Stern Knee		7/28/2010
2' below bow in clays	River Bottom - pedestal below ship	River Bottom			7/30/2010
25' below ground surface at the level of the bottom					
of the vessel; within 10 feet north of the vessel's					
surface; found in backdirt.	Ship Vicinity - within 10 feet of north side of ship	Unknown		Surface find	7/22/2010
about 25' below ground surface; about 4' south of					
the vessel, midway from top to bottom of vessel	Ship Vicinity - clearing south of ship during initial discovery	Unknown		Surface find	7/22/2010
Above outer planks after frame removal	Ship - cleaning of inner surface of outer hull	Ship	Unidentified Ship	Water Screening	7/28/2010
Against Apron [stern knee]	Ship - around stern knee	Ship	Stern Knee	Water Screening	7/28/2010
Around Keel and Apron [stern knee]	Ship - around stern knee	Ship	Stern Knee	Flotation Sample #9	7/28/2010
Around Keel and Apron [stern knee]	Ship - around stern knee	Ship	Stern Knee	Water Screening	7/28/2010
Artifacts from BP	Ship - around stern knee	Ship	Stern Knee		7/28/2010
Artifacts from under BP	Ship - around stern knee	Ship	Stern Knee		7/28/2010
Artifacts from under BP	Ship - around stern knee	Ship	Stern Knee		7/28/2010
Below bow [stern] in clays	River Bottom - clays below ship	River Bottom			7/30/2010
Below outer planking on south side of the ship	River Bottom - below outer planking on south side of keel	River Bottom			7/30/2010
Beneath bow [stern]; recovered during hand	· · · · · ·				
excavation to remove apron [stern knee]	River Bottom - below outer hull in vicinity of stern knee	River Bottom		Surface find	7/29/2010
Beneath hull south side of ship	River Bottom - below outer planking on south side of keel	River Bottom			7/30/2010
Beneath hull, north side; recovered during removal of keel and apron	River Bottom - below outer planking on north side of keel	River Bottom			7/30/2010
Beneath hull; recovered during removal of keel and					
apron	River Bottom - below outer planking on north side of keel	River Bottom			7/30/2010
Beneath Orlop Deck - Flotation	Ship - below Orlop Deck above ceiling layer - Flotation	Ship	Orlop Deck	Flotation Sample #1	7/26/2010
Beneath Orlop Deck; water screened	Ship - below Orlop Deck above ceiling layer	Ship	Orlop Deck	Water Screening	7/26/2010
Beneath south side of vessel at the far west end at what was then called the bow	River Bottom - below outer planking on west end of south side of keel	River Bottom			7/29/2010
Between FN 14 and FN 15	Ship - between frames FN14 and FN15	Ship	В	Flotation Sample #7	7/27/2010
Between FN7 and FN8	Ship - between frames FN7 and FN8	Ship	A	Flotation Sample #4	7/27/2010
Between FN7 and FN8	Ship - between frames FN7 and FN8	Ship	A	Water Screening	7/27/2010
BP 1/9	Ship - stern knee	Ship	Stern Knee		7/27/2010
BP1/9	Artifacts from MAC Lab	Ship	Unidentified Ship	lab find	
Brick from sw corner of vessel between ceiling and		I		-	1
outer planks (among frames)	Ship - between frames in southwest corner	Ship	А	Water Screening	7/27/2010
Brick propping up CS-0 amidst frames at west end of vessel	Ship - supporting CS-0 amidst frames at west end of ship	Ship	А	surface find	7/27/2010
Brick Sample from beneath Orlop Beam (bricks beneath almost _ s. extent of Orlop beam)	Ship - below Orlop Deck beam above ceiling layer	Ship	Orlop Deck	Surface find	7/27/2010

		I	ndex to Field an	nd Laboratory Pro	Table B-2 veniences
Field Provenience	Lab Provenience	Context	Analytical Unit	Collection Method	Date Collected
CN 1/8	Ship - north side near west end of keelson	Ship	В		7/26/2010
CN1/8	Artifacts from MAC Lab	Ship	Unidentified Ship	lab find	
CS 2/5	Ship - below CS 2/5 east of orlop deck	Ship	В	Flotation Sample #12	7/27/2010
CS 2/6A	Ship - below CS 2/6A east of orlop deck	Ship	В	Water Screening	7/27/2010
East edge under hull	River Bottom - below outer planking on east side of the ship	River Bottom	Possibly ship related		7/30/2010
Eastern side beneath planks	River Bottom - below outer planking on east side of the ship	River Bottom			7/29/2010
Eastern side of vessel beneath outer planking	River Bottom - below outer planking on east side of the ship	River Bottom			7/29/2010
F-0	Ship - attached to F0	Ship	A	lab find	8/30/2010
Fill from F10 to F 14	Ship - between frames FN10 and FN14	Ship	В	Water Screening	7/28/2010
Fill near vessel	Ship Vicinity	Landfill			Unknown
Fill northwest of ship	Landfill - 30-60 feet northwest of ship	Landfill		Surface find	7/27/2010
Fill outside the ship on the south side between the cross beams 6 and 9, if 1 is the easternmost	Ship Vicinity - south side of ship	Landfill		Surface find	7/16/2010
FN 10 - FN 11	Ship - between frames FN10 and FN11	Ship	В	Water Screening	7/27/2010
FN 12 - FN 13	Ship - between frames FN12 and FN13	Ship	В	Water Screening	7/27/2010
FN 17 - FN 18	Ship - between frames FN17 and FN18	Ship	В	Flotation Sample #5	7/27/2010
FN 18 - FN 19	Ship - between frames FN18 and FN19	Ship	С	Water Screening	7/27/2010
FN 20 - FN 21	Ship - between frames FN20 and FN21	Ship	С	Water Screening	7/27/2010
FN 22 and FN 23	Ship - between frames FN22 and FN23	Ship	С	Flotation Sample #8	
FN 4 - FN 5	Ship - between frames FN4 and FN5	Ship	A	Water Screening	7/27/2010
FN 5 - FN 6	Ship - between frames FN5 and FN6	Ship	А	Water Screening	7/27/2010
FN 6 - FN 7	Ship - between frames FN6 and FN7	Ship	A	Water Screening	7/27/2010
FN 7-0	Ship - found in lab adhered to FN7	Ship	A	lab find	7/27/2010
Found in unknown location by site workers	Misc. find by contractor	Unknown		Surface find	Unknown
From 1st 1-2 feet below outer planking near east end of AP-1 [stern knee]	River Bottom - below outer planking in vicinity of stern knee	River Bottom			7/30/2010
From between FN5 and FN6	Ship - between frames FN5 and FN6	Ship	А	Flotation Sample #10	7/27/2010
From between frames FN 2- FN 3	Ship - between frames FN2 and FN3	Ship	А	Flotation Sample #3	7/27/2010
From between frames FN 4 and FN 5	Ship - between frames FN4 and FN5	Ship	А	Water Screening	7/27/2010
From between frames FN 8 and FN 9	Ship - between frames FN8 and FN9	Ship	A	Water Screening	7/27/2010
From between frames FS 15 and FS 16	Ship - between frames FS15 and FS16	Ship	В	Water Screening	7/27/2010
From between frames FS 7 and FS 9 (with pulleys)	Ship - between frames FS7 and FS9	Ship	A	Water Screening	7/27/2010
From between frames FS6 and FS7	Ship - between frames FS6 and FS7	Ship	A	Water Screening	7/27/2010
From between the area west of Frame 10 and the bow [stern]	Ship - between cant frames and FNFS10	Ship	А	Water Screening	7/28/2010

		1	ndex to Field an	nd Laboratory Pro	Table B-2 ovenience
Field Provenience	Lab Provenience	Context	Analytical Unit	Collection Method	Date
From between the frames near the Northwest corner of the ship; large shoe leather deposit	Ship Vicinity - between outer ends of FN3 and FN6, NW corner of ship	Landfill			7/26/2010
From fill adjacent to the beams [frames] at the eastern side of the ship	Ship Vicinity - east side of ship	Landfill/Ship	Possibly ship related	Surface find	7/16/2010
From fill atop west half atop vessel	Ship Vicinity - clearing of west half of stern during initial discovery	Landfill/Ship	Possibly ship related	Surface find	7/14/2010
From outer planking on N 1/2 of ship under keel	River Bottom - below outer planking on north side of keel	River Bottom			7/30/2010
From soil adjacent to frame FN 13	Ship - adjacent to FN13	Ship	В		7/27/2010
From soil within 1 foot below outer planking in center of ship (found while removing apron [stern knee])	River Bottom - below outer planking in vicinity of stern knee	River Bottom			7/30/2010
From surface of outer planking	Ship - upper surface of outer hull	Ship	Unidentified Ship	Surface find	7/29/2010
From under outer planking on N 1/2 of ship under keel	River Bottom - below outer planking on north side of keel	River Bottom			7/30/2010
FS 10 - FS 11	Ship - between frames FS10 and FS11	Ship	В	Water Screening	7/27/2010
FS 12 - FS 13	Ship - between frames FS12 and FS13	Ship	В	Water Screening	7/27/201
FS 14 - FS 15	Ship - between frames FS14 and FS15	Ship	В	Water Screening	7/27/2010
FS1-FS7 brick sample	Ship - between frames FS1 and FS7	Ship	А	Water Screening	7/27/2010
FS7-FS9 brick sample	Ship - between frames FS7 and FS9	Ship	A	Water Screening	7/27/2010
Imm. Beneath vessel after removal	River Bottom - pedestal below ship	River Bottom			8/2/2010
Immediate vicinity of vessel during initial identification	Ship Vicinity - clearing during initial discovery	Landfill/Ship	Possibly ship related	Surface find	7/13/2010
Immediately beneath east edge of platform [orlop deck], in center of platform	Ship - below east edge of Orlop Deck above ceiling layer	Ship	Orlop Deck		7/16/2010
Inside Vessel	Ship Vicinity - clearing during initial discovery	Landfill/Ship	Possibly ship related	Surface find	7/13/2010
Inside vessel near west end (in west half) but east of platform [orlop]	Ship Vicinity - clearing of soils east of orlop deck and above ceiling layer	Landfill/Ship	Possibly ship related	Surface find	7/16/201
Inside vessel, north side; dark clay fill on top of SP	Ship Vicinity - clearing dark clay from port side of ship during initial discovery	Landfill/Ship	Possibly ship related	Surface find	7/13/2010
	Ship Vicinity - clearing of soils from starboard side of ship east		Possibly ship		
Inside vessel, south side, just east of platform	of orlop deck and above ceiling layer	Landfill/Ship	related	Surface find	7/13/201
Landfill	Landfill - 30-60 feet northwest of ship	Landfill		Surface find	7/15/2010
Machine excavated area below outer planking on the south side of the ship	River Bottom - below outer planking on south side of keel	River Bottom			7/30/2010
Misc. surface finds near NE corner	Ship Vicinity - misc. surface find in northeast corner	Landfill		Surface find	7/27/201
Misc. surface finds outside ship collected by EE Cruz	Misc. find by contractor	Unknown		Surface find	7/29/201
Mortar sample associated with bricks found under the eastern orlop beam (brick sample is separate)	Ship - below Orlop Deck above ceiling layer	Ship	Orlop Deck		7/26/2010

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					Table B-2
		1	ndex to Field an	d Laboratory Pro	veniences
Field Provenience	Lab Provenience	Context	Analytical Unit	Collection Method	Date Collected
near starboard amidships	Artifacts from MAC Lab	Ship	Unidentified Ship	lab find	
Near starboard amidships	Ship - near starboard amidships	Ship	Unidentified Ship		Unknown
near1-2 abutting keel east end	Artifacts from MAC Lab	Ship	Unidentified Ship	lab find	
no provenience	Artifacts from MAC Lab	Ship	Unidentified Ship	lab find	
Northern side of vessel at level of the top of the vessel	Ship Vicinity - clearing north of ship during initial discovery	Landfill		Surface find	7/13/2010
Outer Hull	Ship - outer surface of outer hull	Ship	Unidentified Ship	Flotation Sample #11	7/30/2010
Outside East	Ship Vicinity - east side of ship	Landfill		Surface find	7/13/2010
Outside ship on east side below hull	River Bottom - below east side of hull	River Bottom	Possibly ship related		7/28/2010
Outside Vessel, North side	Ship Vicinity - clearing north of ship during initial discovery	Landfill		Surface find	7/13/2010
Outside Vessel, South side	Ship Vicinity - clearing south of ship during initial discovery	Landfill		Surface find	7/13/2010
Pedestal Removal	River Bottom - pedestal below ship	River Bottom			7/30/2010
PN 10-2	River Bottom - below PN10-2	River Bottom			7/30/2010
PN 10-4	Ship - immediately below PN10-4	Ship	Unidentified Ship		7/30/2010
Sample of brick beneath Orlop Deck	Ship - below Orlop Deck above ceiling layer	Ship	Orlop Deck	Surface find	7/27/2010
Sample of rope from east end of ship adjacent to 2nd to last [easternmost] crossbeam [frame]	Ship - adjacent to FNFS23	Ship	С	Surface find	7/13/2010
Scattered find in soil near ship	Ship Vicinity	Unknown		Surface find	7/27/2010
Shoe Sample	Ship Vicinity - clearing during initial discovery	Landfill/Ship	Possibly ship related	Surface find	7/14/2010
Soil below hull south side of ship	River Bottom - below outer planking on south side of keel	River Bottom			7/30/2010
Soil from west end below outer planking	River Bottom - below outer planking on west side of ship	River Bottom			7/29/2010
Soil screening from above the outer planks after the removal	Ship - cleaning of inner surface of outer hull	Ship	Unidentified Ship	Water Screening	7/28/2010
South side far west end of bow [stern] at ST-1 [stern post] shell rich sample	River Bottom - shell rich sample below outer planking on west side of stern post	River Bottom			7/29/2010
Southeast corner under planks	River Bottom - below outer planking in SE corner of ship	River Bottom	Possibly ship related		7/29/2010
Trunnel in fill between FS-6 and FS-8	Ship - between frames FS6 and FS8	Ship	A	Water Screening	7/28/2010
Under Apron [stern knee]	Artifacts from MAC Lab	Ship	Unidentified Ship	lab find	
Under Keel, southeast	River Bottom - below outer planking on south side of keel	River Bottom			7/30/2010
Under planks of platform [orlop deck]	Ship - below Orlop Deck above ceiling layer	Ship	Orlop Deck		7/16/2010
Under PS-4-2A [outer planking] near apron [stern knee]	River Bottom - below outer planking in vicinity of stern knee	River Bottom			7/29/2010
Under ship south side	River Bottom - below outer planking on south side of keel	River Bottom			7/30/2010
Under ship west side	River Bottom - below outer planking on south side of keel	River Bottom			7/30/2010
Under the keel southeast	River Bottom - below outer planking on south side of keel	River Bottom			7/30/2010

		]	ndex to Field an	d Laboratory Pro	Table B-2 oveniences
Field Provenience	Lab Provenience	Context	Analytical Unit	Collection Method	Date Collected
Under west side	River Bottom - below outer planking on west side of ship	River Bottom			7/30/2010
Unknown provenience; found in bottom of washing					
basin	Misc. find on or near ship	Unknown		Surface find	
Unlabeled	Ship Vicinity - clearing during initial discovery	Landfill/Ship	Possibly ship related	Surface find	7/13/2010
Unlabeled	Ship Vicinity - discovered while clearing off ship	Unknown			7/13/2010
VSC Vessel, FN 16-FN 17	Ship - between frames FN16 and FN17	Ship	В	Water Screening	7/27/2010
VSC Vessel FN 14-FN15	Ship - between frames FN14 and FN15	Ship	В	Water Screening	7/27/2010
VSC Vessel FN16-FN 17	Ship - between frames FN16 and FN17	Ship	В	Water Screening	7/27/2010
VSC Vessel FS14-FS15	Ship - between frames FS14 and FS15	Ship	В	Water Screening	7/27/2010
VSC Vessel	Ship - outer surface of outer hull	Ship	Unidentified Ship		Unknown
VSC Vessel FN14-FN15	Ship - between frames FN14 and FN15	Ship	В	Water Screening	7/27/2010
VSC Vessel, artifact sample from sketched feature [galley hearth] immediately East of Orlop Deck	Ship - east of orlop deck above ceiling layer	Landfill/Ship	Possibly ship related	Surface find	7/26/2010
VSC Vessel, FN14-FN15	Ship - between frames FN14 and FN15	Ship	В	Water Screening	7/27/2010
VSC Vessel; artifact sample from sketched feature immediately East of Orlop Deck	Ship - east of orlop deck above ceiling layer	Landfill/Ship	Possibly ship related	Surface find	7/26/2010
VSC Vessel; Beneath outer planking on the south side of the vessel, in line with the large notch in AP- 1 [stern knee]	River Bottom - below outer planking on south side of stern knee	River Bottom			7/29/2010
VSC Vessel; from area immediately south of possible cask	Ship Vicinity - immediately south of possible cask above orlop deck	Landfill			7/26/2010
Water screen from area around bow [stern]	River Bottom - around stem post	River Bottom		Water Screening	7/29/2010
Water screened from around bow [stern]	River Bottom - pedestal below ship	River Bottom		Water screening	7/29/2010
Water screened from between frames FN 22 and FN 23	Ship - between frames FN22 and FN23	Ship	С	Water Screening	7/27/2010
water screened from eastern half of boat on top of outer planking	Ship - cleaning of inner surface of outer hull	Ship	Unidentified Ship	Water Screening	7/28/2010
Water screened between bow [stern]and apron [stern knee]	Ship - around stern knee	Ship	Stern Knee	Water screening	7/28/2010
Within or Adjacent to Ship	Ship Vicinity - clearing during initial discovery	Landfill/Ship	Possibly ship related	Surface find	7/13/2010
Within Vessel	Ship Vicinity - clearing during initial discovery	Ship	Unidentified Ship	Surface find	7/14/2010
Wood Sample	Ship Vicinity - clearing during initial discovery	Landfill/Ship	Possibly ship related	Surface find	7/13/2010

Appendix C: Faunal Analysis by Marie-Lorraine Pipes

# 1 Introduction

The VSC ship excavation recovered a small faunal assemblage two thirds of which was located outside the vessel. Most of the assemblage from both inside and out of the ship represents refuse thrown into landfill sediments. There does not seem to be any association between the ship and the faunal remains. Instead it appears to be primarily refuse generated by local businesses and households. A small amount of accidental inclusions such as wild mammals and fish are also indicated. Faunal remains are commonly recovered from landfill sites in lower Manhattan. Previous excavations at sites such 175 Water Street, Assay, and South Ferry Terminal yielded landfill deposits that included industrial waste from tanneries, commercial refuse from markets and eating establishments, as well as household dietary refuse.

Distinguishing bone refuse types is difficult. Landfill deposits present great challenges in terms of contextual association, refuse characterization, and interpretation of meaning and significance. Closed contexts are preferred by analysts because temporal and behavioral associations permit small scale interpretations whereas large open contexts such as landfill sites tend to be confusing due their depositional and post-depositional complexities. While most waterfront landfill sites contain refuse generated by trash disposal activities from surrounding businesses, markets and industries, they may also contain gradual and accidental refuse accumulations predating landfilling as well as during construction of docks and wharfs.

Dump deposits vary in volume and content according to time period and location as well as by refuse source. Dump deposits are similar in that they represent multiple source accumulations from households, businesses and local industries, and potentially many other sources including disaster and demolition cleanups. In many cases, the easiest dump deposits to identify are those generated by businesses and industries because they result in large dumping events, and leave signature compositions unlike households or small shops which yield smaller amounts of refuse. Where faunal remains are concerned, sorting out refuse types can be accomplished by considering the range of animal species and skeletal elements represented and by examining bone modifications found within the assemblage. The physical appearance of a bone provides an important clue to understanding sources of refuse and for interpreting what they represent.

# 2. Methodology

The assemblage was in an excellent state of preservation. As a result there was a high degree of identification, 81%. Each bone specimen was identified by species when possible, and by class and size range category when not possible. For the purposes of this report, large mammal

<sup>&</sup>lt;sup>1</sup> A full catalog of faunal remains recovered during the investigation of the WTC Ship Remnant was prepared by Ms. Pipes follows this report.

is equivalent in size to cattle, medium mammal is equivalent in size to pig and sheep, and small mammal is equivalent in size to cat or smaller. Table 1 summarizes the faunal assemblage for the site by class, species and size-range category. Two counts are presented, the Total Number of bone Fragments (TNF) and the Minimum Number of bone Units (MNU). In brief, the TNF count serves as a curation tool indicating the absolute number of bone fragments for a given row of data. The MNU count is an adjusted bone count based on the number of actual skeletal elements represented for a given species for a given row of data. Not all rows of data received an adjusted bone count (MNU) as its application was used only when one or more skeletal elements were identified. For example, a crushed sheep femur consisting of 12 bone fragments would be tallied as 12 TNF, and receive an adjusted bone count. However, the TNF count was used when discussing frequencies of bone modifications.

Each bone specimen was further identified by skeletal element, portion, and age at death, when possible. All apparent bone modifications were recorded. The term "bone modification" means the physical alteration of the original appearance of a skeletal element either by human, animal or natural agents. Bone modifications at this site included butcher marks, gnaw marks, heat exposure and weathering. Identifications were made with the aid of a comparative skeletal type collection and the use of references including but not limited to: Brown and Gustafson (1979), Cannon (1987), Cornwall (1956), Daniels (1996), Lyman (1977), Olsen (1964, 1968), Pipes (1995), Schmid (1972) and Ubaldi and Grossman (1987). In the report that follows refuse types are classified based on skeletal elements, staining of the cortical bone surface, and associated butcher marks. "Dietary refuse" and "table scrap" are terms used to describe household food refuse: for example, the bones from a roast or a ham steak, or the skeletal remains of a roasted bird. "Processing waste" is used to describe the bone waste generated during the preparation of a meat dish: for example, skull bones left over from preparing headcheese or beef tongue. "Butcher waste" potentially includes butchered mandibles and skulls. "Industrial waste" describes waste from tanneries and horn-workers such skull, foot elements and horn cores from large domesticated mammals. "Commercial waste" is a term that describes tavern refuse such as large joints of meat and repetition of the same cuts of meat. Figures 3-5 illustrate the reduction of cattle, pig and sheep carcasses.

## 3. Data Description

There was approximately 445 bone fragments (TNF) representing a minimum of 124 actual bone units (MNU) in the assemblage. The bone fragment count is approximate because of the presence of a semi-fossilized fish skeleton recovered from beneath the ship's hull. That particular specimen was partially embedded in a soil matrix. The faunal assemblage was composed of a diverse range of species despite its small size. Mammal was the most abundant class whereas fish and bird were about equally represented (Figure 1). More than half of the identified species were domesticated; six were mammals and two were birds (Table 1). Nearly all of the identified species were commonly consumed in New York City during the eighteenth century including all of the birds and fish, and most of the mammals, with the exception of rat and cat. All faunal specimens were stained. Some were brown and others dark brown-black. The brown staining is thought to be related to heat exposure whereas dark brown black was considered possibly related to tanning of hides. The brown staining is actually low level burning whereas the dark brown staining is a chemical transformation of the cortical bone.

### a. Bird

Identified bird species included chicken, turkey and passenger pigeon (Table 1). Chicken was the most abundant of the three species (Figure 1). It was represented by a minimum of two individuals. Body parts included the back, wing, leg, thigh and foot. One specimen exhibited cut marks and another appeared to have been boiled. Turkey consisted of a leg bone that bore slice marks and exhibited canine tooth marks. Passenger pigeon was indicated by one element, a wing bone that was cut through the end. Unidentified bird consisted of wing elements and longbone fragments. One bird down feather was also present. This could not be identified by species because it was not a flight feather and lacked critical markers for identification.

## b. Mammal

Eight mammal species were identified including cattle, pig, sheep, horse, goat, grey squirrel, cat and rat (Table 1). Figure 2 presents the relative frequencies of large domesticated mammals. Cattle (58%) was the most abundant species followed by pig (19%) and sheep (18%) and distantly by horse (4%) and goat (1%). Table 2 summarizes the types of meat units represented for beef, veal, pork and mutton. Figures 3-5 illustrate the reduction of cattle, pig and sheep carcasses and serve as guides for understanding the types of meat cuts presented in Table 2. Specific cuts are illustrated in Figures 6-8. Cattle was composed of a mix of industrial waste, commercial waste and household dietary refuse. It was represented by a partial skull and foot elements, several butchered cervical, lumbar, and thoracic vertebrae and ribs, large meat joints from the arm, shank, rump, round and sirloin. The skull came from an individual aged at around at more than 9 years at death. The teeth showed signs of enamel hypoplasia. This condition happens when the enamel is not formed properly and can happen for a variety of reasons such as illness, injury and genetic disorders. Most beef cuts were large (see Figure 6). The size of beef cuts was too large to be associated with regular household consumption. It is more likely that the cuts were generated by commercial eateries. A few cattle specimens represented veal meat cuts. Most of the meat cuts were processed by saw though some were chopped. Only one specimen bore canine gnaw marks.

Pig consisted of a majority of roasts or hams from the Boston butt, leg and shank (Table 2, Figure 4). A few spare ribs were also indicted. There was also a neonatal skull. Three bones exhibited rodent incisor gnaw marks. Many of the cuts were chopped and bore slice marks. Sheep was very limited as well in terms of body part distributions (Table 2, Figure 5). It was represented by the fore and hind shanks, two feet, the butt, leg, a loin chop, and two ribs. The majority represented stew meats though a few roasts were present as well. Most of the bones were chopped and exhibited slice marks. Two of them bore canine tooth marks. The majority of the specimens came from mature individuals though at least one lamb foot bone was also present.

Horse and goat remains were composed of tanner's and horn-worker's refuse. Horse consisted of a skull and two foot elements and goat consisted of a horn core that had been removed from the base of the skull. The horse skull came from an individual aged between 18 and 20 years of age at death. The frontal area was crushed suggesting the animal was killed by pole axing. The foot elements were very dark in color suggesting they came from a tannery.

In addition to identified mammal species there was a small number of medium and large mammal bones. These consisted mainly of vertebra, rib and longbone fragments. A fair number of these bore chop marks.

Cat was identified by a single mandible. None of the teeth were preserved and the specimen was culturally unmodified. There was a small mammal cranium that may also be cat but it was too fragmentary to be certain. Rat consisted of a mandible and squirrel of two leg bones. The squirrel bones appeared burnedheat which suggests they are food-related. There were two other small mammal bones consisting of fragments of a vertebra and rib.

#### c. Fish

Identified fish species included sheepshead, yellow perch and bay anchovy. Yellow perch was indicated by a cranial element, a preoperculum; sheepshead was represented by a preoperculum and two vertebrae and bay anchovy was identified by a fish scale. A nearly complete bay anchovy articulated skeleton was found impressed in the sediment beneath the ship's hull. The head was missing but the axial skeleton was fairly well preserved as were some of the fish scales. One other fish species was indicated by a fragmentary operculum. It may be from a porgy.

### d. Reptile

Reptile was represented by a tibia from an unidentified turtle.

#### 4. Summary

The faunal remains from the VSC excavation were composed of a range of species available within the local region. Most of the bone came from large domesticated mammal species. Beef, pork and mutton meat cuts dominated the assemblage. The size of beef cuts was large suggesting that they were mainly generated by commercial establishments such as restaurants, taverns and boardinghouses Smaller meat cuts, however, were also present that may have been contributed by local households. Industrial waste was represented by the skulls and foot elements of cattle and horse, and by a goat horncore. Fish, bird and turtle remains were infrequent though all were locally available. As such, most of their remains may represent either household or commercial refuse.

Faunal remains were found within the ship in 'sealed' contexts as well as outside and beneath the ship. A comparison of the faunal remains from inside and outside revealed a few interesting patterns. The most frequent species, cattle, pig, sheep and chicken, were present in both contexts. Some infrequent and isolated specimens such as turkey, cat, rat, squirrel and yellow perch were present inside the ship, others such as anchovy, horse, goat, passenger pigeon and turtle were recovered outside the ship (Table 3). Stained bone was almost exclusively found inside the ship whereas heat exposed bone was recovered both inside and outside the ship (Table 4). It is unknown why the stained bone was so limited in distribution. Meat cuts appeared inside and outside the ship. While no specific cuts overlapped for beef, pork or mutton they were similar. Beef cuts included stew meats and roasts, pork included hams and mutton included rack cuts from both contexts. The visual differences in the appearance of meat cuts indicates they were generated by different butchers.

The VSC faunal assemblage by itself provides limited information. However it is significant because it represents another data set for the study of eighteenth century animal husbandry practices, dietary traditions and craft-related activities at the city level. There has generally been a lack of interest in landfill deposits. As a result the data sets are small or if they exist, remain undescribed. Yet these deposits are rich sources of information concerning the rearing and exploitation of animals during specific time periods. They also provide information about the life histories of livestock. Broad questions require lots of data. Landfill deposits represent an excellent source of data useful in investigating urban issues.

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Class/Species/Size-range Category	TNB	MNU
Bird		
Chicken (Gallus gallus)	5	5
Turkey (Gallus gallopavo)	1	1
Passenger Pigeon (Ectopistes migratorius)	1	1
Unidentified Bird	7	3
Subtotal <u>TNF/MNU</u>	14	10
Mammal		
Rat sp. (Rattus sp.)	1	1
Cat (Felis domesticus)	1	1
Cattle (Bos Taurus)	74	45
Goat (Capra sp.)	1	1
Grey Squirrel (Sciurus caroliensis)	2	2
Horse (Equus caballus)	160	3
Pig (Sus scrofa)	19	15
Sheep (Ovis aries)	16	14
Small Mammal	6	3
Medium Mammal	48	12
Large Mammal	13	3
Subtotal <u>TNF/MNU</u>	341	100
Fish		
Bay Anchovy (Anchoa mitchilli)	75	1
Sheepshead (Archosargus probatocephalus)	4	4
Yellow Perch (Perca flavens)	1	1
Unidentified Fish	8	7
Subtotal <u>TNF/MNU</u>	88	13
Reptile		
Unidentified Turtle	1	1
Subtotal <u>TNF/MNU</u>	1	1
Other		
Unidentified Bone	1	-
Subtotal <u>TNF/MNU</u>	1	-
Total <u>TNF/MNU</u>	445	124

**Table 1.** Summary of faunal species by Total Number of bone Fragments(TNF) and Minimum Number of bone Units (MNU).

Meat Type	Stew	Roast/Ham	Steak/Cho	Trimming	Processed	Tanners
			р	Waste	Waste	Waste
Beef						
Head	-	-	-	-	1	2
Neck	5	-	-	-	-	-
Loin	-	2	-	-	-	-
Rib	4	-	6	-	-	
Shank	10	-	-	-	-	
Foot	-	-	-	-	-	3
Sirloin	-	1	-	-	-	
Rump	-	3	-	-	-	
Round	-	2	-	-	-	-
Subtotal	19	8	6	-	1	5
Veal						
Rack	-	-	2	-	-	
Breast	1	-	-	-	-	
Shank	1	-	-	-	-	
Foot	-	-	-	-	1	
Leg	-	1	-	-	-	
Subtotal	2	1	2	-	1	
Pork						
Boston butt	1	4	-	-	-	
Picnic Ham	-	2	-	-	-	
Rib	2	-	1	-	-	
Butt ham	-	2	-	-	-	
Shank ham	-	2	-	-	-	
Subtotal	3	10	1	-	-	
Mutton						
Loin	-	-	1	-	-	
Butt	-	2	-	-	-	
Leg	-	1	-	-	-	
Foot	-	-	-	3	-	
Shank	5	-	-	-	_	
Subtotal	5	3	1	3	-	

**Table 2**. Summary of beef, veal, pork and mutton cuts, based on MNU.

Class/Species/Size-range	Category	Insid	e	Outsi	de	
		MNU	Rel.%	MNU	Rel.%	
Bird						
Chicken		3	.06	2	.03	
Turkey		1	.02	-	-	
Passenger Pigeon		-	-	1	.01	
Unidentified Bird		3	.06	-	-	
Mammal						
Rat sp.		1	.02	-	-	
Cat		1	.02	-	-	
Cattle		15	.30	30	.41	
Goat		-	-	1	.01	
Grey Squirrel		2	.04	-	-	
Horse		-	-	3	.04	
Pig		6	.12	9	.12	
Sheep		5	.10	9	.12	
Unidentified Mammal		10	.20	8	.11	
Fish						
Bay Anchovy		-	-	1	.01	
Sheepshead		2	.04	2	.03	
Yellow Perch		1	.02	-	-	
Unidentified Fish		-	-	7	.10	
Reptile						
Unidentified Turtle		-	-	1	.01	
		50	1.00	74	1.00	

Table 3. Comparison of faunal remains inside and outside the ship.

# **Table 4.** Comparison of burned bone and

brown-black stained bone from inside and outside the ship.

Inside TNF	Outside TNF
27	71
35	3
	Inside TNF 27 35

Cut #	Inside	Outside
	MNU	MNU
126	1	-
136	1	-
162	1	-
192	-	1
199	-	1
238	1	-
277	-	1
278	-	2
279	1	-
280	-	1
283	2	-
285	1	-
	-	1
314	-	1
	-	1
	-	1
	-	1
	-	1
	-	1
	-	1
	8	14
148	_	1
	1	_
	-	2
	_	1
	1	4
286	_	1
	1	-
		_
520	2	1
	126 136 162 192 199 238 277 278 279 280	$\begin{array}{c c c c c c c c c c c c c c c c c c c $

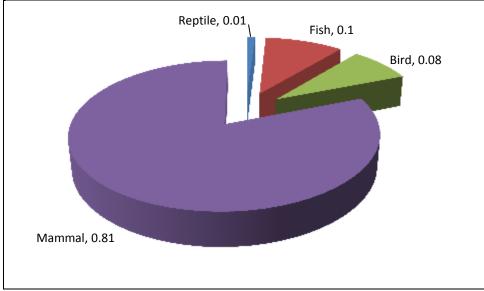


Figure 1. Class relative frequencies based on MNU.

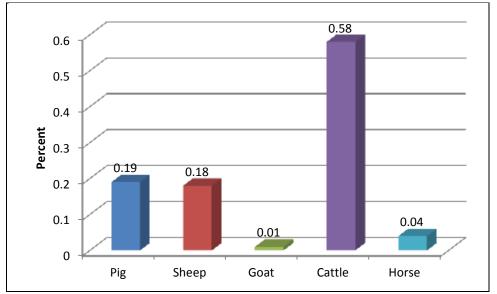
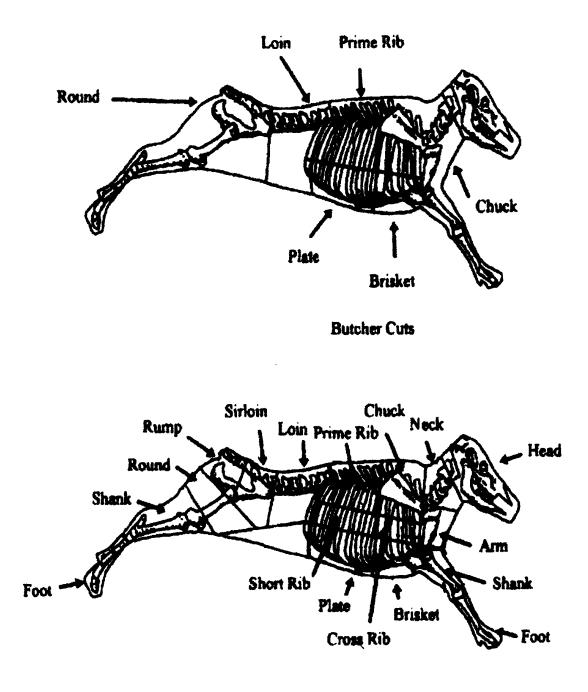
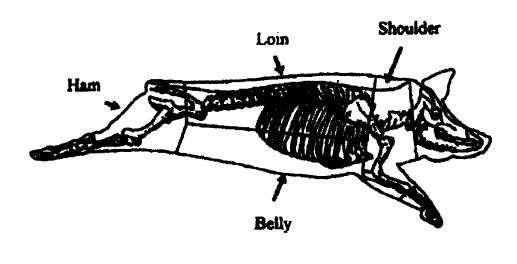


Figure 2. Relative frequencies of large domesticated mammals.

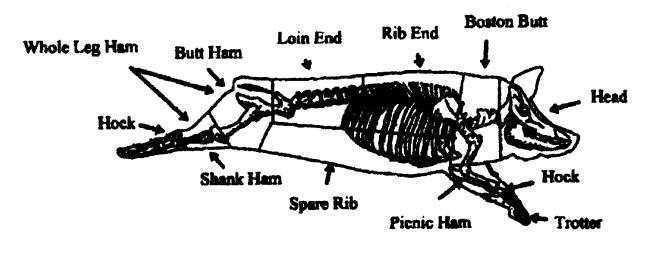


Meat Cuts





**Butcher Cuts** 



**Meat Cuts** 

Figure 4. Pig/Pork Secondary Butcher Cuts and Primary Meat Cuts.

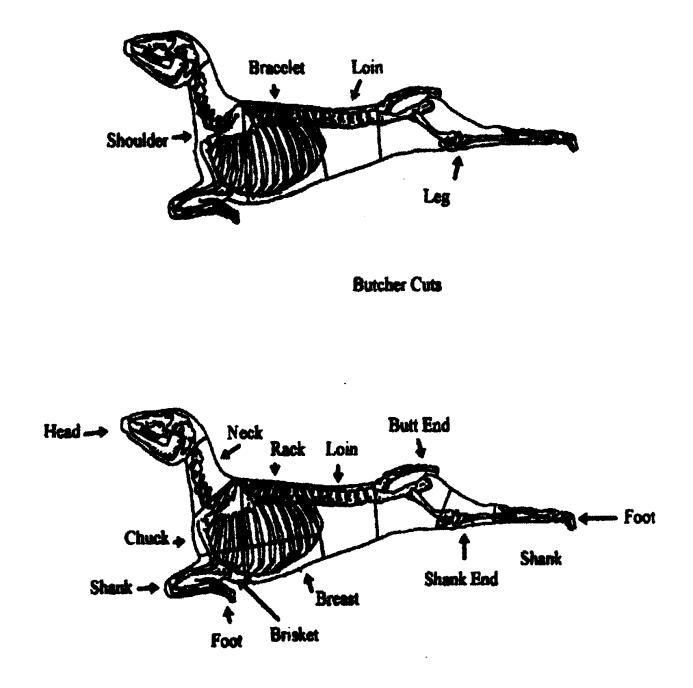
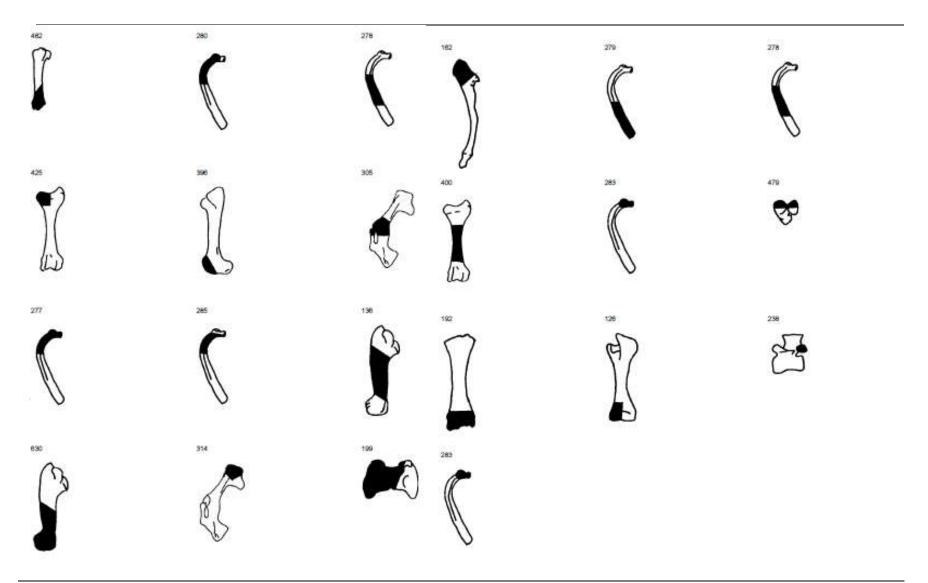
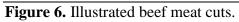


Figure 5. Sheep/Mutton Secondary Butcher Cuts and Primary Meat Cuts.





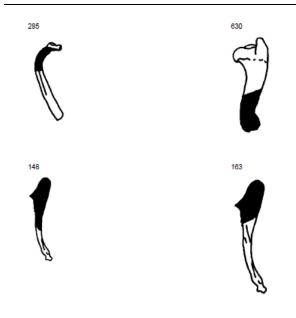


Figure 7. Illustrated pork meat cuts.

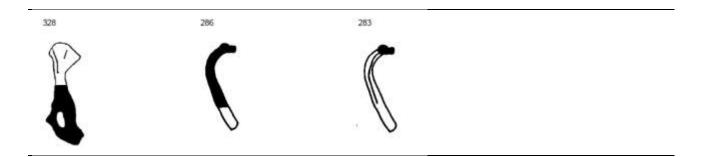


Figure 8. Illustrated mutton meat cuts.

Catalog No	Provenience description	Other field information	Species	Latin Name	TNF	MNU Descriptor	MNU	Skeletal Element	Element Part	Age Indicator	Cut Mark	Illustrated Meat Cut	Gnaw Mark	Heat Exposure Translation	Weathering Translation	Note Field
			Pig	Sus scrofa	2	MNE	1	Calvar (Skull)	Fragment	Neonate (< than 6 months)	-	0	-	-	Porous	SUCKLING
1	beneath hull, n side, found when removing keel and		Cow	Bos taurus	1	MNMC	1	Tibia	Distal section	+ 2 1/2 years	Chopped	482	-	-	Porous	SPIRAL FRACTURE PROXIMAL END, CLEAVER MARK DISTAL END
	apron		Medium Mammal		1	MNE	1	Rib	Proximal fragment	Unfused	-	0	-	Calcined	-	
			Small Fish		2	MNE	1	Operculum	Partial	-	-	0	-	-	-	POSSIBLE PORGY
2	outside east		Cow	Bos taurus	1	MNMC	1	Rib	Proximal section	-	Cleaved	280	-	-	DARK STAINING	DARK IN APPEARANCE
	below outer		Pig	Sus scrofa	3	MNMC	2	Rib	Shaft section	-	Chopped	285	-	Presence	Porous	PLATE
3	planking on south side of the ship		Cow	Bos taurus	1	MNMC	1	Rib	Shaft section	-	Cleaved	278	-	Presence	-	MASSIVE 11" LONG. SCORED ON SHAFT
4	se corner under outer planks		Cow	Bos taurus	1	MNMC	1	Femur	Proximal section	+ 3 1/2 years	Cleaved	425	-	-	DARK STAINING	VERY DARK, SMOOTH APPEARANCE
5	misc. surface finds near ne corner		Cow	Bos taurus	1	MNE	1	Maxilla	Partial	-	-	0	-	-	-	LEFT SIDE, MILD DENTAL HYPOPLASIA ON THE M1- M3. RECEDING GUM LINE DUE TO HEAVY PLAQUE BUILD UP. MAY BE CHOPPED BEHIND M3
			Cow	Bos taurus	1	MNMC	1	Femur	Distal section	+ 2 1/2 years	Sawed	396	-	Presence	-	PITTING AT THE SUTURE LINE. SLICE MARK ON THE CONDYLE
6	under keel se, shells growing on bone are falling off		Cow	Bos taurus	1	MNMC	1	Pelvis (innominates)	Section	+ 3/4 year	Chopped	305	-	-	Porous	
7	under ship west side		Cow	Bos taurus	1	MNMC	1	Rib	Proximal section	Fused	Chopped	277	-	Presence	Porous	SLICE MARK ON SHAFT
	machine excavated		Chicken	Gallus gallus	1	MNMC	1	Tibiotarsus	Distal section	Unfused	Cut	0	-	Presence	-	CUT ABOVE THE JOINT
8	area below outer planking on		Sheep	Ovis aries	1	MNE	1	Radius	Shaft	-	Cut marks(s) on body	0	-	Presence	Flaking cortex	
	the south side of the		Sheep	Ovis aries	1	MNE	1	Metatarsus	Whole	+ 2 1/2 years	-	0	-	-	Porous	

Catalog No	Provenience description	Other field information	Species	Latin Name	TNF	MNU Descriptor	MNU	Skeletal Element	Element Part	Age Indicator	Cut Mark	Illustrated Meat Cut	Gnaw Mark	Heat Exposure Translation	Weathering Translation	Note Field
	ship		Pig	Sus scrofa	1	MNMC	1	Humerus	Distal section	Young	Cleaved	630	-	Presence	-	
			Cow	Bos taurus	1	MNMC	1	Cervical Vertebra	Section	- 9 years	Chopped	12	-	Presence	Flaking cortex	BISECTED VERTICALLY. C6
			Cow	Bos taurus	1	MNMC	1	Tibia	Shaft section	Young	Chopped	0	-	Presence	-	
			Sheeps- head	Archosargus probatoceph alus	1	MNE	1	Preoperculum	Whole	-	-	0	-	-	DARK STAINING	VERY DARK. LEFT
			Turkey	Meleagris gallopavo	1	MNE	1	Tibiotarsus	Partial	Fused	Cut marks(s) on body	0	Carni- vore	Presence	-	
9	inside vessel		Sheep	Ovis aries	1	MNE	1	Radius	Whole	1/4 - 3 1/2 years	Cut marks(s) on body	0	-	Presence	Porous	
5			Cow	Bos taurus	1	MNMC	1	Rib	Proximal section	Unfused	Sawed, cut mark(s) on body	285	-	Presence	-	
			Cow	Bos taurus	2	MNMC	1	Radius	Shaft section	Young	Chopped	136	Carni- vore	Charred/ black	-	
10	outside vessel, south side		Cow	Bos taurus	1	MNMC	1	Cervical Vertebra	Section	- 9 years	Cleaved	12	-	Presence	-	C6
10	outside vessel, south		Cow	Bos taurus	1	MNMC	1	Humerus	Distal section	+ 1 1/2 years	Sawed, cut mark(s) on body	630	-	Presence	-	
	side		Cow	Bos taurus	1	MNE	1	Proximal Phalange	Distal fragment	-	-	0	-	Calcined	-	
			Pig	Sus scrofa	1	MNMC	1	Humerus	Proximal fragment	- 3 years	Chopped	148	-	Presence	-	
11	under keel southeast		Horse	Equus caballus	1	MNE	1	Metacarpus	Whole	+ 1 1/4 years	-	0	-	-	Porous	
			Large Mammal		1	-	0	Unidentified	Fragment	-	-	0	-	Presence	-	
	immediately beneath		Sheep	Ovis aries	1	MNE	1	Metacarpus	Partial	Neonate (< than 6 months)	Chopped	0	Carni- vore	Presence	-	
12	vessel after removal		Cow	Bos taurus	1	MNMC	1	Lumbar Vertebra	Section	+ 9 years	Cleaved	12	-	Presence	-	L6
			Cow	Bos taurus	1	MNMC	1	Right Mandible	Proximal section	-	Chopped	0	-	Presence	Porous	
		wood block	Cow	Bos taurus	1	MNMC	1	Atlas	Section	-	Chopped	199	-	Presence	-	
13	pedestal removal	wood block with spike removed for Gary	Cow	Bos taurus	1	MNMC	1	Rib	Distal section	Neonate (< than 6 months)	Chopped	0	-	-	Porous	
		Gary	Cow	Bos taurus	1	MNE	1	Rib	Whole	-	-	0	-	Presence	-	
			Cow	Bos taurus	1	MNMC	1	Innominate - Ilium	Section	-	Sawed	314	-	Presence	-	

Catalog No	Provenience description	Other field information	Species	Latin Name	TNF	MNU Descriptor	MNU	Skeletal Element	Element Part	Age Indicator	Cut Mark	Illustrated Meat Cut	Gnaw Mark	Heat Exposure Translation	Weathering Translation	Note Field
			Cow	Bos taurus	1	MNE	1	Calcaneus	Whole	- 3 years	Cut mark(s) on body	0	-	Presence	Porous	
			Medium Mammal		4	-	0	Long bone	Fragment	-	-	0	-	-	-	
14	artifacts from under BP		Chicken	Gallus gallus	1	MNE	1	Sacrum	Partial	-	-	0	-	Presence	-	
			Unidentifi ed Bird		1	MNE	1	Radius	Shaft	-	-	0	-	-	Weathering present	
			Unidentifi ed Bird		1	-	0	Unidentified	Fragment	-	-	0	-	-	Weathering present	
			Sheep	Ovis aries	1	MNMC	1	Pelvis (innominates)	Partial	+ 1/2 year	Chopped	328	-	Presence	-	
			Pig	Sus scrofa	1	MNMC	1	Humerus	Proximal section	-	Chopped	0	-	Presence	Porous	
			Cow	Bos taurus	1	MNMC	1	Rib	Distal section	-	Chopped	279	-	Presence	Porous	PLATE
14	artifacts from under BP		Cow	Bos taurus	2	MNMC	1	Cuneiform	Proximal section	- 3 1/2 years	Cleaved	162	-	Presence	-	
			Brown Rat	Rattus norweigicus	1	MNE	1	Right Mandible	Whole	-	-	0	-	Presence	-	
			Medium Mammal		1	MNE	1	Rib	Shaft	-	-	0	-	Presence	-	
			Medium Mammal		1	-	0	Long bone	Fragment	-	-	0	-	Presence	-	
			Medium Mammal		8	-	0	Unidentified	Fragment	-	-	0	-	Calcined	-	
			Large Mammal		1	MNMC	1	Long bone	Section	-	Chopped	0	-	Presence	-	
			Goat	Capra	1	MNMC	1	Horn Core	Whole	-	Chopped	0	-	-	Porous	RIGHT
	under ship,		Cow	Bos taurus	1	MNMC	1	Cervical Vertebra	Section	-	Chopped	51	I	Presence	-	
15	south side		Cow	Bos taurus	1	MNMC	1	Thoracic Vertebra	Dorsal spine	Neonate (< than 6 months)	Chopped	0	-	Presence	-	
			Cow	Bos taurus	1	MNMC	1	Rib	Shaft section	-	Chopped	278	-	Presence	Porous	
	soil below		Unidentifi ed Bone		1	-	0	Unidentified	Fragment	-	-	0	-	Calcined	-	
16	hull, south		Sheep	Ovis aries	1	MNMC	1	Tibia	Distal section	- 1 1/4 year	Chopped	0	-	-	Porous	
	side of ship		Sheep	Ovis aries	1	MNMC	1	Tibia	Proximal section	-	Chopped	0	Carni- vore	Presence	-	
			Pig	Sus scrofa	1	MNMC	1	Scapula	Distal section	-	Chopped	0	-	-	Porous	
			Pig	Sus scrofa	1	MNE	1	Humerus	Distal fragment	-	-	0	-	-	Porous	
	soil below		Cow	Bos taurus	26	MNE	1	Calvar (Skull)	Partial	-	-	0	-	Presence	-	INCLUDES ORBITAL
16	hull, south		Cow	Bos taurus	1	MNE	1	Metacarpus/M etatarsus	Distal epiphysis	- 2 years	-	0	-	-	-	
	5.00 51 51 10		Cow	Bos taurus	1	MNMC	1	Innominate - Ischium	Section	Neonate (< than 6 months)	Chopped	0	-	-	Porous	
			Horse	Equus caballus	1	MNE	1	Mid Phalange	Whole	+ 1 year	-	0	-	Presence	-	

Catalog No	Provenience description	Other field information	Species	Latin Name	TNF	MNU Descriptor	MNU	Skeletal Element	Element Part	Age Indicator	Cut Mark	Illustrated Meat Cut	Gnaw Mark	Heat Exposure Translation	Weathering Translation	Note Field
			Small Mammal		1	MNE	1	Rib	Shaft	-	-	0	-	-	Porous	
			Medium Mammal		1	MNMC	1	Rib	Proximal section	-	Chopped	0	-	Presence	-	
			Medium Mammal		1	-	0	Long bone	Fragment	-	-	0	-	-	Porous	
			Medium Mammal		3	-	0	Unidentified	Fragment	-	-	0	-	-	Porous	
			Medium Mammal		1	-	0	Unidentified	Fragment	-	-	0	-	Charred/ black	-	
			Large Mammal		1	-	0	Long bone	Fragment	-	Cut mark(s) on body	0	-	Charred/ black	-	
			Turtle		1	MNE	1	Tibia	Whole	-	-	0	-	Presence	-	
17	within or adjacent to		Cow	Bos taurus	1	MNE	1	Proximal Phalange	Whole	+ 2 years	-	0	-	Presence	-	
	ship		Cow	Bos taurus	1	MNMC	1	Femur	Shaft section	-	Cleaved	400	-	Presence	-	
	eastern side		Chicken	Gallus gallus	1	MNE	1	Coracoid	Proximal fragment	-	-	0	-	Presence	-	
18	of vessel beneath outer planking		Sheep	Ovis aries	1	MNE	1	Carpus	Whole	-	-	0	-	Presence	-	
			Sheep	Ovis aries	1	MNE	1	Femur	Partial	+ 3 1/2 years	-	0	-	-	Porous	
18	eastern side of vessel beneath		Horse	Equus caballus	152	MNE	1	Calvar (Skull)	Partial	Old	-	0	-	-	-	BETWEEN 18 AND 20 YEARS OLD
	outer planking		Medium Mammal		1	-	0	Vertebra	Fragment	-	-	0	-	-	-	
			Medium Mammal		1	-	0	Unidentified	Section	-	Chopped	0	-	-	-	
			Sheep	Ovis aries	1	MNE	1	Radius	Shaft	-	-	0	-	Presence	-	
19	between bow and apron	water screened	Medium Mammal		2	MNMC	1	Lumbar Vertebra	Section	-	Chopped	12	-	Presence	-	MAY BE SHEEP
		301001100	Medium Mammal		1	MNE	1	Humerus	Shaft	-	-	0	-	Presence	-	
19	between bow and apron	water screened	Large Mammal		1	-	0	Unidentified	Fragment	-	-	0	-	Presence	-	
20	beneath orlop deck	water screened	Chicken	Gallus gallus	1	MNE	1	Femur	Shaft	-	-	0	-	-	-	
21	inside vessel near west end (in west half but east of 'platform')		Cow	Bos taurus	1	MNMC	1	Rib	Proximal section	Fused	Chopped	283	-	Presence	-	

Catalog No	Provenience description	Other field information	Species	Latin Name	TNF	MNU Descriptor	MNU	Skeletal Element	Element Part	Age Indicator	Cut Mark	Illustrated Meat Cut	Gnaw Mark	Heat Exposure Translation	Weathering Translation	Note Field
22	from all adjacent to th 'beams' (frames) at the eastern end of the ship		Cow	Bos taurus	1	MNE	1	Carpus	Whole	-	-	0	-	Presence	-	
23	above outer planks after		Cow	Bos taurus	1	MNMC	1	Thoracic Vertebra	Dorsal spine	Unfused	Chopped	12	-	Presence	-	
	frame removed		Cow	Bos taurus	1	MNMC	1	Femur	Section	-	Chopped	0	-	Presence	-	
24	beneath south side of the vessel at the far west end of what was then called the bow		Passenge r Pigeon		1	MNE	1	Ulna	Whole	-	Cut	0	-	-	-	
25	fill from F10 to F14		Medium Mammal		2	MNE	1	Costal Rib	Shaft	-	-	0	-	-	-	
26	from surface of outer planking		Cat	Felis domesticus	1	MNE	1	Mandible	Whole	-	-	0	-	-	Porous	
27	VSC (Vessel); FN14-FN15		Large Mammal		1	-	0	Calvar (Skull)	Fragment	-	-	0	-	Presence	-	
28	soil from west end below outer planking		Sheep	Ovis aries	2	MNMC	1	Rib	Proximal section	-	Chopped	286	-	-	Porous	
	1 mm vicinity		Sheep	Ovis aries	1	MNE	1	Radius	Shaft	-	-	0	-	-	Porous	
29	of vessel during initial identification		Small Mammal		4	MNE	1	Calvar (Skull)	Fragment	-	-	0	-	Presence	-	POSSIBLE CAT CRANIUM
	from under outer		Medium Mammal		2	MNE	1	Rib	Shaft	-	-	0	-	Presence	-	
30	planking on the northern half of the ship, under the keel		Medium Mammal		1	MNE	1	Sternum	Plates	Unfused	-	0	-	-	-	
31	inside vessel, south side		Sheep	Ovis aries	2	MNMC	1	Lumbar Vertebra	Section	- 4 years	Cleaved	12	-	Presence	-	
20	beneath		Sheep	Ovis aries	1	MNMC	1	Rib	Proximal section	-	Chopped	283	-	Presence	-	
32	orlop deck		Medium Mammal		3	-	0	Long bone	Fragment	-	-	0	-	Calcined	-	
33	from between frames FN2 and FN3		Small Mammal		1	MNE	1	Vertebra	Fragment	-	-	0	-	Presence	-	

Catalog No	Provenience description	Other field information	Species	Latin Name	TNF	MNU Descriptor	MNU	Skeletal Element	Element Part	Age Indicator	Cut Mark	Illustrated Meat Cut	Gnaw Mark	Heat Exposure Translation	Weathering Translation	Note Field
34	outside vessel, north		Pig	Sus scrofa	1	MNE	1	Femur	Shaft	Young	Cut marks(s) on body	0	-	Presence	-	
34	side		Pig	Sus scrofa	1	MNMC	1	Tibia	Distal section	-	Cleaved	0	-	Presence	-	
	0.00		Medium Mammal		1	MNMC	1	Rib	Shaft section	-	Chopped	278	-	Presence	-	
35	fill outside ship, south side between cross beams 6 and 9, if 1 is the eastern most		Cow	Bos taurus	1	MNMC	1	Radius	Distal section	-	Cleaved	192	-	-	Porous	
35	fill outside ship, south side between cross beams 6 and 9, if 1 is the eastern most		Cow	Bos taurus	1	MNMC	1	Tibia	Proximal section	+ 3 1/2 years	Chopped	479	-	-	Porous	
			Unidenti- fied Bird		1	MNE	1	Radius	Shaft	-	-	0	-	-	DARK STAINING	VERY DARK
			Unidenti- fied Bird		1	-	0	Long bone	Fragment	-	-	0	-	-	DARK	VERY DARK
	from		Pig	Sus scrofa	1	MNE	1	Cervical Vertebra	Partial	-	-	0	Rodent	-	DARK	VERY DARK
	between the area west of		Pig	Sus scrofa	1	MNE	1	Femur	Shaft	-	-	0	Rodent	-	DARK STAINING	VERY DARK
36	Frame 10 and the stern		Cow	Bos taurus	1	MNE	1	Rib	Proximal section	-	-	0	Rodent	-	DARK STAINING	VERY DARK
	(id'd in the field as the		Cow	Bos taurus	2	MNMC	1	Humerus	Distal section	+ 1 1/2 years	Spiral fracture	126	Rodent	-	DARK STAINING	VERY DARK
	bow)		Medium Mammal		1	-	0	Sacrum	Fragment	-	-	0	-	-	DARK STAINING	VERY DARK
			Medium Mammal		2	MNE	1	Scapula	Fragment	-	-	0	-	-	DARK STAINING	VERY DARK
			Medium Mammal		1	-	0	Long bone	Fragment	-	-	0	-	-	DARK STAINING	VERY DARK
	from between the		Yellow Perch	Perca flavens	1	MNE	1	Preoperculum	Partial	-	-	0	-	-	DARK STAINING	VERY DARK
36	area west of Frame 10 and the stern (id'd in the field as the bow)		Sheeps- head	Archosargus probatoceph alus	1	MNE	1	Vertebra	Whole	-	-	0	-	-	DARK STAINING	VERY DARK
37	soil below hull, south		Sheeps- head	Archosargus probatoceph alus	1	MNE	1	Vertebra	Whole	-	-	0	-	Presence	-	
	side of ship		Unidenti- fied Fish		1	MNE	1	Vertebra	Whole	-	-	0	-	-	-	

Catalog No	Provenience description	Other field information	Species	Latin Name	TNF	MNU Descriptor	MNU	Skeletal Element	Element Part	Age Indicator	Cut Mark	Illustrated Meat Cut	Gnaw Mark	Heat Exposure Translation	Weathering Translation	Note Field
			Unidenti- fied Fish		1	MNE	1	Thoracic Vertebra	Dorsal spine	-	-	0	-	Presence	-	
			Unidenti- fied Fish		1	MNE	1	Scale	Fragment	-	-	0	-	-	-	
			Unidenti- fied Fish		3	MNE	3	Branchio- stegal	Fragment	-	-	0	-	-	-	
	fill from F10 to F14		Chicken	Gallus gallus	1	MNE	1	Tarsometa- tarsus	Partial	-	-	0	-	-	Porous	
			Unidenti- fied Bird		2	-	0	Long bone	Shaft	-	-	0	-	-	DARK STAINING	VERY DARK
			Pig	Sus scrofa	1	MNE	1	Rib	Partial	-	Cut mark(s) on body	0	-	-	DARK STAINING	VERY DARK
			Pig	Sus scrofa	1	MNMC	1	Humerus	Proximal section	-	Chopped	163	Rodent	-	DARK STAINING	VERY DARK
			Pig	Sus scrofa	3	MNE	1	Tibia	Distal fragment	- 2 years	-	0	-	Calcined	-	
			Cow	Bos taurus	1	MNE	1	Premolar	Proximal epiphysis and diaphysis	+ 9 years	-	0	-	-	DARK STAINING	VERY DARK
			Cow	Bos taurus	1	MNMC	1	Cervical Vertebra	Section	-	Chopped	12	-	-	DARK STAINING	VERY DARK
			Cow	Bos taurus	1	MNMC	1	Lumbar Vertebra	Section	-	Chopped	238	-	-	DARK STAINING	VERY DARK
38			Cow	Bos taurus	2	MNE	1	Thoracic Vertebra	Dorsal spine	-	-	0	-	-	DARK STAINING	VERY DARK
			Cow	Bos taurus	1	MNMC	1	Rib	Proximal section	Fused	Chopped	283	Rodent	-	DARK STAINING	VERY DARK
			Eastern Grey Squirrel	Sciurus caroliensis	2	MNE	2	Tibia	Partial	-	-	0	-	-	DARK STAINING	VERY DARK
			Medium Mammal		1	MNE	1	Vertebra	Epiphysis	Unfused	Sawed on end	0	-	Calcined	-	
			Medium Mammal		3	MNE	1	Rib	Fragment	-	-	0	-	-	DARK STAINING	VERY DARK
			Medium Mammal		1	-	0	Long bone	Fragment	-	-	0	-	-	Porous	
			Medium Mammal		4	-	0	Unidentified	Fragment	-	-	0	-	Calcined	-	
			Large Mammal		1	MNE	1	Mandible	Fragment	-	-	0	-	-	DARK STAINING	VERY DARK
			Large Mammal		1	-	0	Vertebra	Fragment	-	-	0	-	-	DARK STAINING	VERY DARK
			Large Mammal		1	MNE	1	Humerus	Distal fragment	-	-	0	-	Presence	-	POSSIBLE CATTLE. VERY DARK
38	fill from F10		Large Mammal		1	-	0	Unidentified	Fragment	-	-	0	-	-	Porous	
30	to F14		Large Mammal		3	-	0	Unidentified	Fragment	-	-	0	-	-	DARK STAINING	VERY DARK

Catalog No	Provenience description	Other field information	Species	Latin Name	TNF	MNU Descriptor	MNU	Skeletal Element	Element Part	Age Indicator	Cut Mark	Illustrated Meat Cut	Gnaw Mark	Heat Exposure Translation	Weathering Translation	Note Field
			Large Mammal		1	-	0	Unidentified	Fragment	-	-	0	Rodent	-	DARK STAINING	VERY DARK
			Sheeps- head	Archosargus probate- cephalus	1	MNE	1	Vertebra	Whole	-	-	0	-	-	DARK STAINING	VERY DARK
39	outside ship on east side below hull		Horse	Equus caballus	6	-	0	Calvar (Skull)	Partial	-	-	0	-	-	-	POSSIBLE POLE AXED
40	FN12-FN13		Unidentifi ed Bird		1	MNE	1	Feather	Whole	-	-	0	-	-	-	UNDER LAYER NOT A FLIGHT FEATHER
41	found beneath the ship after removal		Bay Anchovy	Anchoa mitchilli	75	MNI	1	Articulated Skeleton	Partial	-	-	0	-	-	-	IDENTIFICA- TION BASED ON SCALES. ARTICULATED BODY, LACKING THE SKULL.

Appendix D: Ordnance Analysis by Daniel Sivilich

# **CULTURAL RESOURCE REPORT**

Analysis of Possible Military Artifacts Recovered from Partial Ship Remains Discovered at the Base of the World Trade Center Reconstruction Site New York City, New York

Client: AKRF, INC. Environmental, Planning, and Engineering Consultants 440 Park Ave South, 7th Floor New York, NY 10016



Prepared by: Daniel M. Sivilich

Report Date: January 1, 2011

# **Management Summary**

In July 2010, workers excavating the site of the underground vehicle security center for the future World Trade Center hit a 32' section of the hull of a wooden ship. Archaeologists Molly McDonald and A. Michael Pappalardo, both of AKRF, Inc., the firm hired to monitor construction, were on site at the time of the discovery. They began cleaning mud and silt away from the timbers by hand. The construction appeared to be 18<sup>th</sup> or 19<sup>th</sup> century. Only five days were allowed for the removal of the vessel and any associated artifacts. A number of ordnance or ordnance-related artifacts were recovered. Diane Dallal, Director of Archaeology at ARKF, contacted the author, Dan Sivilich, President and Founder of the Battlefield Restoration and Archaeological Volunteer Organization (BRAVO) for assistance in identifying the artifacts in an effort to more precisely date the ship. The author has over 20 years experience in excavating and identifying Revolutionary War Era military artifacts (Sivilich 1996, Sivilich 2004).

On October 31, 2010, Molly McDonald gave the author 346 artifacts for analysis that were recovered from in and around the vessel. On December 6, 2010 an additional artifact (gun spall) was received in the mail.

251 of the artifacts were lead birdshot. The majority of the birdshot (215 pieces) had diameters of 0.14" - 0.16" and the majority of the musket balls (31 of the 56 found) were 0.52" in diameter. These are not typical sizes for military ordnance (Sivilich 1996, Sivilich 2004). These sizes are more consistent with personal fowling muskets. Most of the birdshot was slightly out-ofround, apple-shaped and had a distinctive dimple. An experiment was conducted to determine how the birdshot was manufactured (Attachment C). The results show that it was produced using the short drop method. This method was used before shot towers were invented. The first shot tower built in the US was constructed in 1808 (Spivak 1990) in Philadelphia. Birdshot and dust shot have been linked to slave ships such as the Whydah that went down off Cape Cod in 1717 (Kinkor 2010). Due to its light weight, the force of impact is minimal and thus not deadly. Therefore it was kept on board to quell potential riots. With a low powder charge, it could cause sufficient pain to stop slaves, but without causing irreparable damage. Alternatively it could have also been on board as an anti-boarding weapon to be used against pirates or other undesirables. Based on the marine biology analysis of the outer planking (which will be covered in the ARKF report), this vessel did spend time in the Caribbean which was known for being infested with pirates. However, it was most likely used for hunting water fowl for food which is what it was specifically designed for.

56 artifacts were lead musket balls. They ranged in size from 0.47" to 0.67" with 31 pieces being at 0.52". This could represent as many as 4 different weapons as shown in Attachment E: Figure 3. The sizes of Weapons 1-3 are not typically military and are either rifled muskets, which are typically American, or small smooth bore fowling pieces (Sivilich 1996, Sivilich 2004). Weapon 4 is only represented by 1 musket ball. It is 0.67" in diameter and is of the size range used with British Brown Bess muskets. 15 of the musket balls were cast out-of-round. Nearly all of the round and out-of-round musket balls had visible mold seams and sprue cuts. This is very characteristic of American musket balls (Sivilich 1996). 3 musket balls were chewed by rats as identified by zoo-archaeologist Henry Miller, Ph.D., Director of Research and Maryland Heritage

Scholar at Historic St. Mary's City, St. Mary's City, Maryland (personal communication email, November 12, 2010).

Only one artifact could be associated specifically with the military. This was a British 52<sup>nd</sup> Regiment of Foot pewter button. This regiment was active during the Revolutionary War from 1775 to 1778. They participated in Lexington and Concord; Bunker Hill; Siege of Boston; Long Island; Pell's Point, White Plains; occupation of Newport, Rhode Island; Fort Washington; Princeton; Brandywine; Fort Montgomery; occupation of Philadelphia; Monmouth Courthouse and the retreat to Sandy Hook and New York (Troiani 2001:58).

One small cannon ball was found. Based on the diameter, it was for a four-pounder cannon (Caruana 1979:14). This size was not typical for the British military (McConnell 1988:92), but was a standard size for the French who supplied the Americans (Stryker 1927).

Four pieces of grape shot were recovered, but only one had sufficient unrusted iron to yield a reliable weight and diameter. It also was the size consistent for a four-pounder cannon (Caruana 1979:18).

Three gun spalls, wedge-shaped gun flints with curved backs (Hume 1991:219-221), were recovered from three different locations on the ship. All three were made from black flint from the chalk regions in and around Dover, England. However, this material was in common use in this country for centuries. "Dover" flints have been found by the author on numerous domestic sites throughout New Jersey and in several other states.

One silver coin was found, but is too encrusted too identify. This coin may yield a date after electrolytic conservation.

Overall, the analysis of all of the lead shot suggest they are most likely of civilian origin. The musket balls are more likely American made. The artillery related artifacts suggest there was possibly a four-pounder cannon on board which was most likely American. The high level of birdshot on board might suggest that the vessel was involved in slave transport at one time, however, this is speculative.

The lack of any weapons such as cannons, muskets, rifles, pistols, swords, etc. strongly indicates that the ship was stripped of any usable materials before it sank. The scatter of the lead ordnance throughout the ship's hold suggests that this material was accidentally or intentionally discarded over time along with other miscellaneous items. The  $52^{nd}$  Regimental button might suggest some usage during the Revolutionary War, but most likely as a merchant vessel or maybe a personnel transport.

Based on the ordnance found, the vessel was no older than the early 19<sup>th</sup> century when it sank. All of the materials indicate the usage of flintlock muskets. No evidence of percussion weapons was found. Discovered in 1805 by Alexander Forsyth, the percussion lock and cap revolutionized firearms. The concept most likely reached the states by the 1820's.

Therefore, based on the dating of the  $52^{nd}$  button and the lack of percussion caps, it is estimated that the vessel sank between 1775 and 1830.

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- B. Tables:
  - Table 1 Detailed Artifact Report Sorted by Artifact Number Table 2 - Semi-Detailed Artifact Report Grouped by Artifact Type Table 3 - Summary Artifact Report Sorted by Artifact Type and Subtype
- C. Experiment: Determining the Manufacturing Method for Small Lead Birdshot
- D. Curriculum Vitae of Dan Sivilich

#### **INTRODUCTION:**

On July 13, 2010 workers excavating the site of the underground Vehicular Security Center for the future World Trade Center hit a row of sturdy, upright wood timbers, regularly spaced, sticking out of the mud. The world was surprised when it was announced that a 32' section of the hull of a wooden ship was being recovered. Archaeologists Molly McDonald and A. Michael Pappalardo, both of AKRF, Inc., the firm hired to monitor construction during the construction process, were on site at the time of the discovery. As reported by the New York newspapers, "They began cleaning mud and silt away from the timbers by hand". Figure 1 shows a laser scan of the site when the assemblage was exposed.

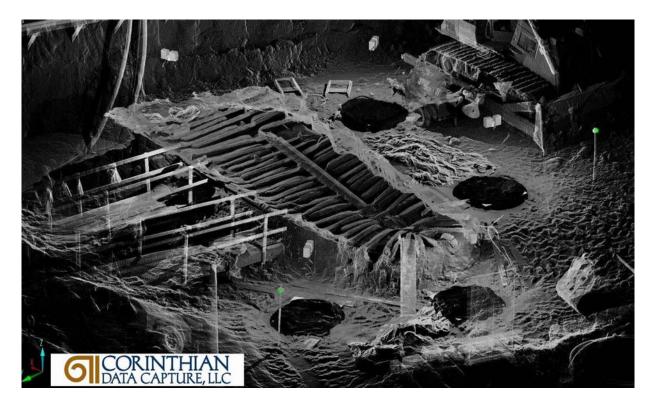


Figure 1 – Laser Scan of Ship Frame In-Situ at the World Trade Center Site. Provided by: Diane Dallal, Director of Archaeology, AKRF, INC., New York, NY 10016

Figure 2 shows a composite of the field sketches of the layers of timbers removed. Only five days were allowed for the removal of the vessel and any artifacts. Most of the small artifacts were recovered by water screening. As such, it was nearly impossible to point-provenience each artifact. A number of ordnance or ordnance related artifacts, such as a cannon ball, musket balls, small lead shot, gun flints, and more were recovered. Diane Dallal of ARKF contacted the author, Dan Sivilich, President and Founder of the Battlefield Restoration and Archaeological Volunteer Organization (BRAVO) for assistance in identifying the artifacts in an effort to more precisely date the ship. The author has over 20 years experience working with Revolutionary War Era military artifacts specializing in musket balls and other lead shot (Sivilich 1996, Sivilich 2004).

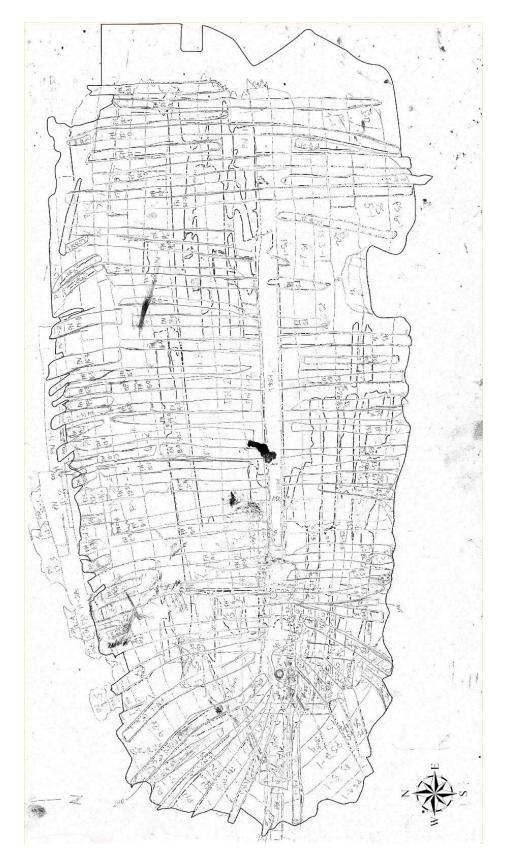


Figure 2 - World Trade Center Ship: Frame and Planking Composite of Field Sketches

#### **METHODOLOGY USED IN ANALYZING THE LEAD SHOT:**

All artifacts were weighed to the nearest 0.1 gram using an Ohaus electronic laboratory balance. Diameters of spherical or circular artifacts were measured using Max-Cal electronic digital calipers. The diameters of any deformed musket balls or lead shot were determined using the Sivilich Formula (Sivilich 1996:104):

## Diameter in inches = 0.223204 x (Weight in grams)<sup>1/3</sup>

Lead shot that had small amounts of concretion still attached were cleaned using mechanical abrasion and/or aqueous ultrasonic cleaning. The diameters of shot that were embedded in concretions were estimated using Max-Cal electronic digital calipers.

#### **ARTIFACT ANALYSIS:**

#### 1. Birdshot:

As shown in Figure 3 and Table 1-3 (see Attachment B), of the 313 pieces of lead shot recovered, 251 were birdshot. Birdshot is defined as having diameters from 0.08" to 0.19" inclusive. The majority of the birdshot (215 pieces) had diameters of 0.14" - 0.16". No birdshot has been recovered by BRAVO at Monmouth Battlefield or any other Revolutionary War site that the author has been involved with. Typical military buckshot is 0.30" - 0.36" in diameter. In 1776, General George Washington issued a general order that the men shall load their muskets with one musket ball and four to eight buckshot for their first volley. However it was a more common practice to use one ball and three buckshot (Peterson 1968). Since most of the Americans cast their own shot, the diameter became more of a function of the sprue hole in which the lead was poured (Refer to Figure 1 of the attached paper on manufacturing lead shot). Several musket balls have been excavated at Monmouth Battlefield having the impression of 3 buckshot impressed into the lead musket ball (Sivilich 2004:5).

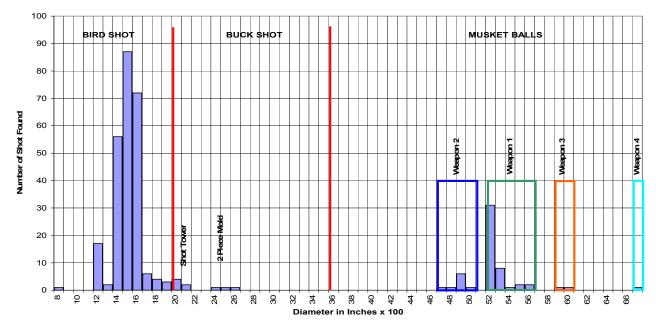


Figure 3 - Lead Shot Sizes Found on the Ship Excavated at the World Trade Center Site

The sizes of the birdshot found on the WTC vessel are more consistent with personal fowling pieces. Based on the small diameters of the musket balls, which will be discussed later, these were either rifled muskets or small caliber smooth bore flintlock muskets.

Most of the birdshot was slightly out-of-round, apple-shaped and had a distinctive dimple. An experiment was conducted to determine how the birdshot was manufactured (Attachment C). The results show that it was produced using the short drop method. As shown in Figure 4 below, the experimental shot had the same dimple and was roughly the same size as the WTC shot. Occasionally a droplet was not hot enough to create a sphere but would form a tear-shaped droplet instead. This was also reproduced in the experiment as shown in Figure 4. This production method was used before shot towers were invented. The first shot tower built in the US was constructed in 1808 (Spivak 1990) in Philadelphia. Birdshot and dust shot have been linked to slave ships, such as the Whydah that went down off Cape Cod in 1717 (Kinkor 2010). Due to its light weight, the knock-down power of birdshot is minimal and not deadly. Therefore it was kept on board to quell potential riots. With a low powder charge, it could cause sufficient pain to stop slaves, but without causing irreparable damage to the "merchandise". . Alternatively it could have also been available as an anti-boarding weapon to be used against pirates or other undesirables. Based on the marine biology analysis of the outer planking (which will be covered in the ARKF report), this vessel did spend time in the Caribbean which was known for being infested with pirates. However, it was most likely used for hunting water fowl for food which is what it was specifically designed for.



*Figure 4 - Experimental shot to the left and WTC shot to the right* 

*Figure 5 - Experimental shot to the left and WTC shot to the right* 

# 2. Buckshot:

Buckshot is defined as having diameters from 0.20" to 0.36" inclusive with military usage being typically 0.30 - 0.36". 8 pieces were found. 5 could be identified as having the distinctive short drop dimple and they had diameters of 0.20" - 0.21". 2 pieces had distinct mold seams and sprue cuts (0.24" and 0.25" in diameter.) The 0.26" diameter was an estimate since the piece is embedded in a concretion and has a slightly irregular shape.

#### 3. Button (F10-14-001):

Only one button was found. It is a British 52<sup>nd</sup> Regiment of Foot button in excellent condition. It is 23.5 mm in diameter and is made of pewter. It is a standard pewter private's button, not an officer's button (Troiani,- personal communication, November 3, 2010). The 52<sup>nd</sup> Regiment, also know as the Oxfordshire Regiment, was very active during the Revolutionary War from 1775 to 1778. They participated in Lexington and Concord; Bunker Hill; Siege of Boston; Long Island; Pell's Point, White Plains; occupation of Newport, Rhode Island; Fort Washington; Princeton; Brandywine; Fort Montgomery; occupation of Philadelphia; Monmouth Courthouse and the retreat to Sandy Hook and New York (Troiani 2001:58). They were last stationed in New York until 1778. Possibly the WTC ship was used to ferry troops from the dock to the British warships and troop transports that were docked in Raritan Bay. However this button does provide the *terminus post quem* date of 1775 for the sinking of the vessel.



Figure 6 - British 52<sup>nd</sup> Regiment of Foot button

Finding only one button is somewhat surprising to the author, since buttons are so easily lost by either the thread breaking or the button loop breaking. These are usually one of the most prolific artifacts found on terrestrial sites.

#### 4. Cannon Ball (USP-001):

One small cannon ball was found. Based on the diameter, it was for a four-pounder cannon (Caruana 1979:14). This size was not typical for the British military (McConnell 1988:92), but was a standard size for the French who supplied the Americans (Stryker 1927). It was attached to wood. Possibly an analysis of the wood can identify if this was just lying on the decking or if it was in a wooden container.

### 5. Clay Marbles (F10-14-011 and -012):

Two earthenware clay marbles made of Kaolin or Ball clay were found together. These gaming pieces are common artifacts found on numerous terrestrial sites. The following was found on the internet in an article titled "Handmade Non-Glass Marbles" at: *http://www.cowtowncollectibles.com/Handmade Non-Glass Marbles.htm*:

"*Clay marbles* are the most common old marble that you will find. These marbles were the easiest to produce and hundreds of thousands, probably millions, still exist. Unfortunately, clay marbles do not have nearly the eye-appeal of any other marbles and therefore are the least collectible of any marble. Clay marbles were made in both Germany and the United States. It has been reported that clay marbles were used as

ballast in the keels of ships that sailed to America from Germany, and were then removed and sold in this country. On the American side, some of the earliest U.S. marble-related patents are for devices that fashion blobs of clay into round spheres, which were then fired to harden them. Clay marbles are usually found in their natural tan color, but they may also be dyed."

# 6. Coal (F10-14-014A-2):

A small piece of anthracite coal, known as pea coal based on its size, was found embedded in a concretion next to a musket ball. This context strongly suggests that the coal was associated with the ship. A small coal stove for cooking and heating was far more efficient than a woodburning stove.



Figure 7 - musket ball (left) and pea coal (right) in concretion

# 7. Coin (WF10S-009-1):

One coin was found in a concretion with 8 birdshot. A slight scraping of the edge suggests that the coin is made of silver. It is too encrusted to identify country of origin, denomination or date. Professional electrolytic conservation may yield this data, which would be useful for dating the time of sinking of the ship.

# 8. Concretions (WF10S-011 to 016):

A number of concretions were recovered, most with either birdshot or musket balls embedded in them. However, artifact numbers WF10S-011 to 016 were wood and rust or simply rusted iron. AKRF questioned the possibility that the iron could be from case or canister shot. Both case and canister shot containers were made from tin not iron. The sources of the wood and iron are not readily identifiable. As with the cannon ball, a qualitative analysis of the wood might identify if it is decking or from an alternate source.

# 9. Concretions (WF10S-017 and WF10S-022):

Two of the concretions were of particular interest because they had rectangular holes piercing them. The holes were impressions of where square nails once resided and have since rusted away. This appears to be the source of much of the rust found on the concretions. A thorough examination of the holes might determine if they were made by wrought nails or machine cut nails.



*Figure 8 - WF10S-017: Concretion with 2 square nail holes* 



Figure 9 - WF10S-022: Concretion with toothpicks showing locations and directions of 3 square nail holes

## 10. Glass (WF10S-017-9 and WF10S-022-3):

Two small sherds of flat, clear glass were found embedded in the concretions with the square nail holes. Due to the diminutive sizes of the sherds, it is difficult to determine if they are window glass or bottle glass.

#### 11. Grape Shot:

Four iron balls were recovered and appear to be grape shot, but only one (AOP-001-1) had sufficient unrusted iron to yield a reliable weight and diameter. It also was the size consistent for a sea service four-pounder cannon (Caruana 1979:18). This is consistent with the cannon ball described above. The diameter of embedded artifact # WF10S-022-1 has a diameter consistent with shot for a sea service 3-pounder. However, it is not known if any iron was lost due to exfoliation. The two remaining pieces were very light weight and may actually be all iron oxide. X-Ray analysis and professional electrolytic conservation may possibly identify their original size and weight.

### 12. Gun Spalls:

Three gun spalls, wedge-shaped gun flints with curved backs (Hume 1991:219-221), were recovered from three different locations on the ship and are shown in Figures 10 - 12.. All three were made from black flint from the chalk regions, in and around Dover, England. However, this material was in common use in this country for centuries. "Dover" flints have been found by the author on numerous domestic sites throughout New Jersey and in several other states. The spall shape suggests that these were for domestic use. British military flints are typically square with a trapezoidal cross section.



*Figure 10 - F10-14-013* 

Figure 11 - ORLOP-027-5

*Figure 12 - WF10S-023* 

# 13. Lead:

F10-14-010 is a small lead hemisphere with partial lip around the flat spot. No mold seam is visible. This does not appear to be a musket ball. WF10S-022-5 is very small triangular piece of sheet lead.

# 14. Lead Sheeting:

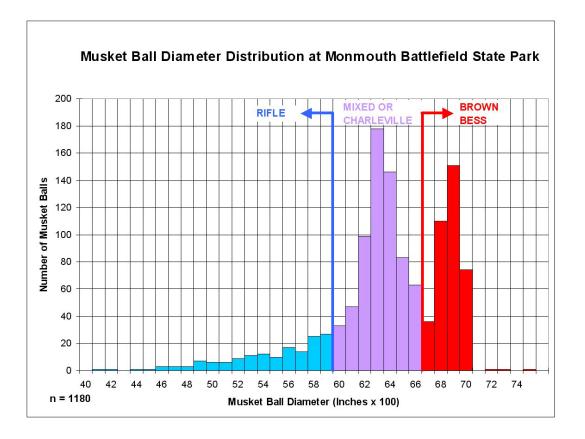
2 pieces of plate or sheet lead were found in different location throughout the ship. ADJ-032 is a possible plate with multiple square nail holes. USP-004 is a piece of bent sheeting with a possible knife hole in it. Due to its malleability, lead sheeting was used for many different purposes.

# 15. Leather:

Several pieces of intact leather were recovered. FS6-FS7-031 appears to be black leather and may have been from a pouch. USP-003 is two small, thin pieces that are shaped like a thumb of a glove or possibly a musket frizzen cover. A frizzen is the steel plate on a musket lock that is struck with the flint to create a spark. It is usually covered with a leather sheath when the musket is not in use, to prevent an accidental firing.

# 16. Musket Balls:

One of the artifacts studied in great detail by the author is the musket ball at the time of the Revolutionary War. Its size can identify the type of weapon that it was made for. Previous research by the author shows that typically, but not exclusively, musket balls having diameters of less than 0.60" in diameter are used by rifles; musket balls with diameters between 0.60" - 0.66" are associated with a variety of smooth bore muskets, such as British fusils and French-supplied Charleville muskets, and lead shot with diameters greater than 0.66" are used by large bore muskets, such as the British Brown Bess which was issued to infantry (Sivilich 2004; Sivilich 2009) as shown in Figure 13. However, small quantities of Brown Bess muskets were also used by American troops. Some were captured weapons and others were early versions supplied as Committee of Safety weapons to the Colonies during the French and Indian War. Fowling (or hunting) muskets were generally small caliber, smooth bore weapons.



*Figure 13 - Analysis of musket balls excavated at Monmouth Battlefield State Park, Freehold/Manalapan, NJ (Sivilich 2009).* 

However, Figure 13 is of data taken primarily from a battlefield environment and the majority of the musket balls are impacted. To specifically identify weapons used by either side, the author evaluated musket balls (primarily dropped) from a campsite occupied strictly by American troops the day before the Battle of Monmouth (Figure 14) and another site that was only occupied by British troops the day after the Battle of Monmouth (Figure 15). This data is useful in associating specific ordnance sizes with a given 18<sup>th</sup>-century army. Unfortunately, none of the charts address weapons used by Hessian Jaegers. The Jaegers carried rifles and were known for their hunting skills (Catts 2004). Three Jaeger rifles are listed in *The History of Weapons of the American Revolution*, by George Neumann. Two are 56 caliber (0.56" diameter) and one is 60 caliber (0.60" diameter). Estimating the typical windage of 0.06", these weapons would probably take musket balls that are 0.50" and 0.54" in diameter, respectively. Windage is the difference between the inside diameter of the gun barrel and the outside diameter of the projectile.

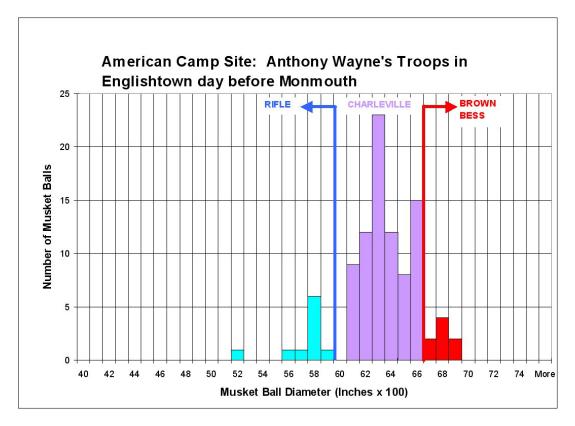


Figure 14- Analysis of musket balls recovered from an American camp site occupied the day before (and possibly the day after) the Battle of Monmouth.

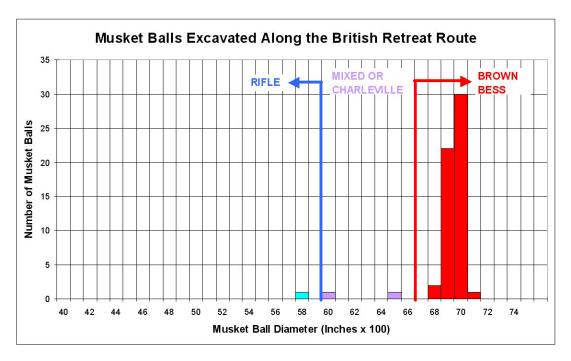


Figure 15 - Analysis of musket balls recovered from a British occupation site the day after the Battle of Monmouth.

Using this data as a baseline, a detailed analysis of 56 musket balls recovered from the WTC ship is presented. They ranged in size from 0.47" to 0.67" with 31 pieces being at 0.52" as shown in Figure 3. This could represent as many as 4 different weapons as also shown in Figure 3. The sizes of Weapons 1-3 are not typically military. They would either be rifled muskets, which would be typically American, or small caliber, smooth bore fowling pieces (Sivilich 1996, Sivilich 2004). Weapon 4 is only represented by 1 musket ball. It is 0.67" in diameter and is of the size range used with British Brown Bess muskets. 15 of the musket balls were cast out-of-round which suggests that they were probably made from a rough mold such as the steatite mold shown in Attachment F: Figure 1 (Sivilich 2010). Military musket balls were typically made in iron gang molds that were held to tight tolerances. Nearly all of the 34 round and 15 out-of-round musket balls had visible mold seams and sprue cuts. This is very characteristic of American musket balls (Sivilich 1996).

3 musket balls were chewed by rats (Figures 16-18) as identified by zoo-archaeologist Henry Miller, Ph.D., Director of Research and Maryland Heritage Scholar at Historic St. Mary's City, St. Mary's City, Maryland (personal communication email, November 12, 2010). The parallel line gouges are too small to be human. Experimental testing by Dr. Miller and the author actually chewing on lead musket balls show totally different patterns for humans (Sivilich 2009:91-93). The small parallel lines match rat incisors as compared to skeletal bite marks made into clay by Dr. Miller. This obviously indicates the presence of rats on board before the ship sank and that the musket balls were probably in a dry environment.



Figure 16 - WF10S-002-22 Figure 17 - WF10S-002-23



Musket ball WF10S-002-35 is a short shot, meaning that insufficient lead was poured into the mold and the result is a hemispherical incomplete musket ball. This may indicate that some of the musket balls were being cast on board.

2 musket balls (F10-14-009 AND WF10S-002-26) were deformed into wedge shapes. This was most likely caused by being crushed by the overburden, such as being between 2 planks.

### 17. Nail:

Artifact AOP-001-3 is a nail fragment that lacks sufficient definition to identify the method of manufacture. This item lacks rust and this may indicate that it was thermally altered.

# 18. Leather Pouch or "Wallet":

Artifact # USP-002 is a black leather pouch or wallet that has 3 stitched compartments, but the stitching is not completed from top to bottom. Its specific use is not known by the author.



Figure 19 - Artifact # USP-002: Pouch or Wallet?

# 19. Unknown:

Artifact # MISC-001 appears to be the tip of a wooden spike that has an iron sheeting overlay. The author's initial reaction was that this was a possible defensive chevaux-de-frise. However, given its location and small diameter, it is most likely the remnant of an iron-tipped piling.



Figure 20 - Ironclad spike, probably a piling

#### 20. Wood:

Artifact # WF10S-022-4 is a small but distinct piece of wood embedded in a concretion.

#### **CONCLUSIONS:**

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The presence of a British 52<sup>nd</sup> Regiment of Foot button provides the terminus post quem date of 1775 for the sinking of the vessel since that is the earliest year this unit was in the area. Based on the ordnance found, all of the materials indicate the usage of flintlock muskets or rifles. No evidence of percussion weapons was found. Percussion caps are very small and easily lost, but none were recovered from the ship. Discovered in 1805 by Alexander Forsyth, the percussion lock and cap revolutionized firearms. The concept most likely reached the states by the 1820's. This indirectly gives a possible terminus ad quem date of approximately 1830.

The size of the cannon ball, grape shot, the type, size and physical characteristics of the musket balls recovered, the types of gun spalls found, the type of manufacture of the birdshot recovered all suggest that the vessel was American and most likely civilian. There is a slight possibility that based on the birdshot, it may have been used for slave transportation.

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WTC-Aop-001-2.jpg



WTC-Aop-001-3.jpg



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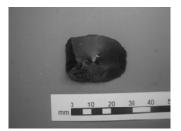
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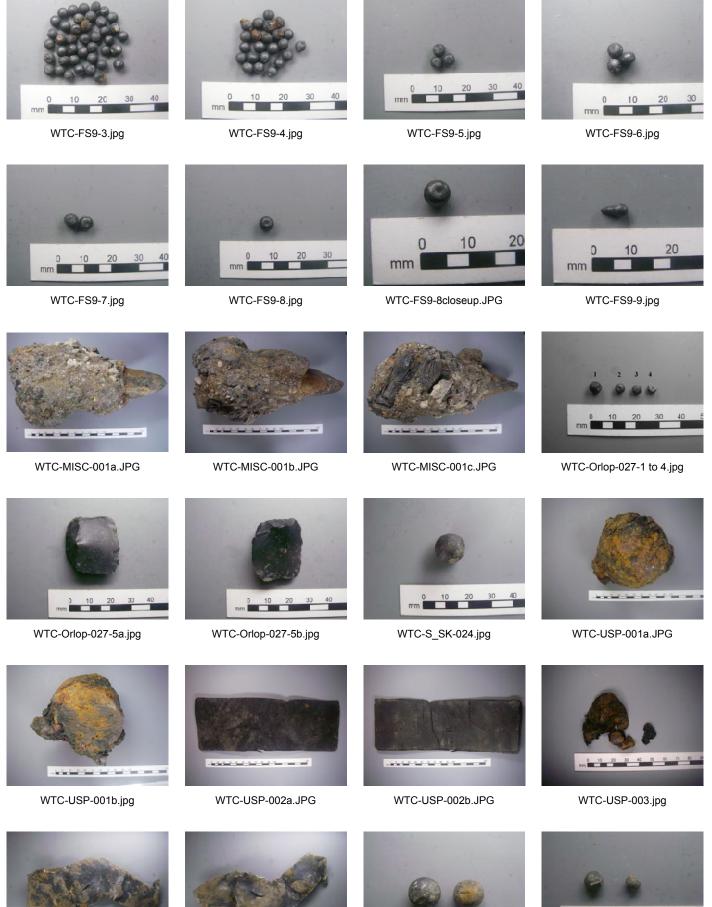


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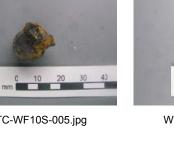


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									Calculated						
Artifact No	Provenience	Туре	Subtype	Composition	Qty	Weight	Wt L	Jnits Diameter	Diameter D	ia Units Prob Caliber	Length W	lidth	L/W Units	Flotation	Date Found Remarks
															LARGE PIECE OF LEAD SHEETING WITH SEVERAL SQUARE NAIL HOLES, ORIGINALLY
ADJ-032	Within or adjacent to ship	LEAD SHEETING		LEAD		1 861.0	00 GM								7/14/2010 RECTANGULAR
AD3-032	Within or adjacent to ship	LEAD SHEETING				1 001.0									IRON GRAPE SHOT - 5.61 oz (WT INCLUDES
															SMALL TRIANGULAR CONCRETION). FOR SEA
AOP-001-1	Above Outer Planks	GRAPE SHOT	6 OZ	IRON		1 159	9.0 GM	1.371	11	N	0.00	0.00	C	)	7/28/2010 SERVICE 4 POUNDER
															IRON GRAPE SHOT - POOR QUALITY IRON,
000 004 0	Altaria Outra Dianta		4.07	IDON		4 50		1.00							WEIGHS 2.06 oz BUT DIAMETER IS THAT OF 4
AOP-001-2	Above Outer Planks	GRAPE SHOT	4 OZ	IRON		1 58	3.4 GM	1.22	11	N					7/28/2010 oz. FOR SEA SERVICE 3 POUNDER SQUARE IRON NAIL FRAGMENT, TIP IS
AOP-001-3	Above Outer Planks	NAIL		IRON		1 (	).9 GM		1	J	1.00		IN		7/28/2010 CURLED BACK.
		10.02													MUSKET BALL - OUT OF ROUND WITH FLAT
AOP-002	Above Outer Planks	MUSKET BALL	OUT OF ROUND	LEAD		1 13	3.0 GM		0.5248 I	N 52	2				7/28/2010 SPOT, POSSIBLY IMPACTED.
															BIRD SHOT SHAPED LIKE A TEAR DROP -
CS2_5-030	TAR	BIRD SHOT		LEAD		1 (	).3 GM	0.152	11	N 15	5			12	
															BRITISH 52nd REGIMENT OF FOOT BUTTON, SLIGHTLY BENT, NO LOOP, EXCELLENT
F10-14-001	Fill from F-10 to F-14	BUTTON		PEWTER		1 4	.9 GM	23.5	N	IM					7/28/2010 CONDITION. STD ISSUE FOR PRIVATES.
1 10 11 001		Borron						20.0							MUSKET BALL - ROUND, SPRUE CUT AND
F10-14-002	Fill from F-10 to F-14	MUSKET BALL	ROUND	LEAD		1 16	6.8 GM	0.563	1	N 56	6				7/28/2010 PARTIAL MOLD SEAM VISIBLE
															MUSKET BALL - ROUND, SLIGHT SPRUE CUT
F10-14-003	Fill from F-10 to F-14	MUSKET BALL	ROUND	LEAD			3.3 GM	0.522			2				7/28/2010 AND PARTIAL MOLD SEAM VISIBLE
F10-14-004	Fill from F-10 to F-14	MUSKET BALL	ROUND	LEAD		1 13	3.2 GM	0.520	11	N 52	2				7/28/2010 MUSKET BALL - ROUND, SPRUE CUT VISIBLE
F10-14-005	Fill from F-10 to F-14	MUSKET BALL	ROUND	LEAD		1 13	3.1 GM	0.520	1	N 52					MUSKET BALL - ROUND, SPRUE CUT AND 7/28/2010 PARTIAL MOLD SEAM VISIBLE
F 10-14-005		MUSKET BALL	ROUND	LEAD		1 13	S. T. GIVI	0.520	11	N 52					MUSKET BALL - ROUND, SPRUE CUT AND
F10-14-006	Fill from F-10 to F-14	MUSKET BALL	ROUND	LEAD		1 13	3.0 GM	0.517	1	N 52	2				7/28/2010 PARTIAL MOLD SEAM VISIBLE
															MUSKET BALL - ROUND, SLIGHT SPRUE CUT
F10-14-007	Fill from F-10 to F-14	MUSKET BALL	ROUND	LEAD		1 11	.3 GM	0.492	1	N 49	9				7/28/2010 AND PARTIAL MOLD SEAM VISIBLE
															MUSKET BALL - ROUND, STRONG SPRUE CUT
F10-14-008	Fill from F-10 to F-14	MUSKET BALL	ROUND	LEAD		1 10	).4 GM	0.477	11	N 48	3				7/28/2010 AND PARTIAL MOLD SEAM VISIBLE
															MUSKET BALL - SLIGHTLY WEDGE SHAPED, SPRUE CUT AND MOLD SEAM VISIBLE -
F10-14-009	Fill from F-10 to F-14	MUSKET BALL	WEDGE	LEAD		1 12	2.8 GM		0.522	N 52	2				7/28/2010 PROBABLY CRUSHED
															SMALL LEAD HEMISPHERE WITH PARTIAL LIP
															AROUND FLAT SPOT - NO MOLD SEAM
F10-14-010	Fill from F-10 to F-14	LEAD		LEAD			5.6 GM	0.445							7/28/2010 VISIBLE. PROBABLY NOT A MUSKET BALL
F10-14-011	Fill from F-10 to F-14	CLAY MARBLE		BALL/KAOLIN CLAY			3.6 GM	0.544							7/28/2010 KAOLIN OR BALL CLAY MARBLE
F10-14-012	Fill from F-10 to F-14	CLAY MARBLE		BALL/KAOLIN CLAY		1 3	8.0 GM	0.518	11	N					7/28/2010 KAOLIN OR BALL CLAY MARBLE GUN SPALL - BLACK FLINT WITH GREY
															INCLUSIONS: FROM WHITE CLIFFS OF DOVER
															ENGLAND. WORN WITH MULTIPLE REWORKS,
F10-14-013	Fill from F-10 to F-14	GUN SPALL		DOVER FLINT		1 8	3.0 GM								7/28/2010 PROBABLY DISCARDED.
							_								CONCRETION WITH MUSKET BALL AND SMALL
F10-14-014A	Fill from F-10 to F-14	CONCRETION	DOUND	CONCRETION		17	'.7 GM	0.540		N 54					7/28/2010 PIECE OF ANTHRACITE COAL
F10-14-014A-1	Fill from F-10 to F-14 Fill from F-10 to F-14	MUSKET BALL COAL	ROUND	LEAD ANTHRACITE		1		0.540	11	N 54	+				7/28/2010 ENCRUSTED MUSKET BALL - ROUND 7/28/2010 SMALL FRAGMENT OF ANTHRACITE COAL
F 10-14-014A-2		COAL		ANTIKACITE		1									CONCRETION WITH 7 PIECES OF "BIRD" SHOT
F10-14-014B	Fill from F-10 to F-14	CONCRETION		CONCRETION		8	3.2 GM								7/28/2010 VISIBLE.
F10-14-014B-1		BIRD SHOT		LEAD		1		0.168	1						7/28/2010 BIRD SHOT IN CONCRETION
F10-14-014B-2	Fill from F-10 to F-14	BIRD SHOT		LEAD		1		0.154	11	N 16	6				7/28/2010 BIRD SHOT IN CONCRETION
	Fill from F-10 to F-14	BIRD SHOT		LEAD		1		0.144			1				7/28/2010 BIRD SHOT IN CONCRETION
	Fill from F-10 to F-14	BIRD SHOT		LEAD		1		0.142							7/28/2010 BIRD SHOT IN CONCRETION
	Fill from F-10 to F-14 Fill from F-10 to F-14	BIRD SHOT BIRD SHOT		LEAD LEAD		1		0.132							7/28/2010 BIRD SHOT IN CONCRETION 7/28/2010 BIRD SHOT IN CONCRETION
	Fill from F-10 to F-14	BIRD SHOT		LEAD		1		0.120			3				7/28/2010 BIRD SHOT IN CONCRETION
						· ·		0.000							BUCK SHOT IN CONCRETION WITH SPRUE
F10-14-015	Fill from F-10 to F-14	BUCK SHOT		LEAD		1 1	.4 GM	0.246	1	N 25	5				7/28/2010 CUT VISIBLE
															MUSKET BALL - HEMISPHERICAL DUE TO
								0.510							POOR CASTING, INSUFFICIENT LEAD TO FILL
FN10-FN11-02	Between FN10 and FN11	MUSKET BALL	HEMISPHERE	LEAD		1 11	.8 GM	0.519	11	N 52	2				7/27/2010 THE MOLD, FAINT MOLD SEAM

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10	Die I - Altilació II			nter Ship (Groupe	u by Artilact	π)							Page 2
EN12-EN13-025	Between FN12 and FN13	MUSKET BALL	ROUND	LEAD	1	12.8	GM	0.517		N	52	7/27/2010	MUSKET BALL - ROUND, SPRUE CUT AND PARTIAL MOLD SEAM VISIBLE
			ROOND				-						BIRD SHOT SHAPED LIKE A TEAR DROP -
FN5-FN6-029	Between FN5 and FN6	BIRD SHOT		LEAD	1	0.3	GM	0.144		N	14	4 7/26/2010	MADE BY DROP TOWER. BIRD SHOT SHAPED LIKE A TEAR DROP -
FN7-FN8-028	Between FN10 and FN11	BIRD SHOT		LEAD	1	0.4	GM	0.164		N	16	10 7/28/2010	MADE BY DROP TOWER.
FS6-FS7-031	Between frames FS6 AND FS7	LEATHER		LEATHER	1	30.4	GM					7/27/2010	LARGE PIECE OF BLACK LEATHER
							-						BIRD SHOT, NOT TRUE ROUND, SMALL
FS9-1	FLOAT SAMPLE 9	BIRD SHOT		LEAD	14	2.3	GM		0.122	N	12	9 7/26/2010	DIMPLE, MADE FROM SHOT TOWER
FS9-2	FLOAT SAMPLE 9	BIRD SHOT		LEAD	31	7.7	GM		0.140	N	14	9 7/26/2010	BIRD SHOT, NOT TRUE ROUND, SMALL DIMPLE, MADE FROM SHOT TOWER
													BIRD SHOT, NOT TRUE ROUND, SMALL
FS9-3	FLOAT SAMPLE 9	BIRD SHOT		LEAD	41	13.3	GM		0.153	N	15	9 7/26/2010	DIMPLE, MADE FROM SHOT TOWER BIRD SHOT, NOT TRUE ROUND, SMALL
FS9-4	FLOAT SAMPLE 9	BIRD SHOT		LEAD	23	8.7	GM		0.161	N	16	9 7/26/2010	DIMPLE, MADE FROM SHOT TOWER
													BIRD SHOT, NOT TRUE ROUND, SMALL DIMPLE, MADE FROM SHOT TOWER.
FS9-5	FLOAT SAMPLE 9	BIRD SHOT		LEAD	3	1.4	GM		0.173	N	17	9 7/26/2010	MEASURE DIA: 0.171", 0.174", 0.180"
													BIRD SHOT, NOT TRUE ROUND, SMALL
500.0				1515		~ ~			0.400		10		DIMPLE, MADE FROM SHOT TOWER.
FS9-6	FLOAT SAMPLE 9	BIRD SHOT		LEAD	3	2.0	GM		0.190	N	19	9 7/26/2010	MEASURE DIA: 0.193", 0.194", 0.196" BUCK SHOT, NOT TRUE ROUND, SMALL
													DIMPLE, MADE FROM SHOT TOWER.
FS9-7	FLOAT SAMPLE 9	BUCK SHOT		LEAD	2	1.4	GM		0.198	N	20	9 7/26/2010	MEASURE DIA: 0.197", 0.200"
500.0		DUOK OLIOT		1515				0.007	0.007		04		BUCK SHOT, NOT TRUE ROUND, SMALL
FS9-8	FLOAT SAMPLE 9	BUCK SHOT		LEAD	1	0.8	GM	0.207	0.207	N	21	9 7/26/2010	DIMPLE, MADE FROM SHOT TOWER BIRD SHOT SHAPED LIKE A TEAR DROP -
FS9-9	FLOAT SAMPLE 9	BIRD SHOT		LEAD	1	0.3	GM		0.149	N		9 7/26/2010	MADE BY DROP TOWER.
	About 25' below ground												
	surface: about 4' south of vessel, midway from top to												VERY ENCRUSTED WOOD SPIKE WITH IRON SHEETING OVERLAY. POSSIBLE CHEVAUX-DE
MISC-001	bottom of vessel	UNKNOWN		IRON/WOOD	1 7	88.900	GM					7/22/2010	FRISE, OR SIMPLY AN IRON-TIPPED PILING.
ORLOP-027-1	Beneath Orlop Deck	BIRD SHOT		LEAD	1		GM	0.196		N	20		BIRD SHOT - FLAT SPOT
							-						BUCK SHOT, NOT TRUE ROUND, SMALL
ORLOP-027-2	Beneath Orlop Deck	BIRD SHOT		LEAD	1	0.4	GM	0.163		N	16	1 7/26/2010	DIMPLE, MADE FROM SHOT TOWER BUCK SHOT, NOT TRUE ROUND, SMALL
ORLOP-027-3	Beneath Orlop Deck	BIRD SHOT		LEAD	1	03	GM	0.153		N	15	1 7/26/2010	DIMPLE, MADE FROM SHOT TOWER
ORLOP-027-4	Beneath Orlop Deck	BIRD SHOT		LEAD	1		GM	0.138		N	14		BIRD SHOT - IRREGULAR SHAPE
							-						BLACK FLINT GUN SPALL, UTILIZED, FLINT IS
ORLOP-027-5	Beneath Orlop Deck	GUN SPALL		DOVER FLINT	1	8.3	GM				1.10	1.00 IN 7/26/2010	FROM DOVER, ENGLAND
S SK-024	Between Stern and Stern Knee	MUSKET BALL	ROUND	LEAD	1	10.6	GM	0.487		N	49	7/27/2010	MUSKET BALL - ROUND, SPRUE CUT AND PARTIAL MOLD SEAM VISIBLE
						10.0		0.107					
													4 POUNDER BASED ON DIAMETER, HAS SOME
USP-001	Under Stern Piece	CANNON BALL		IRON	1	3.720	LB	3.05		N		//28/2010	ENCRUSTATION AND WOOD ATTACHED LEATHER "WALLET" OR POUCH, DIVIDED INTO
													3 COMPARTMENTS VIA STITCHING (1/2 WAY
USP-002	Under Stern Piece	POUCH		LEATHER	1	26.9	GM				8.70	3.00 in 7/28/2010	FROM TOP TO BOTTOM
													2 FRAGMENTS OF LEATHER FROM A
													POSSIBLE MUSKET FRIZZEN COVER OR A FRAGMENT OF A FINGER FROM A LEATHER
USP-003	Under Stern Piece	LEATHER		LEATHER	2	10	GM					7/28/2010	
							0						BENT LEAD SHEETING WITH SMALL SLIT,
USP-004	Under Stern Piece	LEAD SHEETING		LEAD	1	132.4	GM					7/28/2010	POSSIBLY FROM A KNIFE
USP-005-1	Under Stern Piece	MUSKET BALL	ROUND	LEAD	1	13.3	GM	0.560		N	56	7/28/2010	MUSKET BALL - ROUND, SPRUE CUT AND PARTIAL MOLD SEAM VISIBLE
001-000-1		MOSILIBALL	ROOND			10.0	Civi	0.500			50	1120/2010	MUSKET BALL - ROUND, SPRUE CUT AND
													PARTIAL MOLD SEAM VISIBLE. SMALL IRON
	Under Oterre Di		DOUND					0.105					SPOT, TESTED FOR WIRE INCLUSION, NON
USP-005-2	Under Stern Piece	MUSKET BALL	ROUND	LEAD		11.1	GIVI	0.495		N	50	//28/2010	PRESENT. ONLY RUST SPOT. BUCK SHOT - ROUND WITH VISIBLE SPRUE
USP-006-1	Under Stern Piece	BUCK SHOT		LEAD	1	1.3	GM	0.243		N	24	7/28/2010	
									1		·		•

				<u> </u>					BIRD SHOT - SLIGHTLY OUT OF ROUND, OVAL
USP-006-2	Under Stern Piece	BIRD SHOT		LEAD	1 0.7 GM	0.180	IN	18	7/28/2010 XSECTION GRAPE SHOT? - DIAMETER FOR 5 1/4 LBER,
	Between Area West of								BUT WEIGHT (2.44 oz) IS LOW - SHOULD BE 7oz FOR THIS DIAMETER. POSSIBLY
WF10S-001	Frame 10 and Stern	GRAPE SHOT	7 OZ	IRON OXIDE	1 69.3 GM	1.450	IN		7/26/2010 COMPLETELY OXIDIXED
WF10S-002-1	Between Area West of Frame 10 and Stern	MUSKET BALL	OUT OF ROUND	LEAD	1 26.6 GM		0.666 IN	67	MUSKET BALL - CAST OUT OF ROUND, SPRUE 7/26/2010 CUT VISIBLE
WF10S-002-10	Between Area West of Frame 10 and Stern	MUSKET BALL	ROUND	LEAD	1 13.4 GM	0.521	IN	52	7/26/2010 MUSKET BALL - ROUND, SPRUE CUT VISIBLE
WF10S-002-11	Between Area West of Frame 10 and Stern	MUSKET BALL	OUT OF ROUND	LEAD	1 13.1 GM	0.520	IN	52	MUSKET BALL - OUT OF ROUND, SPRUE CUT 7/26/2010 AND MOLD SEAM VISILE
WF10S-002-12	Between Area West of Frame 10 and Stern	MUSKET BALL	ROUND	LEAD	1 13.4 GM	0.522	IN	52	MUSKET BALL - ROUND, SPRUE CUT AND 7/26/2010 MOLD SEAM VISIBLE
WF10S-002-13	Between Area West of Frame 10 and Stern	MUSKET BALL	ROUND	LEAD	1 13.0 GM	0.517	IN	52	MUSKET BALL - ROUND, SPRUE CUT AND MOLD SEAM VISIBLE, SLIGHT MOLD FLASHING 7/26/2010 OPPOSITE SPRUE
WF10S-002-14	Between Area West of Frame 10 and Stern	MUSKET BALL	OUT OF ROUND	LEAD	1 13.2 GM	0.520	IN	52	MUSKET BALL - OUT OF ROUND, WITH SPRUE 7/26/2010 CUT
WF10S-002-15	Between Area West of Frame 10 and Stern	MUSKET BALL	OUT OF ROUND	LEAD	1 13.0 GM	0.517	IN	52	MUSKET BALL - OUT OF ROUND, FAINT SPRUE 7/26/2010 CUT
WF10S-002-16	Between Area West of Frame 10 and Stern	MUSKET BALL	OUT OF ROUND	LEAD	1 13.3 GM	0.520	IN	52	MUSKET BALL - SLIGHTLY OUT OF ROUND, 7/26/2010 FAINT SPRUE CUT
WF10S-002-17	Between Area West of Frame 10 and Stern Between Area West of	MUSKET BALL	OUT OF ROUND	LEAD	1 13.2 GM	0.520	IN	52	7/26/2010 MUSKET BALL - ROUND, FAINT SPRUE CUT MUSKET BALL - SLIGHTLY OUT OF ROUND.
WF10S-002-18	Frame 10 and Stern Between Area West of	MUSKET BALL	OUT OF ROUND	LEAD	1 13.5 GM	0.523	IN	52	7/26/2010 STRONG SPRUE CUT, PARTIAL MOLD SEAM MUSKET BALL - SLIGHTLY OUT OF ROUND,
WF10S-002-19	Frame 10 and Stern Between Area West of	MUSKET BALL	OUT OF ROUND	LEAD	1 13.2 GM	0.520	IN	52	7/26/2010 SPRUE CUT VISIBLE MUSKET BALL - ROUND, SPRUE CUT AND
WF10S-002-2	Frame 10 and Stern Between Area West of	MUSKET BALL	ROUND	LEAD	1 18.7 GM	0.592	IN	59	7/26/2010 PARTIAL MOLD SEAM VISIBLE
WF10S-002-20	Frame 10 and Stern Between Area West of	MUSKET BALL	ROUND	LEAD	1 10.4 GM	0.486	IN	47	7/26/2010 MUSKET BALL - ROUND MUSKET BALL - ROUND, FAINT SPRUE CUT
WF10S-002-21	Frame 10 and Stern	MUSKET BALL	ROUND	LEAD	1 10.7 GM	0.491	IN	49	7/26/2010 AND MOLD SEAM
WF10S-002-22	Between Area West of Frame 10 and Stern	MUSKET BALL	ANIMAL CHEWED	LEAD	1 12.9 GM	0.519	IN	52	MUSKET BALL - OUT OF ROUND MOLD, SPRUE CUT AND MOLD SEAM VISIBLE - CHEWED B A 7/26/2010 RODENT (PROBABLY A RAT) OR A FISH MUSKET BALL - ROUND, FAINT SPRUE CUT
WF10S-002-23	Between Area West of Frame 10 and Stern	MUSKET BALL	ANIMAL CHEWED	LEAD	1 11.2 GM	0.493	IN	49	AND PARTIAL MOLD SEAM. SMALL TEETH 7/26/2010 MARKINGS FROM A RAT OR FISH
WF10S-002-24	Between Area West of Frame 10 and Stern	MUSKET BALL	ANIMAL CHEWED	LEAD	1 10.7 GM	0.490	IN	49	MUSKET BALL - ROUND WITH FLAT SPOT - 7/26/2010 APPEARS CHEWED BY RODENT OR A FISH
WF10S-002-25	Between Area West of Frame 10 and Stern	MUSKET BALL	OUT OF ROUND	LEAD	1 14.8 GM	0.550	IN	55	MUSKET BALL - SLIGHTLY OUT OF ROUND, PARTIAL MOLD SEAM, VERY DEEP SPRUE 7/26/2010 CUT
WF10S-002-26	Between Area West of Frame 10 and Stern	MUSKET BALL	WEDGE	LEAD	1 12.9 GM	0.523	0.523 IN	52	MUSKET BALL - WEDGE SHAPED, SPRUE CUT 7/26/2010 AND MOLD SEAM, POSSIBLY CRUSHED MUSKET BALL - ROUND, VERY ENCRUSTED,
WF10S-002-27	Between Area West of Frame 10 and Stern	MUSKET BALL	ROUND	LEAD	1 13.5 GM	0.531	IN	53	CONCRETION REMOVED BY MECHANICAL 7/26/2010 ABRASION. MUSKET BALL - SLIGHTLY OUT OF ROUND.
WF10S-002-28	Between Area West of Frame 10 and Stern	MUSKET BALL	OUT OF ROUND	LEAD	1 13.1 GM	0.525	IN	53	VERY ENCRUSTED, CONCRETION REMOVED 7/26/2010 BY MECHANICAL ABRASION.
WF10S-002-29	Between Area West of Frame 10 and Stern	MUSKET BALL	OUT OF ROUND	LEAD	1 13.4 GM	0.527	IN	53	MUSKET BALL - SLIGHTLY OUT OF ROUND, VERY ENCRUSTED, CONCRETION REMOVED 7/26/2010 BY MECHANICAL ABRASION.
WF10S-002-3	Between Area West of Frame 10 and Stern	MUSKET BALL	ROUND	LEAD	1 13.4 GM	0.524	IN	52	MUSKET BALL - ROUND, PARTIAL MOLD SEAM 7/26/2010 VISIBLE, SLIGHTLY ENCRUSTED
WF10S-002-30	Between Area West of Frame 10 and Stern	MUSKET BALL	ROUND	LEAD	1 13.4 GM	0.527	IN	53	MUSKET BALL - ROUND, VERY ENCRUSTED, CONCRETION REMOVED BY MECHANICAL 7/26/2010 ABRASION.

10						1	- I	1	1 1		
											MUSKET BALL - SLIGHTLY OUT OF ROUND,
											VERY ENCRUSTED, CONCRETION REMOVED
	Between Area West of										BY MECHANICAL ABRASION.CPARTIAL MOLD
WF10S-002-31	Frame 10 and Stern	MUSKET BALL	OUT OF ROUND	LEAD	1 13.	4 GM	0.527	IN	53	7/26/2010	SEAM VISIBLE.
											MUSKET BALL - SLIGHTLY OUT OF
											ROUND, SPRUE CUT VISIBLE , CONCRETION
	Between Area West of										REMOVED BY MECHANICAL
WF10S-002-32	Frame 10 and Stern	MUSKET BALL	OUT OF ROUND	LEAD	1 13.	3 GM	0.526	IN	53	7/26/2010	ABRASION.CPARTIAL MOLD SEAM VISIBLE.
											MUSKET BALL - SLIGHTLY OUT OF
											ROUND, STRONG SPRUE CUT VISIBLE ,
	Between Area West of										CONCRETION REMOVED BY MECHANICAL
WF10S-002-33	Frame 10 and Stern	MUSKET BALL	OUT OF ROUND	LEAD	1 13.	2 GM	0.522	IN	52	7/26/2010	ABRASION.CPARTIAL MOLD SEAM VISIBLE.
											MUSKET BALL - ROUND, VERY ENCRUSTED,
	Between Area West of										CONCRETION REMOVED BY MECHANICAL
WF10S-002-34	Frame 10 and Stern	MUSKET BALL	ROUND	LEAD	1 10.	2 GM	0.489	IN	49	7/26/2010	ABRASION.
											MUSKET BALL - MOLDED SHORT,
											HEMISPHERICAL, MOLD SEAM PARTIALLY
	Between Area West of										VISIBLE, CONCRETION REMOVED BY
WE10S-002-35	Frame 10 and Stern	MUSKET BALL	SHORT SHOT	LEAD	1 13	6 GM	0.600	IN	60	7/26/2010	MECHANICAL ABRASION.
11100-002-00		MOORET DALL			1 10.		0.000		00	1120/2010	MUSKET BALL - ROUND, SPRUE CUT AND
	Between Area West of										PARTIAL MOLD SEAM VISIBLE - SLIGHT
WF10S-002-4	Frame 10 and Stern	MUSKET BALL	ROUND	LEAD	1 15	6 GM	0.552	IN	55	7/26/2010	ENCRUSTATION, SLIGHTLY OUT OF ROUND
WF105-002-4		MUSKETBALL	ROUND	LEAD	1 15.	GIVI	0.552	IIN	55	//20/2010	ENCRUSTATION, SLIGHTLY OUT OF ROUND
	Between Area West of				1 10		0.500	INI	53	7/26/2010	
WF10S-002-5	Frame 10 and Stern	MUSKET BALL	ROUND	LEAD	1 13.	4 GM	0.529	IN	53	7/26/2010	MUSKET BALL - ROUND, LIGHTLY ENCRUSTED
	Between Area West of		DOLINID				0.504		50	7/00/0010	
WF10S-002-6	Frame 10 and Stern	MUSKET BALL	ROUND	LEAD	1 13.	3 GM	0.524	IN	52	7/26/2010	MUSKET BALL - ROUND, SPRUE CUT VISIBLE
	Between Area West of										
WF10S-002-7	Frame 10 and Stern	MUSKET BALL	ROUND	LEAD	1 13.	0 GM	0.521	IN	52	7/26/2010	MUSKET BALL - ROUND, FAINT SPRUE CUT
	Between Area West of										MUSKET BALL - ROUND, SPRUE CUT AND
WF10S-002-8	Frame 10 and Stern	MUSKET BALL	ROUND	LEAD	1 13.	1 GM	0.522	IN	52	7/26/2010	PARTIAL MOLD SEAM VISIBLE
	Between Area West of										MUSKET BALL - ROUND, FAINT MOLD SEAM
WF10S-002-9	Frame 10 and Stern	MUSKET BALL	ROUND	LEAD	1 13.	3 GM	0.525	IN	53	7/26/2010	AND SPRUE CUT
	Between Area West of										MUSKET BALL AND BIRD SHOT IN
WF10S-003	Frame 10 and Stern	CONCRETION		CONCRETION	14.	0 GM				7/26/2010	CONCRETION
	Between Area West of										
WF10S-003-1	Frame 10 and Stern	MUSKET BALL	ROUND	LEAD	1		0.519	IN	52	7/26/2010	MUSKET BALL - ROUND
	Between Area West of										
WF10S-003-2	Frame 10 and Stern	BIRD SHOT		LEAD	1		0.150	IN	15	7/26/2010	BIRD SHOT - DIA IS BEST ESTIMATE
	Between Area West of										MUSKET BALL AND BIRD SHOT IN
WF10S-004	Frame 10 and Stern	CONCRETION		CONCRETION	13.	6 GM				7/26/2010	CONCRETION
	Between Area West of										
WF10S-004-1	Frame 10 and Stern	MUSKET BALL	ROUND	LEAD	1		0.522	IN	52	7/26/2010	MUSKET BALL - ROUND
	Between Area West of										
WF10S-004-2	Frame 10 and Stern	BIRD SHOT		LEAD	1		0.140	IN	14	7/26/2010	BIRD SHOT - DIA IS BEST ESTIMATE
	Between Area West of										MUSKET BALL AND BIRD SHOT IN
WF10S-005	Frame 10 and Stern	CONCRETION		CONCRETION	14.	1 GM				7/26/2010	CONCRETION
	Between Area West of										
WF10S-005-1	Frame 10 and Stern	MUSKET BALL	ROUND	LEAD	1		0.517	IN	52	7/26/2010	MUSKET BALL - ROUND
	Between Area West of						0.011				
WF10S-005-2	Frame 10 and Stern	BIRD SHOT		LEAD	1		0.136	IN	14	7/26/2010	BIRD SHOT - DIA IS BEST ESTIMATE
11100 000 2	Between Area West of	DIRE ONOT			-		0.100		14	1120/2010	MUSKET BALL AND BIRD SHOT IN
WF10S-006	Frame 10 and Stern	CONCRETION		CONCRETION	12	6 GM				7/26/2010	CONCRETION
WF 103-000	Between Area West of	CONCRETION		CONCRETION	13.					1120/2010	CONCILETION
WE108 006 1					1		0.520	IN	52	7/26/2010	
WF10S-006-1	Frame 10 and Stern Between Area West of	MUSKET BALL	ROUND	LEAD	1		0.520	IN	52	//26/2010	MUSKET BALL - ROUND
WF10S-006-2	Frame 10 and Stern			LEAD	1		0.460	INI	16	7/00/0040	
VVF 103-000-2		BIRD SHOT			1	-	0.160	IN	10	//26/2010	BIRD SHOT - DIA IS BEST ESTIMATE MUSKET BALL AND BIRD SHOT IN
1	Between Area West of	CONCRETION		CONCRETION	4-					7/00/0010	
	Frame 10 and Stern	CONCRETION		CONCRETION	15.	2 GM	_			7/26/2010	CONCRETION
WF10S-007						1					
	Between Area West of		DOLINE	1 540							
WF10S-007 WF10S-007-1	Between Area West of Frame 10 and Stern	MUSKET BALL	ROUND	LEAD	1		0.518	IN	52	7/26/2010	MUSKET BALL - ROUND
WF10S-007-1	Between Area West of Frame 10 and Stern Between Area West of		ROUND		1						
	Between Area West of Frame 10 and Stern Between Area West of Frame 10 and Stern	MUSKET BALL BIRD SHOT	ROUND	LEAD	1		0.518	IN IN	15		BIRD SHOT - DIA IS BEST ESTIMATE
WF10S-007-1	Between Area West of Frame 10 and Stern Between Area West of		ROUND		1					7/26/2010	

14				/		1					
WF10S-007-4	Between Area West of Frame 10 and Stern	BIRD SHOT	LEAD	1			0.154		IN	15	7/26/2010 BIRD SHOT - DIA IS BEST ESTIMATE
VVF 103-007-4	Between Area West of	BIRD SHOT	LEAD	1			0.154		IIN	15	MUSKET BALL AND BIRD SHOT IN
WF10S-008	Frame 10 and Stern	CONCRETION	CONCRETION		15.6						7/26/2010 CONCRETION
	Between Area West of										
WF10S-008-1	Frame 10 and Stern	MUSKET BALL ROUND	LEAD	1			0.524		IN	52	7/26/2010 MUSKET BALL - ROUND
	Between Area West of										
WF10S-008-2	Frame 10 and Stern	BIRD SHOT	LEAD	1			0.148		IN	15	7/26/2010 BIRD SHOT - DIA IS BEST ESTIMATE
	Between Area West of										
WF10S-008-3	Frame 10 and Stern	BIRD SHOT	LEAD	1			0.140		IN	15	7/26/2010 BIRD SHOT - DIA IS BEST ESTIMATE
	Between Area West of										
WF10S-008-4	Frame 10 and Stern	BIRD SHOT	LEAD	1			0.151		IN	15	7/26/2010 BIRD SHOT - DIA IS BEST ESTIMATE
WE400.000.5	Between Area West of										BIRD SHOT - TOO ENCRUSTED TO MEASURE
WF10S-008-5	Frame 10 and Stern	BIRD SHOT	LEAD	1					IN		7/26/2010 DIA MUSKET BALL AND BIRD SHOT IN
WE108 000	Between Area West of	CONCRETION	CONCRETION		13.6						7/26/2010 CONCRETION
WF10S-009	Frame 10 and Stern Between Area West of	CONCRETION	CONCRETION		13.0						SILVER COIN - TOO ENCRUSTE TO IDENTIFY
WF10S-009-1	Frame 10 and Stern	COIN	SILVER	1			1.096		IN		7/26/2010 TYPE
WI 100-003-1	Between Area West of		SILVEIX				1.030				
WF10S-009-2	Frame 10 and Stern	BIRD SHOT	LEAD	1			0.160		IN	16	7/26/2010 BIRD SHOT - DIA IS BEST ESTIMATE
111100 000 2	Between Area West of						0.100			10	
WF10S-009-3	Frame 10 and Stern	BIRD SHOT	LEAD	1			0.163		IN	16	7/26/2010 BIRD SHOT - DIA IS BEST ESTIMATE
	Between Area West of										
WF10S-009-4	Frame 10 and Stern	BIRD SHOT	LEAD	1			0.160		IN	16	7/26/2010 BIRD SHOT - DIA IS BEST ESTIMATE
	Between Area West of										
WF10S-009-5	Frame 10 and Stern	BIRD SHOT	LEAD	1			0.159		IN	16	7/26/2010 BIRD SHOT - DIA IS BEST ESTIMATE
	Between Area West of										
WF10S-009-6	Frame 10 and Stern	BIRD SHOT	LEAD	1			0.180		IN	18	7/26/2010 BIRD SHOT - DIA IS BEST ESTIMATE
	Between Area West of										
WF10S-009-7	Frame 10 and Stern	BIRD SHOT	LEAD	1			0.159		IN	16	7/26/2010 BIRD SHOT - DIA IS BEST ESTIMATE
	Between Area West of										
WF10S-009-8	Frame 10 and Stern	BIRD SHOT	LEAD	1			0.159		IN	16	7/26/2010 BIRD SHOT - DIA IS BEST ESTIMATE
	Between Area West of		LEAD								BIRD SHOT - TOO ENCRUSTED TO MEASURE 7/26/2010 DIA
WF10S-009-9	Frame 10 and Stern	BIRD SHOT	LEAD	1					IN		
											BIRD SHOT, NOT TRUE ROUND, SMALL DIMPLE, MADE FROM SHOT TOWER.
	Between Area West of										ENCRUSTED PIECES WERE CLEANED WITH
WF10S-010-1	Frame 10 and Stern	BIRD SHOT	LEAD	12	3 1	GM		0.142		14	7/26/2010 ULTRAONIC BATH AND MECHANICALLY
WI 100-010-1				12	5.1			0.142		14	BIRD SHOT, NOT TRUE ROUND, SMALL
											DIMPLE, MADE FROM SHOT TOWER.
	Between Area West of										ENCRUSTED PIECES WERE CLEANED WITH
WF10S-010-2	Frame 10 and Stern	BIRD SHOT	LEAD	29	9.4	GM		0.153	IN	15	7/26/2010 ULTRAONIC BATH AND MECHANICALLY
											BIRD SHOT, NOT TRUE ROUND, SMALL
											DIMPLE, MADE FROM SHOT TOWER.
	Between Area West of										ENCRUSTED PIECES WERE CLEANED WITH
WF10S-010-3	Frame 10 and Stern	BIRD SHOT	LEAD	19	7.4	GM		0.163	IN	16	7/26/2010 ULTRAONIC BATH AND MECHANICALLY
											BIRD SHOT, NOT TRUE ROUND, SMALL
											DIMPLE, MADE FROM SHOT TOWER.
											ENCRUSTED PIECES WERE CLEANED WITH
	Between Area West of							o	]		ULTRAONIC BATH AND MECHANICALLY. Dm =
WF10S-010-4	Frame 10 and Stern	BIRD SHOT	LEAD	2	1.2	GM	_	0.182	IN	18	7/26/2010 0.180", 0.184"
											BUCK SHOT, NOT TRUE ROUND, SMALL DIMPLE, MADE FROM SHOT TOWER.
	Between Area West of										ENCRUSTED PIECES WERE CLEANED WITH
WF10S-010-5	Frame 10 and Stern	BUCK SHOT	LEAD	1	0.7	GM	0.198		IN	20	7/26/2010 ULTRAONIC BATH AND MECHANICALLY
WF 103-010-3					0.7		0.130			20	BUCK SHOT, NOT TRUE ROUND, SMALL
											DIMPLE, MADE FROM SHOT TOWER.
	Between Area West of										ENCRUSTED PIECES WERE CLEANED WITH
WF10S-010-6	Frame 10 and Stern	BUCK SHOT	LEAD	1	0.8	GM	0.207		IN	21	7/26/2010 ULTRAONIC BATH AND MECHANICALLY
	Between Area West of				2.0				-		
WF10S-011	Frame 10 and Stern	CONCRETION	RUST/WOOD	1	1.500	GM					7/26/2010 RUST CONCRETION ON WOOD.
	Between Area West of										
WF10S-012	Frame 10 and Stern	CONCRETION	RUST/WOOD	1	0.900	GM					7/26/2010 RUST CONCRETION ON WOOD.

10										
	Between Area West of									
WF10S-013	Frame 10 and Stern	CONCRETION	RUST/WOOD	1	0.600 GM					7/26/2010 RUST CONCRETION ON WOOD.
	Between Area West of									
WF10S-014	Frame 10 and Stern	CONCRETION	RUST/WOOD	1	2.000 GM					7/26/2010 RUST CONCRETION ON WOOD.
	Between Area West of									
WF10S-015	Frame 10 and Stern	CONCRETION	RUST/WOOD	1	2.600 GM					7/26/2010 RUST CONCRETION ON WOOD.
										RUST CONCRETION IN A CONCAVE
	Between Area West of									HEMISPHEREABOUT THE SIZE GRAPE SHOT,
WF10S-016	Frame 10 and Stern	CONCRETION	RUST	1	4.900 GM					7/26/2010 MISSING A PIECE OF BIRD SHOT
										CONCRETION WITH 8 BIRD SHOT, GLASS
	Between Area West of									FRAGMENT, 1/2 SQUARE NAIL IMPRESSION
WF10S-017	Frame 10 and Stern	CONCRETION	RUST/LEAD/GLASS		23.700 GM					7/26/2010 AND 3 SQUARE NAIL HOLES
	Between Area West of									
WF10S-017-1	Frame 10 and Stern	BIRD SHOT	LEAD	1	GM	0.164	IN	16		7/26/2010 1 OF 8 BIRD SHOT IN CONCRETION
	Between Area West of									
WF10S-017-2	Frame 10 and Stern	BIRD SHOT	LEAD	1	GM	0.158	IN	16		7/26/2010 1 OF 8 BIRD SHOT IN CONCRETION
	Between Area West of									
WF10S-017-3	Frame 10 and Stern	BIRD SHOT	LEAD	1	GM	0.126	IN	12		7/26/2010 1 OF 8 BIRD SHOT IN CONCRETION
	Between Area West of									1 OF 8 BIRD SHOT IN CONCRETION -
WF10S-017-4	Frame 10 and Stern	BIRD SHOT	LEAD	1	GM	0.120	IN	12		7/26/2010 EMBEDDED, DIA ESTIMATED
	Between Area West of									
WF10S-017-5	Frame 10 and Stern	BIRD SHOT	LEAD	1	GM	0.143	IN	14		7/26/2010 1 OF 8 BIRD SHOT IN CONCRETION
	Between Area West of									1 OF 8 BIRD SHOT IN CONCRETION -
WF10S-017-6	Frame 10 and Stern	BIRD SHOT	LEAD	1	GM	0.160	IN	16		7/26/2010 EMBEDDED, DIA ESTIMATED
	Between Area West of									
WF10S-017-7	Frame 10 and Stern	BIRD SHOT	LEAD	1	GM	0.159	IN	16		7/26/2010 1 OF 8 BIRD SHOT IN CONCRETION
	Between Area West of									1 OF 8 BIRD SHOT IN CONCRETION -
WF10S-017-8	Frame 10 and Stern	BIRD SHOT	LEAD	1	GM	0.120	IN	12		7/26/2010 EMBEDDED, DIA ESTIMATED
	Between Area West of									SMALL SHERD OF GLASS - POSSIBLY
WF10S-017-9	Frame 10 and Stern	GLASS	GLASS	1	GM			14 0.38	0.20 IN	7/26/2010 WINDOW GLASS
										CONCRETION WITH 11 BIRD SHOT, WOOD
	Between Area West of									FRAGMENT, 1/2 SQUARE NAIL IMPRESSION
WF10S-018	Frame 10 and Stern	CONCRETION	RUST/LEAD/WOOD		9.200 GM					7/26/2010 AND ONE HOLE FROM A SQUARE NAIL
	Between Area West of									
WF10S-018-1	Frame 10 and Stern	BIRD SHOT	LEAD	1	GM	0.164	IN	16		7/26/2010 1 OF 11 BIRD SHOT IN CONCRETION
	Between Area West of									1 OF 11 BIRD SHOT IN CONCRETION -
WF10S-018-10	Frame 10 and Stern	BIRD SHOT	LEAD	1	GM	0.140	IN	14		7/26/2010 EMBEDDED, DIA ESTIMATED
	Between Area West of									
WF10S-018-11	Frame 10 and Stern	BIRD SHOT	LEAD	1	GM	0.141	IN	14		7/26/2010 1 OF 11 BIRD SHOT IN CONCRETION
	Between Area West of									1 OF 11 BIRD SHOT IN CONCRETION -
WF10S-018-2	Frame 10 and Stern	BIRD SHOT	LEAD	1	GM	0.160	IN	16		7/26/2010 EMBEDDED, DIA ESTIMATED
	Between Area West of									1 OF 11 BIRD SHOT IN CONCRETION -
WF10S-018-3	Frame 10 and Stern	BIRD SHOT	LEAD	1	GM	0.160	IN	16		7/26/2010 EMBEDDED, DIA ESTIMATED
	Between Area West of									1 OF 11 BIRD SHOT IN CONCRETION -
WF10S-018-4	Frame 10 and Stern	BIRD SHOT	LEAD	1	GM	0.160	IN	16		7/26/2010 EMBEDDED, DIA ESTIMATED
	Between Area West of									
WF10S-018-5	Frame 10 and Stern	BIRD SHOT	LEAD	1	GM	0.161	IN	16		7/26/2010 1 OF 11 BIRD SHOT IN CONCRETION
	Between Area West of									
WF10S-018-6	Frame 10 and Stern	BIRD SHOT	LEAD	1	GM	0.162	IN	16		7/26/2010 1 OF 11 BIRD SHOT IN CONCRETION
	Between Area West of									
WF10S-018-7	Frame 10 and Stern	BIRD SHOT	LEAD	1	GM	0.159	IN	16		7/26/2010 1 OF 11 BIRD SHOT IN CONCRETION
	Between Area West of									
WF10S-018-8	Frame 10 and Stern	BIRD SHOT	LEAD	1	GM	0.163	IN	16		7/26/2010 1 OF 11 BIRD SHOT IN CONCRETION
	Between Area West of									1 OF 11 BIRD SHOT IN CONCRETION -
WF10S-018-9	Frame 10 and Stern	BIRD SHOT	LEAD	1	GM	0.140	IN	14		7/26/2010 EMBEDDED, DIA ESTIMATED
	Between Area West of									
WF10S-019	Frame 10 and Stern	CONCRETION	RUST/LEAD/WOOD		6.800 GM					7/26/2010 CONCRETION WITH 6 BIRD SHOT
	Between Area West of									
WF10S-019-1	Frame 10 and Stern	BIRD SHOT	LEAD	1	GM	0.163	IN	16		7/26/2010 1 OF 6 BIRD SHOT IN CONCRETION
	Between Area West of									
WF10S-019-2	Frame 10 and Stern	BIRD SHOT	LEAD	1	GM	0.146	IN	15		7/26/2010 1 OF 6 BIRD SHOT IN CONCRETION
	Between Area West of									1 OF 6 BIRD SHOT IN CONCRETION -
WF10S-019-3	Frame 10 and Stern	BIRD SHOT	LEAD	1	GM	0.150	IN	15		7/26/2010 EMBEDDED, DIA ESTIMATED

										1 490 /
WF10S-019-4	Between Area West of Frame 10 and Stern	BIRD SHOT	LEAD	1	GM	0.169	IN	17		7/26/2010 1 OF 6 BIRD SHOT IN CONCRETION
	Between Area West of				-					
WF10S-019-5	Frame 10 and Stern	BIRD SHOT	LEAD	1	GM	0.156	IN	16		7/26/2010 1 OF 6 BIRD SHOT IN CONCRETION
	Between Area West of									1 OF 6 BIRD SHOT IN CONCRETION -
WF10S-019-6	Frame 10 and Stern	BIRD SHOT	LEAD	1	GM	0.150	IN	15		7/26/2010 EMBEDDED, DIA ESTIMATED
	Between Area West of									
WF10S-020	Frame 10 and Stern	CONCRETION	RUST/LEAD	4.200	O GM					7/26/2010 CONCRETION WITH 5 BIRD SHOT
	Between Area West of									
WF10S-020-1	Frame 10 and Stern	BIRD SHOT	LEAD	1	GM	0.150	IN	15		7/26/2010 1 OF 5 BIRD SHOT IN CONCRETION
	Between Area West of									
WF10S-020-2	Frame 10 and Stern	BIRD SHOT	LEAD	1	GM	0.154	IN	15		7/26/2010 1 OF 5 BIRD SHOT IN CONCRETION
	Between Area West of									
WF10S-020-3	Frame 10 and Stern	BIRD SHOT	LEAD	1	GM	0.136	IN	14		7/26/2010 1 OF 5 BIRD SHOT IN CONCRETION
	Between Area West of									
WF10S-020-4	Frame 10 and Stern	BIRD SHOT	LEAD	1	GM	0.160	IN	16		7/26/2010 1 OF 5 BIRD SHOT IN CONCRETION
	Between Area West of									
WF10S-020-5	Frame 10 and Stern	BIRD SHOT	LEAD	1	GM	0.139	IN	14		7/26/2010 1 OF 5 BIRD SHOT IN CONCRETION
	Between Area West of									BUCK SHOT - WAS IN CONCRETION,
WF10S-021-1	Frame 10 and Stern	BUCK SHOT	LEAD	1 1.	5 GM		IN	26		7/26/2010 IRREGULAR SHAPE
	Between Area West of									BIRD SHOT - WAS IN CONCRETION,
WF10S-021-2	Frame 10 and Stern	BIRD SHOT	LEAD	1 0.3	3 GM	0.152	IN	15		7/26/2010 IRREGULAR SHAPE
	Between Area West of									BIRD SHOT - WAS IN CONCRETION,
WF10S-021-3	Frame 10 and Stern	BIRD SHOT	LEAD	1 0.3	3 GM	0.152	IN	15		7/26/2010 IRREGULAR SHAPE
	Between Area West of									BIRD SHOT - WAS IN CONCRETION,
WF10S-021-4	Frame 10 and Stern	BIRD SHOT	LEAD	1 0.4	4 GM	0.162	IN	16		7/26/2010 IRREGULAR SHAPE
	Between Area West of									BIRD SHOT - WAS IN CONCRETION,
WF10S-021-5	Frame 10 and Stern	BIRD SHOT	LEAD	1 0.4	4 GM	0.161	IN	16		7/26/2010 IRREGULAR SHAPE
	Between Area West of									BIRD SHOT - WAS IN CONCRETION,
WF10S-021-6	Frame 10 and Stern	BIRD SHOT	LEAD	1 0.4	4 GM	0.164	IN	16		7/26/2010 IRREGULAR SHAPE
	Between Area West of									BIRD SHOT - WAS IN CONCRETION,
WF10S-021-7	Frame 10 and Stern	BIRD SHOT	LEAD	1 0.4	4 GM	0.166	IN	17		7/26/2010 IRREGULAR SHAPE
										CONCRETION OF WOOD, GRAPE SHOT, BIRD
										SHOT NAD WINDOW GLASS WITH 3 SUARE
	Between Area West of									NAIL HOLES THAT GO ALL THE WAY
WF10S-022	Frame 10 and Stern	CONCRETION	IRON/RUST/LEAD/WOOD/GLASS	85.000	JGM					7/26/2010 THROUGH
	Between Area West of				~	4.450				GRAPE SHOT IN CONCRETION - BASED ON
WF10S-022-1	Frame 10 and Stern	GRAPE SHOT	4 OZ IRON	1	GM	1.159	IN			7/26/2010 DIA: 4 oz FOR 3 lber CANNON.
	Between Area West of				~	0.457	IN I	10		
WF10S-022-2	Frame 10 and Stern	BIRD SHOT	LEAD	1	GM	0.157	IN	16		7/26/2010 BIRD SHOT IN CONCRETION
	Between Area West of	0.000	01.400		~			0.00		SMALL SHERD OF CLEAR GLASS - POSSIBLY
WF10S-022-3	Frame 10 and Stern	GLASS	GLASS	1	GM			0.28	0.10 IN	7/26/2010 WINDOW GLASS
	Between Area West of	WOOD	WOOD		~					
WF10S-022-4	Frame 10 and Stern	WOOD	WOOD	1	GM					7/26/2010 WOOD FRAGMENT
WE400.000.5	Between Area West of			4						
WF10S-022-5	Frame 10 and Stern	LEAD	LEAD	1 0.0	6 GM					7/26/2010 SMALL TRIANGULAR-SHAPED PIECE OF LEAD
WE108 000 0	Between Area West of		LEAD	1		0.167	IN	17		7/26/2010 BIRD SHOT - WAS IN CONCRETION
WF10S-022-6	Frame 10 and Stern	BIRD SHOT	LEAU	1 0.4	4 GM	0.107	IN	17		1120/2010 DIKD SHOT - WAS IN CONCRETION
WE108 022 7	Between Area West of Frame 10 and Stern	BIRD SHOT	LEAD	1 01		0.147	IN	15		7/26/2010 BIRD SHOT - WAS IN CONCRETION
WF10S-022-7			LEAD	1 0	3 GM	0.147	lin	10		
WE108 000	Between Area West of Frame 10 and Stern	GUN SPALL	DOVER FLINT	1 4	6 GM			1.04	0.77 IN	BLACK FLINT GUN SPALL, SLIGHTLY UTILIZED, 7/26/2010 FLINT IS FROM DOVER, ENGLAND
WF10S-023		GUN SPALL	DOVER FLINI	1 4.0				1.04	0.77 IIN	112012010 FLINT IS FROM DOVER, ENGLAND

# TABLE 2 - SEMI-DETAILED ANALYSIS OF ARTIFACTS FROM SHIP FOUND AT WORLD TRADE CENTER SITEGROUPED BY ARTIFACT TYPE

#### Report Printed: 12/17/2010 13:55:48

Artifact #	Provenience	<u>Subtype</u>	<u>Composition</u>	<u>Quantity</u>	<u>Weight</u>	Meas <u>Diar</u>	ured neter	Calc <u>Dia</u>	Dia <u>Units</u>	Prob <u>Cal</u>	<u>Date</u>
Type: BIRD	ѕнот										
CS2 5-030	TAR		LEAD	1	0.300	GM	0.15		IN	15	7/26/2010
F10-14-014B-	1 Fill from F-10 to F-14		LEAD	1			0.17		IN	16	7/28/2010
F10-14-014B-2	2 Fill from F-10 to F-14		LEAD	1			0.15		IN	16	7/28/2010
F10-14-014B-3	3 Fill from F-10 to F-14		LEAD	1			0.14		IN	14	7/28/2010
F10-14-014B-4	4 Fill from F-10 to F-14		LEAD	1			0.14		IN	14	7/28/2010
F10-14-014B-	5 Fill from F-10 to F-14		LEAD	1			0.13		IN	13	7/28/2010
F10-14-014B-6	6 Fill from F-10 to F-14		LEAD	1			0.13		IN	13	7/28/2010
F10-14-014B-	7 Fill from F-10 to F-14		LEAD	1			0.08		IN		7/28/2010
FN5-FN6-029	Between FN5 and FN6		LEAD	1	0.300	GM	0.14		IN	14	7/26/2010
FN7-FN8-028	Between FN10 and FN11		LEAD	1	0.400	GM	0.16		IN	16	7/28/2010
FS9-1	FLOAT SAMPLE 9		LEAD	14	2.300	GM		0.12	IN	12	7/26/2010
FS9-2	FLOAT SAMPLE 9		LEAD	31	7.700	GM		0.14	IN	14	7/26/2010
FS9-3	FLOAT SAMPLE 9		LEAD	41	13.300	GM		0.15	IN	15	7/26/2010
FS9-4	FLOAT SAMPLE 9		LEAD	23	8.700	GM		0.16	IN	16	7/26/2010
FS9-5	FLOAT SAMPLE 9		LEAD	3	1.400	GM		0.17	IN		7/26/2010
FS9-6	FLOAT SAMPLE 9		LEAD	3	2.000	GM		0.19	IN	19	7/26/2010
FS9-9	FLOAT SAMPLE 9		LEAD	1	0.300	GM		0.15	IN		7/26/2010
ORLOP-027-1	Beneath Orlop Deck		LEAD	1	0.700	GM	0.20		IN	20	7/26/2010
ORLOP-027-2			LEAD	1		GM	0.16		IN		7/26/2010
ORLOP-027-3			LEAD	1	0.300	GM	0.15		IN		7/26/2010
ORLOP-027-4			LEAD	1	0.200	GM	0.14		IN	14	7/26/2010
USP-006-2	Under Stern Piece		LEAD	1	0.700	GM	0.18		IN	18	7/28/2010
WF10S-003-2			LEAD	1			0.15		IN	15	7/26/2010
	and Stern										
WF10S-004-2	Between Area West of Frame 10		LEAD	1			0.14		IN	14	7/26/2010
	and Stern										
WF10S-005-2	Between Area West of Frame 10		LEAD	1			0.14		IN	14	7/26/2010
	and Stern										
WF10S-006-2			LEAD	1			0.16		IN	16	7/26/2010
	and Stern										
WF10S-007-2		)	LEAD	1			0.15		IN	15	7/26/2010
	and Stern										
WF10S-007-3		)	LEAD	1			0.15		IN	15	7/26/2010
	and Stern										
WF10S-007-4		)	LEAD	1			0.15		IN	15	7/26/2010
	and Stern										

Artifact #	Provenience	<u>Subtype</u> <u>C</u>	composition	Quantity	<u>Weight</u>	Measured Diameter	Calc Dia	Dia ∣ Units		Date
WF10S-008-2	Between Area West of Frame 10 and Stern		EAD	1		0.15		IN	15	7/26/2010
WF10S-008-3	Between Area West of Frame 10 and Stern	L	EAD	1		0.14		IN	15	7/26/2010
WF10S-008-4		L	EAD	1		0.15		IN	15	7/26/2010
WF10S-008-5	Between Area West of Frame 10 and Stern	L	EAD	1				IN		7/26/2010
WF10S-009-2	Between Area West of Frame 10	L	EAD	1		0.16		IN	16	7/26/2010
WF10S-009-3	and Stern Between Area West of Frame 10	L	EAD	1		0.16		IN	16	7/26/2010
WF10S-009-4	and Stern Between Area West of Frame 10	L	EAD	1		0.16		IN	16	7/26/2010
WF10S-009-5	and Stern Between Area West of Frame 10	L	EAD	1		0.16		IN	16	7/26/2010
WF10S-009-6	and Stern Between Area West of Frame 10	L	EAD	1		0.18		IN	18	7/26/2010
WF10S-009-7		L	EAD	1		0.16		IN	16	7/26/2010
WF10S-009-8	and Stern Between Area West of Frame 10	L	EAD	1		0.16		IN	16	7/26/2010
WF10S-009-9	and Stern Between Area West of Frame 10	L	EAD	1				IN		7/26/2010
WF10S-010-1	and Stern Between Area West of Frame 10	L	EAD	12	3.100	GM	0.14	IN	14	7/26/2010
WF10S-010-2	and Stern	_	EAD	29	9.400		0.15	IN		7/26/2010
	and Stern Between Area West of Frame 10		EAD	19	7.400		0.16	IN		7/26/2010
	and Stern									
	Between Area West of Frame 10 and Stern	_	EAD	2	1.200		0.18	IN		7/26/2010
WF10S-017-1	and Stern		EAD	1		GM 0.16		IN		7/26/2010
	Between Area West of Frame 10 and Stern	L	EAD	1	(	GM 0.16		IN		7/26/2010
WF10S-017-3	Between Area West of Frame 10 and Stern	L	EAD	1	(	GM 0.13		IN	12	7/26/2010
WF10S-017-4	Between Area West of Frame 10 and Stern	L	EAD	1	(	GM 0.12		IN	12	7/26/2010
WF10S-017-5	Between Area West of Frame 10 and Stern	L	EAD	1	(	GM 0.14		IN	14	7/26/2010

Artifact #	Provenience	Subtype	Composition	Quantity		sured ameter	Calc Dia Dia Units		Date
WF10S-017-6	Between Area West of Frame 10 and Stern		LEAD	1	GM	0.16	IN	16	7/26/2010
WF10S-017-7	Between Area West of Frame 10 and Stern		LEAD	1	GM	0.16	IN	16	7/26/2010
WF10S-017-8	Between Area West of Frame 10 and Stern		LEAD	1	GM	0.12	IN	12	7/26/2010
WF10S-018-1	Between Area West of Frame 10 and Stern		LEAD	1	GM	0.16	IN	16	7/26/2010
WF10S-018-10	Between Area West of Frame 10		LEAD	1	GM	0.14	IN	14	7/26/2010
WF10S-018-11	and Stern Between Area West of Frame 10		LEAD	1	GM	0.14	IN	14	7/26/2010
WF10S-018-2	and Stern Between Area West of Frame 10		LEAD	1	GM	0.16	IN	16	7/26/2010
WF10S-018-3	and Stern Between Area West of Frame 10		LEAD	1	GM	0.16	IN	16	7/26/2010
WF10S-018-4	and Stern Between Area West of Frame 10		LEAD	1	GM	0.16	IN	16	7/26/2010
WF10S-018-5			LEAD	1	GM	0.16	IN	16	7/26/2010
WF10S-018-6	and Stern Between Area West of Frame 10		LEAD	1	GM	0.16	IN	16	7/26/2010
WF10S-018-7			LEAD	1	GM	0.16	IN	16	7/26/2010
WF10S-018-8	and Stern Between Area West of Frame 10		LEAD	1	GM	0.16	IN	16	7/26/2010
WF10S-018-9	and Stern Between Area West of Frame 10		LEAD	1	GM	0.14	IN	14	7/26/2010
WF10S-019-1			LEAD	1	GM	0.16	IN	16	7/26/2010
WF10S-019-2	and Stern Between Area West of Frame 10		LEAD	1	GM	0.15	IN	15	7/26/2010
WF10S-019-3	and Stern Between Area West of Frame 10		LEAD	1	GM	0.15	IN	15	7/26/2010
WF10S-019-4	and Stern Between Area West of Frame 10		LEAD	1	GM	0.17	IN	17	7/26/2010
WF10S-019-5	and Stern Between Area West of Frame 10		LEAD	1	GM	0.16	IN		7/26/2010
WF10S-019-6	and Stern Between Area West of Frame 10		LEAD	1	GM	0.15	IN		7/26/2010
WF10S-020-1	and Stern Between Area West of Frame 10		LEAD	1	GM	0.15	IN		7/26/2010
WI 103-020-1	and Stern			I	Givi	0.15	11 N	15	1/20/2010

Artifact #	Provenience	Subtype	Composition	Quantity	Weight		sured ameter	Calc <u>Dia</u>	Dia Units		Date
WF10S-020-2	Between Area West of Frame 10 and Stern		LEAD	<u>adunniy</u> 1	<u>troight</u>	GM	0.15		IN		7/26/2010
WF10S-020-3	Between Area West of Frame 10 and Stern		LEAD	1		GM	0.14		IN	14	7/26/2010
WF10S-020-4	Between Area West of Frame 10 and Stern		LEAD	1		GM	0.16		IN	16	7/26/2010
WF10S-020-5			LEAD	1		GM	0.14		IN	14	7/26/2010
WF10S-021-2			LEAD	1	0.300	GM	0.15		IN	15	7/26/2010
WF10S-021-3			LEAD	1	0.300	GM	0.15		IN	15	7/26/2010
WF10S-021-4	Between Area West of Frame 10 and Stern		LEAD	1	0.400	GM	0.16		IN	16	7/26/2010
WF10S-021-5			LEAD	1	0.400	GM	0.16		IN	16	7/26/2010
WF10S-021-6			LEAD	1	0.400	GM	0.16		IN	16	7/26/2010
WF10S-021-7	Between Area West of Frame 10 and Stern		LEAD	1	0.400	GM	0.17		IN	17	7/26/2010
WF10S-022-2			LEAD	1		GM	0.16		IN	16	7/26/2010
WF10S-022-6			LEAD	1	0.400	GM	0.17		IN	17	7/26/2010
WF10S-022-7	Between Area West of Frame 10 and Stern		LEAD	1	0.300	GM	0.15		IN	15	7/26/2010
		BIRD SHOT	TOTAL:	251							
Type: BUCK SHOT											
Type. Book	51101										
F10-14-015	Fill from F-10 to F-14		LEAD	1	1.400		0.25	0.00	IN		7/28/2010
FS9-7 FS9-8	FLOAT SAMPLE 9 FLOAT SAMPLE 9		LEAD LEAD	2 1	1.400 0.800		0.21	0.20 0.21	IN IN		7/26/2010 7/26/2010
USP-006-1	Under Stern Piece		LEAD	1	1.300		0.24	0.21	IN		7/28/2010
WF10S-010-5	Between Area West of Frame 10 and Stern		LEAD	1	0.700		0.20		IN		7/26/2010
WF10S-010-6	Between Area West of Frame 10 and Stern		LEAD	1	0.800	GM	0.21		IN	21	7/26/2010

<u>Artifact #</u> WF10S-021-1	<u>Provenience</u> Between Area West of Frame 10 and Stern	<u>Subtype</u>	<u>Composition</u> LEAD	<u>Quantity</u> 1	<u>Weight</u> 1.500 (	<b>Measured</b> <u>Diameter</u> GM	Calc Dia I <u>Dia</u> <u>Units</u> IN	Prob <u>Cal</u> <u>Date</u> 26 7/26/2010
		BUCK SHO	T TOTAL:	8				
Type: BUTT	ON							
F10-14-001	Fill from F-10 to F-14		PEWTER	1	4.900 0	GM 23.50	MM	7/28/2010
		BUTTON TO	DTAL:	1				
Type: CANN	ON BALL							
USP-001	Under Stern Piece		IRON	1	3.720 L	.B 3.05	IN	7/28/2010
		CANNON B	ALL TOTAL:	1				
Type: CLAY	MARBLE							
F10-14-011 F10-14-012	Fill from F-10 to F-14 Fill from F-10 to F-14		BALL/KAOLIN BALL/KAOLIN		3.600 ( 3.000 (		IN IN	7/28/2010 7/28/2010
		CLAY MAR	BLE TOTAL:	2				
Type: COAL								
F10-14-014A-2	2 Fill from F-10 to F-14		ANTHRACITE	1				7/28/2010
		COAL TOT	AL:	1				
Type: COIN								
WF10S-009-1	Between Area West of Frame 10 and Stern		SILVER	1		1.10	IN	7/26/2010

Artifact #	<u>Provenience</u>	<u>Subtype</u>	<u>Composition</u>	Quantity	<u>Weight</u>	Measured <u>Diameter</u>	Calc Dia <u>Dia</u> <u>Units</u>	Prob <u>Cal</u> <u>Date</u>
		COIN TOTAL	_:	1				
Type: CONCRETION								
F10-14-014A F10-14-014B WF10S-003	Fill from F-10 to F-14 Fill from F-10 to F-14 Between Area West of Frame 10 and Stern		CONCRETION CONCRETION CONCRETION		17.700 8.200 14.000	GM		7/28/2010 7/28/2010 7/26/2010
WF10S-004	Between Area West of Frame 10 and Stern		CONCRETION		13.600	GM		7/26/2010
WF10S-005	Between Area West of Frame 10 and Stern		CONCRETION		14.100	GM		7/26/2010
WF10S-006	Between Area West of Frame 10 and Stern		CONCRETION		13.600	GM		7/26/2010
WF10S-007	Between Area West of Frame 10 and Stern		CONCRETION		15.200	GM		7/26/2010
WF10S-008	Between Area West of Frame 10 and Stern		CONCRETION		15.600			7/26/2010
WF10S-009	Between Area West of Frame 10 and Stern		CONCRETION		13.600			7/26/2010
WF10S-011	Between Area West of Frame 10 and Stern		RUST/WOOD	1	1.500	GM		7/26/2010
WF10S-012	Between Area West of Frame 10 and Stern		RUST/WOOD	1	0.900	GM		7/26/2010
WF10S-013	Between Area West of Frame 10 and Stern		RUST/WOOD	1	0.600	GM		7/26/2010
WF10S-014	Between Area West of Frame 10 and Stern		RUST/WOOD	1	2.000	GM		7/26/2010
WF10S-015	Between Area West of Frame 10 and Stern		RUST/WOOD	1	2.600	GM		7/26/2010
WF10S-016	Between Area West of Frame 10 and Stern		RUST	1	4.900	GM		7/26/2010
WF10S-017	Between Area West of Frame 10 and Stern		RUST/LEAD/GL	ASS	23.700	GM		7/26/2010
WF10S-018	Between Area West of Frame 10 and Stern		RUST/LEAD/W	DOD	9.200	GM		7/26/2010
WF10S-019	Between Area West of Frame 10 and Stern		RUST/LEAD/W	DOD	6.800	GM		7/26/2010
WF10S-020	Between Area West of Frame 10 and Stern		RUST/LEAD		4.200	GM		7/26/2010

Artifact # WF10S-022			<u>Composition</u> <u>Quantity</u> IRON/RUST/LEAD/		<u>Weight</u> 85.000			Calc <u>Dia</u>	Dia <u>Units</u>	Prob <u>Cal</u>	<u>Date</u> 7/26/2010
		CONCRETIC	ON TOTAL:	6							
Type: GLAS	6										
WF10S-017-9	Between Area West of Frame 10		GLASS	1		GM				14	7/26/2010
WF10S-022-3	and Stern Between Area West of Frame 10 and Stern		GLASS	1		GM					7/26/2010
			AL:	2							
Type: GRAP AOP-001-2 WF10S-022-1		4 OZ 4 OZ	IRON IRON	1	58.400	GM GM	1.22 1.16		IN IN		7/28/2010 7/26/2010
		4 OZ TO1	ſAL:	2							
AOP-001-1	Above Outer Planks	6 OZ	IRON	1	159.000	GM	1.37		IN		7/28/2010
		6 OZ TO	TAL:	1							
WF10S-001	Between Area West of Frame 10 and Stern	7 OZ	IRON OXIDE	1	69.300	GM	1.45		IN		7/26/2010
		7 OZ TO1	ſAL:	1							
		GRAPE SHO	DT TOTAL:	4							
Type: GUN S	PALL										
F10-14-013 ORLOP-027-5	Fill from F-10 to F-14 Beneath Orlop Deck		DOVER FLINT DOVER FLINT	1 1	8.000 8.300						7/28/2010 7/26/2010

Artifact # WF10S-023	Provenience Between Area West of Frame 10 and Stern	<u>Subtype</u>	Composition DOVER FLINT		<u>Weight</u> 4.600	Dia	sured <u>meter</u>	Calc <u>Dia</u>	Dia F <u>Units</u>	<u>Cal</u>	<u>Date</u> 7/26/2010
		GUN SPALL	TOTAL:	3							
Type: LEAD											
F10-14-010 WF10S-022-5	Fill from F-10 to F-14 Between Area West of Frame 10 and Stern		LEAD LEAD	1	5.600 0.600		0.45		IN		7/28/2010 7/26/2010
		LEAD TOTA	L:	2							
Type: LEAD	SHEETING										
ADJ-032 USP-004	Within or adjacent to ship Under Stern Piece		LEAD LEAD	1 1	861.000 132.400						7/14/2010 7/28/2010
		LEAD SHEE	TING TOTAL:	2							
Type: LEATH	IER										
FS6-FS7-031 USP-003	Between frames FS6 AND FS7 Under Stern Piece		LEATHER LEATHER	1	30.400 1.000						7/27/2010 7/28/2010
		LEATHER T	OTAL:	3							
Type: MUSK	ET BALL										
WF10S-002-22	Between Area West of Frame 10 and Stern	ANIMAL CHEWED	LEAD	1	12.900	GM	0.52		IN	52	7/26/2010
WF10S-002-23	B Between Area West of Frame 10 and Stern	ANIMAL CHEWED	LEAD	1	11.200	GM	0.49		IN	49	7/26/2010

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Artifact #         Provenience           WF10S-002-24         Between Area West of Frame 10 and Stern	<u>Subtype</u> ANIMAL CHEWED	<u>Composition</u> LEAD	Quantity 1	<u>Weight</u> 10.700	<b>Measu</b> <u>Diam</u> GM		Calc <u>Dia</u> <u>I</u>	Dia F <u>Units</u> IN	Cal	<u>Date</u> 7/26/2010
	ANIMAL	CHEWED TOTAI	.: 3							
FN10-FN11-026Between FN10 and FN11	HEMISPHERE	LEAD	1	11.800	GM	0.52		IN	52	7/27/2010
	HEMISPH	IERE TOTAL:	1							
AOP-002 Above Outer Planks WF10S-002-1 Between Area West of Frame 10 and Stern	OUT OF ROUND OUT OF ROUND	LEAD LEAD	1 1	13.000 26.600			0.53 0.67	IN IN		7/28/2010 7/26/2010
WF10S-002-11 Between Area West of Frame 10 and Stern	OUT OF ROUND	LEAD	1	13.100	GM	0.52		IN	52	7/26/2010
WF10S-002-14 Between Area West of Frame 10 and Stern	OUT OF ROUND	LEAD	1	13.200	GM	0.52		IN	52	7/26/2010
WF10S-002-15 Between Area West of Frame 10 and Stern	OUT OF ROUND	LEAD	1	13.000	GM	0.52		IN	52	7/26/2010
WF10S-002-16 Between Area West of Frame 10 and Stern	OUT OF ROUND	LEAD	1	13.300	GM	0.52		IN	52	7/26/2010
WF10S-002-17 Between Area West of Frame 10	OUT OF ROUND	LEAD	1	13.200	GM	0.52		IN	52	7/26/2010
and Stern WF10S-002-18 Between Area West of Frame 10	OUT OF ROUND	LEAD	1	13.500	GM	0.52		IN	52	7/26/2010
and Stern WF10S-002-19 Between Area West of Frame 10	OUT OF ROUND	LEAD	1	13.200	GM	0.52		IN	52	7/26/2010
and Stern WF10S-002-25 Between Area West of Frame 10	OUT OF ROUND	LEAD	1	14.800	GM	0.55		IN	55	7/26/2010
and Stern WF10S-002-28 Between Area West of Frame 10	OUT OF ROUND	LEAD	1	13.100	GM	0.53		IN	53	7/26/2010
and Stern WF10S-002-29 Between Area West of Frame 10	OUT OF ROUND	LEAD	1	13.400	GM	0.53		IN	53	7/26/2010
and Stern WF10S-002-31 Between Area West of Frame 10	OUT OF ROUND	LEAD	1	13.400	GM	0.53		IN	53	7/26/2010
and Stern WF10S-002-32 Between Area West of Frame 10	OUT OF ROUND	LEAD	1	13.300	GM	0.53		IN	53	7/26/2010
and Stern WF10S-002-33 Between Area West of Frame 10 and Stern	OUT OF ROUND	LEAD	1	13.200	GM	0.52		IN	52	7/26/2010
	OUT OF I	ROUND TOTAL:	15							
F10-14-002 Fill from F-10 to F-14	ROUND	LEAD	1	16.800	GM	0.56		IN	56	7/28/2010

						Measu	red (	Calc	Dia I	Prob	
Artifact #	<u>Provenience</u>	<u>Subtype</u>	<b>Composition</b>	<b>Quantity</b>	Weight	Diam		Dia	<u>Units</u>		<u>Date</u>
F10-14-003	Fill from F-10 to F-14	ROUND	LEAD	1			0.52		IN		7/28/2010
F10-14-004	Fill from F-10 to F-14	ROUND	LEAD	1	13.200		0.52		IN		7/28/2010
F10-14-005	Fill from F-10 to F-14	ROUND	LEAD	1			0.52		IN		7/28/2010
F10-14-006	Fill from F-10 to F-14	ROUND	LEAD	1			0.52		IN		7/28/2010
F10-14-007	Fill from F-10 to F-14	ROUND	LEAD	1	11.300		0.49		IN		7/28/2010
F10-14-008	Fill from F-10 to F-14	ROUND	LEAD	1	10.400		0.48		IN		7/28/2010
	Fill from F-10 to F-14	ROUND	LEAD	1			0.54		IN		7/28/2010
	5Between FN12 and FN13	ROUND	LEAD	1	12.800		0.52		IN		7/27/2010
S_SK-024	Between Stern and Stern Knee	ROUND	LEAD	1	10.600		0.49		IN		7/27/2010
USP-005-1	Under Stern Piece	ROUND	LEAD	1	13.300		0.56		IN		7/28/2010
USP-005-2	Under Stern Piece	ROUND	LEAD	1			0.50		IN		7/28/2010
	Between Area West of Frame 10 and Stern		LEAD	1			0.52		IN		7/26/2010
WF10S-002-12	Between Area West of Frame 10 and Stern	ROUND	LEAD	1	13.400	GM	0.52		IN	52	7/26/2010
WF10S-002-13	Between Area West of Frame 10 and Stern	ROUND	LEAD	1	13.000	GM	0.52		IN	52	7/26/2010
WF10S-002-2	Between Area West of Frame 10 and Stern	ROUND	LEAD	1	18.700	GM	0.59		IN	59	7/26/2010
WF10S-002-20	Between Area West of Frame 10 and Stern	ROUND	LEAD	1	10.400	GM	0.49		IN	47	7/26/2010
WF10S-002-21	Between Area West of Frame 10 and Stern	ROUND	LEAD	1	10.700	GM	0.49		IN	49	7/26/2010
WF10S-002-27	Between Area West of Frame 10	ROUND	LEAD	1	13.500	GM	0.53		IN	53	7/26/2010
WF10S-002-3	and Stern Between Area West of Frame 10	ROUND	LEAD	1	13.400	GM	0.52		IN	52	7/26/2010
WF10S-002-30	and Stern Between Area West of Frame 10	ROUND	LEAD	1	13.400	GM	0.53		IN	53	7/26/2010
WF10S-002-34	and Stern Between Area West of Frame 10	ROUND	LEAD	1	10.200	GM	0.49		IN	49	7/26/2010
WF10S-002-4	and Stern Between Area West of Frame 10	ROUND	LEAD	1	15.600	GM	0.55		IN	55	7/26/2010
WF10S-002-5	and Stern Between Area West of Frame 10		LEAD	1		-	0.53		IN		7/26/2010
	and Stern										
WF10S-002-6	Between Area West of Frame 10 and Stern		LEAD	1			0.52		IN		7/26/2010
WF10S-002-7	Between Area West of Frame 10 and Stern	ROUND	LEAD	1	13.000	GM	0.52		IN	52	7/26/2010
WF10S-002-8	Between Area West of Frame 10 and Stern	ROUND	LEAD	1	13.100	GM	0.52		IN	52	7/26/2010

Artifact #	Provenience	Subtype	Composition	Quantity	Weight		sured ameter	Calc Dia	Dia Units		Date
WF10S-002-9	Between Area West of Frame 10 and Stern		LEAD	1	13.300		0.53		IN	53	7/26/2010
WF10S-003-1	Between Area West of Frame 10	ROUND	LEAD	1			0.52		IN	52	7/26/2010
WF10S-004-1	and Stern Between Area West of Frame 10	ROUND	LEAD	1			0.52		IN	52	7/26/2010
WF10S-005-1	and Stern Between Area West of Frame 10	ROUND	LEAD	1			0.52		IN	52	7/26/2010
WF10S-006-1	and Stern Between Area West of Frame 10	ROUND	LEAD	1			0.52		IN	52	7/26/2010
WF10S-007-1	and Stern Between Area West of Frame 10	ROUND	LEAD	1			0.52		IN	52	7/26/2010
WF10S-008-1	and Stern Between Area West of Frame 10 and Stern	ROUND	LEAD	1			0.52		IN	52	7/26/2010
		ROUND TOTAL:		34							
WF10S-002-35	Between Area West of Frame 10 and Stern	SHORT SHO	T LEAD	1	13.600	GM	0.60		IN	60	7/26/2010
		Sł	HORT SHOT TOTAL:	1							
F10-14-009 WF10S-002-26	Fill from F-10 to F-14 Between Area West of Frame 10 and Stern	WEDGE WEDGE	LEAD LEAD	1 1	12.800 12.900		0.52	0.52 0.52	IN IN		7/28/2010 7/26/2010
		w	EDGE TOTAL:	2							
		MUSI	KET BALL TOTAL:	56							
Type: NAIL											
AOP-001-3	Above Outer Planks		IRON	1	0.900	GM			IN		7/28/2010
		NAIL	TOTAL:	1							
Type: POUCI	H										
USP-002	Under Stern Piece		LEATHER	1	26.900	GM					7/28/2010

Artifact #	<u>Provenience</u>	<u>Subtype</u>	<u>Composition</u>	Quantity	<u>Weight</u>	Measured <u>Diameter</u>	Calc Dia <u>Dia</u> Unit	a Prob <u>s Cal</u> <u>Date</u>
		POUCH TO	TAL:	1				
Type: UNKN	OWN							
MISC-001	About 25' below ground surface: about 4' south of vessel, mi		IRON/WOOD	1	788.900	GM		7/22/2010
		UNKNOWN	TOTAL:	1				
Type: WOOD	)							
WF10S-022-4	Between Area West of Frame 10 and Stern	)	WOOD	1		GM		7/26/2010
		WOOD TOT	AL:	1				
		(	GRAND TOTAL:	347				

## TABLE 3 - SUMMARY ANALYSIS OF ARTIFACTS FROM SHIP FOUND AT WORLD TRADE CENTER SITE **GROUPED BY ARTIFACT TYPE AND SUBTYPE**

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Page 1

Туре	<u>Subtype</u>	<u>Quantity</u>
BIRD SHOT BUCK SHOT BUTTON CANNON BALL CLAY MARBLE COAL COIN CONCRETION GLASS		251 8 1 2 1 1 6 2
GRAPE SHOT GRAPE SHOT GRAPE SHOT	4 OZ 6 OZ 7 OZ	2 1 1
	GRAPE SHOT TOTAL:	4
GUN SPALL LEAD LEAD SHEETING LEATHER		3 2 2 3
MUSKET BALL MUSKET BALL MUSKET BALL MUSKET BALL MUSKET BALL MUSKET BALL	ANIMAL CHEWE HEMISPHERE OUT OF ROUND ROUND SHORT SHOT WEDGE MUSKET BALL TOTAL:	1
NAIL POUCH UNKNOWN WOOD		1 1 1 1
	GRAND TOTAL:	347

# EXPERIMENT: DETERMINING THE MANUFACTURING METHOD FOR SMALL LEAD BIRD SHOT

by Daniel M. Sivilich November 30, 2010

In July of 2010, a 32' fragment of a wooden sailing vessel was found in the subsoils of The World Trade Center site in Lower Manhattan. 346 artifacts were found that had the potential of being  $18^{th}$ -century military. I was retained to identify and possibly determine the age of them. 251 of the artifacts were identified as bird shot - lead shot with diameters ranging from 0.08" to 0.20" inclusively. Only 8 buck shot were found. Buck shot, 0.21" - 0.36" diameter lead shot, is typically made from a 2 part mold. The casting usually leaves an imprint of the mold seam and a clip mark of where the sprue was attached to the ball.





Figure 1 - 1776 mold (Courtesy of Monmouth County Historical Association, Freehold, NJ)

Figure - buck shot with sprue cut (WTC-USP-006-1)

However, all of the birdshot that was examined lacked these characteristics and were "apple" shaped with a concave dimple:



Figure 3 - Bird shot (WTC-FS9-5)

Since the bird shot were clearly not made in a mold, the next possibility was that they were made from a "shot tower". In 1782, William Watts, a plumber from Bristol, England, was awarded a patent for making lead shot that was "solid throughout, perfectly globular in form, and without the dimples, scratches and imperfections, which other shot, heretofore manufactured, usually have on their surface." Watts determined when molten lead is dropped as a small droplet from a great enough height, the lead will become spherical and will harden enough not deform when hitting the water surface (Minchinton, 1990). In the earlier shortdrop method the water cooled and hardened the shot. The earliest shot tower build in the US was erected in 1808 by John Bishop, Thomas Sparks and James Clement in Philadelphia (Spivak 2007).

In an attempt to identify the type and rough time period of manufacture, I designed a preliminary experiment. Using available materials, I took some 40/60 tin/lead solder in approximately 1/8" diameter wire form. Using a propane torch while standing, I melted several droplets off into a container of cold tap water which was on the floor. The drop height was approximately 5'. The results are shown in Figure 4. The lead did not have sufficient time to solidify. I therefore increased the height to 7' by standing on a chair. These results are shown in Figure 4. Nearly the opposite effect than expected was achieved. The lead splatter was worse. Clearly significantly less height would be needed.



Figure 4 - drop height of 5'



Figure 5 - drop height of 7'

I found that as I got closer to the water, the more spherical/apple-shaped the drops became and began developing the desired concave dimple. I reduced the height to less than 1/4" from the water. The resulting shot produced are shown in Figure 6 next to actual shot recovered from the ship remains.



Figure 6 - experimental shot to the left, actual shot (FS9-3) to the right

The results clearly show a concave dimple. All of the experimental samples produced were weighed and found to be 0.2 - 0.3 grams which is consistent with the largest quantities of bird shot found on the ship. My experimental shot were more flat/less spherical than the actual shot. This was to be expected. The amount of heat per unit mass to change a liquid to a solid is known as the latent heat of fusion. The amount of heat required is equal to the value of the latent heat of fusion times the change in temperature. Tin has a latent heat of fusion of 26 Btu/lb and lead 10 Btu/lb (Rohsenow and Hartnett 1973: 3-18). This means that pure lead will take less time to cool in the water and thus pure lead droplets using this method will become more spherical. Using hot water will also allow the droplet to cool slower and become more spherical. I conclude that the shot recovered from the ship was most likely made using this earlier method with hot water. This was most likely before the Sparks shot tower built in 1808 in Philadelphia.

Further evidence that this method was used was when the lead alloy was being melted, a tear drop formed if the heat was not applied uniformly. Figure 7 shows a tear drop that was produced during the experiment (left) and one found on the ship (right).



Figure 7 - Experimental shot on left and actual shot on right

It was concluded through the results of this experiment that:

- 1. The shot from the World Trade Center ship was manufactured using this short height drop method.
- 2. The resultant shot can be improved by dropping molten pure lead into hot water.

## **REFERENCES:**

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Rohsenow, Warren M. and James P. Hartnett

1973 Handbook of Heat Transfer. McGraw-Hill, New York, NY.

## Spivak, Joel

1990 *Sparks Shot Tower, 1808, 129-131 Carpenter Street, Philadelphia PA 1914*, Work Shop of the World, Internet article: http://www.workshopoftheworld.com/south\_phila/sparks.html

### **Curriculum Vitae**

## Daniel M. Sivilich

## **Battlefield Archaeologist**

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## **Summary of Qualifications**

30+ years field experience in prehistoric and historic archaeology. Conducted numerous Phase I and II surveys. One of the founders of the concept of electronic battlefield archaeology, and developed many new methods, both in field techniques and data analysis. Developed and published the formula for determining the diameter of a non-spherical musket ball (Sivilich Formula). Conducted numerous surveys at battlefield sites.

## Education

New Jersey Institute of Technology, B.S., Chemical Engineering, 1971 New Jersey Institute of Technology, Post-graduate courses in Computer Science

## **Publications**

- Sivilich, D.M.1996. Analyzing Musket Balls to Interpret a Revolutionary War Site. *Historical* Archaeology 30(2):101-109
- Sivilich, D.M. 2005. Evolution of MacroArchaeology at the Battle of Monmouth 1778 American Revolutionary War, *Battlefields Archaeological Review*, Yorkshire, England.
- Sivilich, D.M., Stone, G.W., 2003. The Battle of Monmouth: the Archaeology of Molly Pitcher, the Royal Highlanders, and Colonel Cilley's Light Infantry. Self-published pamphlet available at Monmouth Battlefield State Park.
- Sivilich, D.M. 2006 What the Musket Ball Can Tell You: Monmouth Battlefield State Park, New Jersey. "Fields of Conflict" edited by Douglas Scott, Lawrence Babits and Charles Haecker, Praeger Security International Press, West Port, CT, Vol 1:84 - 101.
- Sivilich, D.M., 2007. Accuracy Testing of Hand-Held GPS Units and Other Methods of Measuring Spatial Data. *Bulletin of the Archaeological Society of New Jersey*, No.62 2007:64-72.
- Sivilich, D.M., Stone, G.W., 2009. The Archaeology of Molly Pitcher, *American Revolution*, Volume 1, October 2009, Issue 3:11-14, Camden, South Carolina.
- Stone, G.W., Sivilich, D.M. and Lender, M.W. 1996. A Deadly Minuet: The Advance of the New England "Picked Men" against the Royal Highlanders at The Battle of Monmouth. *The Brigade Dispatch*, Volume 26, No. 2, Brigade of the American Revolution, River Vale, NJ.

## **Presentations/Papers**

- 2004 **History Channel -** Prominently featured in "Battlefield Detectives the Battle of Monmouth", a television series on battlefield archaeology.
- 2003 **Discovery Channel -** Featured in "Moments in Time Valley Forge the Crucible" demonstrating battlefield archaeology.
- Sivilich, D.M., 1995. The Archaeology of the Battle of Monmouth: Chapter 2 The Repulse of the British 3rd Brigade. Paper presented at the Conference on Underwater and Historical Archaeology, Society for Historical Archaeology, Washington, DC.
- Sivilich, D.M., 1996. Interpreting the Site of General Anthony Wayne vs. the British Grenadiers at the Battle of Monmouth Using Computer Aided Design (CAD) Software. Paper presented at the Conference on Underwater and Historical Archaeology, Society for Historical Archaeology, Washington, DC.
- Sivilich, D.M., 1997. "The Ladies from Hell" Archaeology of the Battle of Monmouth: The Repulse of the British 3rd Brigade. Paper presented at the Conference on the Revolutionary War, sponsored by Council of American Revolutionary War Sites, Philadelphia, PA.
- Sivilich, D.M., 1997. Conducting Effective Archaeological Projects with Limited Resources. Paper presented at the Fourth National Conference on Battlefield Preservation, sponsored by The American Battlefield Protection Program, Charleston, SC.
- Sivilich, D.M., 1997. Using Modern Electronic Technology to Excavate, Analyze and Interpret Large Disturbed Battlefield Sites. Paper presented at the 1999 Annual Meeting of the Council for Northeast Archaeology, St. Mary's City, MD.
- Sivilich, D.M., 2004. Revolutionary War Musket Ball Typology An Analysis of Lead Artifacts Excavated at Monmouth Battlefield State Park. Paper presented at the American Battlefield Protection Program 7<sup>th</sup> National Conference on Battlefield Preservation, Fields of Conflict III Session, Nashville, Tennessee.
- Sivilich, D.M., 2005. Evolution of Macro-Archaeology of the Battle of Monmouth 1778 American Revolutionary War. "Battlefields Annual Review", Pen and Sword Books LTD, South Yorkshire, Great Britain, pp. 72 - 85.
- Sivilich, D.M., 2006. Accuracy Testing of Hand-Held GPS Units and Other Methods of Measuring Spatial Data. Poster presented at the Fields of Conflict Project, 4<sup>th</sup> International Conference, Leeds, England.
- Sivilich, D. M., 2006. What the Musket Ball Can Tell You: Monmouth Battlefield State Park, New Jersey. "Fields of Conflict" edited by Douglas Scott, Lawrence Babits and Charles Haecker, Praeger Security International Press, West Port, CT, Vol 1:84 101.

- Sivilich, D.M., 2008. The Battle of Monmouth: the Archaeology of Molly Pitcher, the Royal Highlanders, and Colonel Cilley's Light Infantry. Paper presented the Annual Middle Atlantic Archaeology Conference (MAAC), Ocean City, MD.
- Sivilich, D.M., 2009. Following the Evidence From Valley Forge to the Battle of Monmouth: A Study of Musket Balls and Their Uses by Soldiers in the Continental Army. Paper Presented at the Conference on Underwater and Historical Archaeology, Society for Historical Archaeology, Toronto, Ontario, Canada.
- Sivilich, D.M., 2010. HEAR THE CANNONS ROAR! 20 Years of Metal Detecting at a Revolutionary War Site or Electronic Archaeology at Monmouth Battlefield State Park, Freehold/Manalapan, NJ. Paper Presented at the Conference on Underwater and Historical Archaeology, Society for Historical Archaeology, Amelia Island, Florida.
- Sivilich, D.M., Stone, G.W., 2001. Monmouth Battlefield Update: Interpreting a Disturbed Site. Joint paper presented at the 2001 Annual CNEHA (Council for Northeast Historical Archaeology), Niagara Falls, Ontario, Canada.
- Sivilich, D.M., Stone, G.W., 2009. *The Archaeology of Molly Pitcher*. "American Revolution", American Revolution Association, Camden, SC, pp 11-14 and cover.

## Grants

New Jersey Council for the Humanities - 2006 For the purchase of two Molly Pitcher wayside exhibits at Monmouth Battlefield State Park by BRAVO: \$2,750

New Jersey Historical Commission - 2003 For the acquisition of a total station laser transit by BRAVO: \$9,000

New Jersey Historical Commission -1997

For the conservation of ferrous artifacts excavated by Deep Search Metal Detecting Club at Monmouth Battlefield State Park: \$8,000

## Significant Sites Excavated

Aug. 15-16, 1689	Battle of Zboriv, Ukraine
Dec. 8, 1776	Battle of Two Bridges, Branchburg, NJ
1776 -	Raritan Landing British/American Encampment, Piscataway, NJ
1776 - 1777	Continental Arms Factory at Pickering Creek, East Pikeland, PA
1777	Fort Montgomery, Ft Montgomery, NY
Jan. 3, 1777	Battle of Princeton, Princeton, NJ
March, 1777	American Barracks burned by the British, Peekskill, NY
June 26, 1777	Battle of Short Hills and Oak Tree Pond, Edison, NJ
July 7, 1777	Battle of Hubbarton, Hubbarton, VT
Sept. 3, 1777	Battle of Cooch's Bridge, Newark, DE and Glasgow, DE
Sept. 11, 1777	Batttle of Brandywine, Birmingham Township, PA

Sept. 11, 1777 Sept. 21, 1777 1777 1777 - 1778 June 28, 1778	Sandy Hollow section of the Battle of Brandywine, PA Paoli Battlefield/Massacre Site, Malvern, PA Wayne's Brigade encampment site, Washington Valley Park, NJ Valley Forge Encampment, Valley Forge, PA and Lower Providence Twp., PA Battle of Monmouth, Freehold/Manalapan, NJ
1778 -	Revolutionary War artillery road between West Point and New Windsor, Cornwall NY
1778 - 1778 - 1779 1779 - 1780 June 7, 1780 June 23, 1780 Aug. 19, 1782 1862 - 1864 1933 - 1942	Cornwall, NY Redoubt #3 and #4, United States Military Academy, West Point, NY American Revolutionary War artillery school and encampment, Pluckemin, NJ Jockey Hollow Encampment at Saint Mary's Abbey, Morristown, NJ Battle of Connecticut Farms, Union, NJ Battle of Springfield, Springfield, NJ Battle of Blue Licks, Mt. Olivet, KY Camp Vredenburg, Manalapan, NJ Bass River State Park CCC camp site, New Gretna, NJ
1933 - 1942	Voorhees State Forest CCC camp site, Glen Gardner, NJ

## **Community Service Awards**

- Volunteer Recognition Award by the State of New Jersey, Department of Parks and Forestry.
- Recipient of the 1999 New Jersey State Historic Preservation Award in the field of archaeology
- Recipient of the 1999 American Association of State and Local History Award of Merit in the field of archaeology
- Recipient of a State of New Jersey General Assembly Resolution for work done in archaeology at Monmouth Battlefield.
- Commissioned as a member of the Honorable Society of Kentucky Colonels by the Governor of Kentucky for the work at Blue Licks Battlefield State Resort Park.

## **Professional Memberships:**

- Archaeological Society of New Jersey
- Council for Northeast Historical Archaeology
- Past Vice Chairman NJ Living History Advisory Council
- Society of Historical Archaeology
- Mid Atlantic Archeology Conference

Appendix E: Flotation Analysis by Justine McKnight

# Report on the Analysis of Flotation-recovered Archeobotanical Remains from the VSC World Trade Center Ship Site, New York, New York.

#### **INTRODUCTION**

Archaeological investigations recently conducted at the World Trade Center (WTC) site by AKRF, Inc., revealed the remains of a partially intact eighteenth century sailing vessel. A series of flotation samples taken from contexts associated with the buried ship yielded a collection of well-preserved plant remains associated with food, fuel and naval architecture. Archeobotanical information secured from the WTC ship contributes to our understanding of vessel construction, operation, and abandonment. In addition, the macro-botanical dataset augments the interpretation of landscape form and function of lower Manhattan Island in the late eighteenth century, including the development of made land.

A total of 12 soil samples were selected for study, and submitted to archeobotanical consultant Justine McKnight at her Severna Park, Maryland laboratory for processing and analysis. Table 01 provides a summary of the samples.

	Volume	Soil	
Sample No.	(liters)	Chemical	description
			2 bags. Sticky dark grey clay, organic
1	4.25	yes (2)	conglomerate. From beneath orlop deck
2	1.5	yes (2)	FN9 and FN10
3	1.25	yes (2)	Between FN2 and FN3
4	1.25	yes (2)	Between FN7 and FN8
5	1.25	yes (2)	FN17 and FN18
			clay, shell. Clay sample from east side of timber
6	2.25	yes (2)	wall btw T3 and T4
7	1.25	yes (2)	Between FN14 and FN15
8	1.25	yes (2)	FN22 and 23
			fine sediment around keel and apron. Oily,
9	1	yes (2)	petroleum smell
			very tiny sample. Oily. From between FN5 and
10	0.025	yes (1)	FN6.
11	~1	yes (1)	two fragments worked wood in oily matrix
12	0.5	yes (2)	tar
12 samples	15.775		

Table 01: Summary of Flotation Samples.

#### **METHODS**

A small vial (approximately 30 ml) of sediment was removed for future soil chemical analyses from each of the 12 soil samples submitted for flotation. The remainder of each soil sample was thoroughly air dried and sample volumes were recorded. Flotation samples were individually

processed using a Flote-Tech flotation system equipped with 0.325mm fine fraction and 1.0mm coarse fraction screens. The Flote-Tech system is a multi-modal flotation system which facilitates the separation and recovery of plant materials from the soil matrix via agitation in water. Processing resulted in two size fractions (heavy and light). The oily nature of many of the flotation samples necessitated periodic clean-outs of the flotation tank during processing to prevent the adhesion of small particles to the interior of the machine or the occlusion of screens with oil and/or tar residues. Recovered floted portions were air dried.

Dried flotation fractions were passed through 5mm and 2mm geological sieves, producing standard size divisions to aid analysis. Organic preservation within the sampled features was excellent, and both carbonized and non-carbonized botanical remains associated with the historic operation and abandonment of the ship were preserved. All botanical remains were included in the analysis, but their state (carbonized/non-carbonized) is in all cases clearly noted. All greater than or equal to 2mm archeobotanical specimens were examined under low magnification (10X to 40X) and sorted into general categories of material (i.e. wood, seed, nutshell, miscellaneous plant material, etc.). Description, count and weight were recorded for each category of the greater than or equal to 2mm carbonized material. The less than 2mm size fractions were examined under low magnification and the remains of seeds and cultivated plants were removed for identification.

Identifications were routinely attempted on all seed, nut, and miscellaneous plant remains, and on a sub-sample of 20 randomly selected wood charcoal fragments and 20 randomly selected non-carbonized wood fragments from each sample containing *more* than twenty specimens, in accordance with standard practice (Pearsall 2000). Identifications of all classes of botanical remains were made to the genus level when possible, to the family level when limited diagnostic information was available, and to the species level only when the assignment could be made with absolute certainty. All identifications were made under low magnification (10X to 40X) with the aid of standard texts (Edlin 1969; Kozlowski 1972; Hoadley 1990; Martin and Barkely 1961; Panshin and deZeeuw 1980; Schopmeyer 1974) and checked against plant specimens from a modern reference collection representative of the flora New York. Specimen weights were recorded using an electronic balance accurate to 0.01 grams.

#### RESULTS

The 12 individual samples flotation-processed for the recovery of plant macro-remains yielded a total of 1.72 grams of charcoal and 628.855 grams of non-carbonized archaeological plant material. Ninety-two percent of the analyzed samples contained archaeological plant remains (none were preserved in Sample Number 2 from FN9 and FN10). Identified plant remains include wood charcoal, non-carbonized wood fibers, non-carbonized bark, non-carbonized shavings or wood chips, nutshells, and seeds (representing a variety of plant foods including field crops, orchard and garden products, as well as ruderal weeds), and miscellaneous materials including deciduous leaf fragments and moss. An inventory of flotation-recovered plant remains is presented by Sample Number in Table 02.

In addition to the archeobotanical remains, the flotation samples contained an array of small artifacts and natural materials. Table 03 details the non-botanical materials observed in the analyzed samples.

						4015.02							
sample number	1	2	3	4	5	ABLE 02 6	7	8	9	10	11	12	totals
	beneath orlop	FN9 and	Between FN2 and	Between FN7 and	FN17 and		between FN14 and	FN 22 and	around keel and	between FN5 and			
description	deck	FN10	FN3	FN8	FN18	Betweren T3 and T4	FR15	FN23	apron	FN6	outer hull	CS 2/5	12 samples
						clay from east side of timber wall			fine sediment	oily soil	2 pieces of wood in oily matrix	tar	
initials of excavator	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD		
date of excavation	7/26/10		7/26/2010	7/26/22010	7/26/2010	6/30/2010	7/27/2010		7/28/2010	7/28/2010			
volume (I) weight carbonized plant remains (grams)	4.25 0.21	1.5 0	1.25 0.61	1.25 0.12	1.25 0.04	2.25 0.21	1.25 0.26	1.25 0	1 0.06	0.025			
weight non-carbonized plant remains (grams)	11.605	0	25.27	20.65	10	15.43	5.79	34.91	29.23	6.91		25.56	
WOOD CHARCOAL (n of	11	0	48	12	2	13	61	0	2	0	0		
total weight (grams) Carya spp. (hickory)	0.21	0	0.61	0.12	0.04	0.21	0.26		0.06	0	0	0.21	1.72
Pinus spp. (pine)	5		8	6	1							11	
Quercus spp. (white oak group)	5			6		1			1				13
Quercus spp. (oak) ring porous	1		8			1			1				8
diffuse porous							1					1	2
coniferous						5							5
unidentifiable			20	12		5	20					- 13	5
charcoal fragments identified	11	0	20	12	2	13	20	0	2	0	0	12	92
NON-CARBONIZED WOOD (n of	435	0	729	571	241	0	337	792	591	179			
total weight (grams)	11.6		25.11	20.62	9.92	0	5.77	34.88	29.02	6.83	443.5	25.04	612.29
											2 (dimensions 22cmx12.5cm		
Pinus spp. (pine)	20		17	8			2		2		and 14cmx6cm)	20	71
Quercus spp. (red oak group)				6	3								9
Quercus spp. (white oak group)					5		18	13	14	20			70
Quercus spp. (oak) ring porous taxa				6	12								6
deciduous taxa								1	4				5
non-carbonized wood fragments identified	20	0	20	20	20	0	20	20	20	20	2	20	182
NON-CARBONIZED WOODY BARK (n of	0		0	0	Ö	594	0	0	0	0	0		594
total weight (grams)	0	0	0	0	0	14.49	0		0	0			
NON-CARBONIZED WOOD SHAVINGS or CHIPS (n of	0	0	0	0	7	149	0		0	0.03	0	0	
Pinus spp. (pine) total weight (grams)					7	20				3	0	0	30
Quercus sp. (oak)										2			2
non-carbonized wood shaving fragments identified					7	20				5			32
NUTS, NON-CARBONIZED (n of fragments)	0	0	1	0	0	0	0	0	0	0	0	0	1
total weight (grams)	0	0	0.08	0	0	0	0		0	0		0	0.08
Carya illinoensis (pecan)			1										1
MISCELLANEOUS, NON-CARBONIZED (n of	0	0	1	2	0	0	0	0	0	2	0	0	5
total weight (grams)	0	0	0.03	0.02	0	0	0		0	0.03	0		
POACEAE (grass) stem fragment			1										1
moss deciduous leaf fragment				1						2			1
				1						2			
NON-CARBONIZED SEEDS (n of specimens)	1	0	16	7	14	9	7	15	36	6	0	34	
total weight (grams)	0.005		0.05	0.01	0.02	0.02	0.02	0.03	0.21	0.02	0	0.52	0.905
Amaranthus spp. (pigweed) Cucumis sp. (melon or cucumber)			1										1
Cucurbita sp. (squash) fragment									1			1	
Datura stramonium (jimsonweed)			5	2	6			4				5	33
Panicum/Setaria (panic/foxtail grass) Phytolacca americana (poke)			1							1			1
Polygonum sp. (knotweed)									1				1
Potentilla sp. (cinquefoil)			1					2					3
Prunus persica (peach) Prunus sp. (cherry)			. 1									1	1
nearly complete									2			6	8
fragment					1				7			6	
Pyrus malus (apple) seed coat fragments Rubus sp. (blackberry/raspberry)			4	2	7	5		7	3			6	
fragment			4		'			· · · · ·	3			1	1
Sambucus canadensis (elder) seed			1					1					2
Vitis sp. (grape) entire			1						13		·		14
fragment CUCURBITACEAE (squash family) fragment						····		1	ь				1
UMBELLIFERAE (carrot family) fragment				1				1					1
POACEAE (grass family)												1	
POLYGONACEAE (knotweed family) SOLACEAE (nightshade)	1											1	5
unidentifiable seed fragments				2									2
unidentifiable seed coat fragments										1			1

#### Wood Remains

Wood charcoal was present in 67 percent of the flotation samples analyzed. A total of 161 fragments of wood charcoal weighing 1.72 grams was recovered. Of this total, 92 fragments (a maximum of 20 fragments per sample) were randomly selected for identification. The subsample was composed of pine species (*Pinus spp.*) (31 fragments or 34 percent of the subsample selected for identification); hickory (*Carya spp.*) (25 fragments or 27 percent), white oak (*Quercus spp.*) (13 fragments or 14 percent), oak (*Quercus spp.*) (eight fragments or nine percent), coniferous (five fragments or five percent), unidentifiable (five fragments or five percent), ring porous (three fragments or three percent) and diffuse porous (two fragments or two percent). See Figure 01.

sample	comple location	datails	artifacts observed
number	sample location	details	artifacts observed
			brick, mortar, coal, lead shot**, coal,
1	hanaath arlan daal	abundant organic	barnacle*, small snails, fish scale, insect body
Ŧ	beneath orlop deck	conglomerate, heavy clay	parts
		organic conglomerate, no	
2	FN9 and FN10	heavy fraction material recovered	insect body parts
2		Tecovered	
			conditional hormoclas iron conglemente
3	Between FN2 and FN3		sandstone, barnacles, iron conglomerate, oyster spat, snails, bone, insect parts, sponges
5	between inz and ins		leather**, brick, coal, small bivalves*, small
4	Between FN7 and FN8		gastropods*, insect parts, lead shot**
	between inv and inv	fibrous peaty material,	fish scale, pink foam (modern)***, coal, shell,
5	FN17 and FN18	organic conglomerate	brick, small clams*, small gastropods*
5			
		clay from east side of timber wall, shell, leaves, dense	quartzitic gravel, brick, glass*, ant body parts,
		deposit not ship related,	clay peds, crushed shell, large oyster shells**,
6	Between T3 and T4	organic/peaty conglomerate	fish bone
	between FN14 and		brick, iron, insect parts, small gastropods, mica
7	FR15		flecks, small clay peds
			crab claw, coal, small bivalve, periwinkle-like
			gastropod*, spat*, small snails*, quartzitic
8	FN 22 and FN23	organic conglomerate	gravel, oyster spat
		fine sediment, oily sample,	abundant lead shot**, coal, bone, cutlery
9	around keel and apron	strong petroleum smell	handle**, shell, bone
			small gastropods*, brick, insect parts, crab
10	between FN5 and FN6	oily soil	claw, lead shot**
		2 pieces of wood in oily	
11	outer hull	matrix	fine gravel
			<pre>tarred rope**, tarry/fibrous conglomerate**,</pre>
			hair**, woven fabric**, fish scale, lead shot**,
12	CS 2/5	tar	crab claw, brick, coal, bone

Table 03: Non-botanical materials observed in the WTC Ship samples.

\* sample of artifact separated

\*\*all of artifact type separated

## \*\*\*used by the archaeologists during ship removal

Fragments of non-carbonized wood were abundant and ubiquitous, being present in 83 percent of the analyzed flotation samples and totaling 4,982 fragments weighing 612.29 grams. Of this total, 182 (a maximum of 20 fragments per sample) were randomly selected for identification. Pine (*Pinus spp.*) (71 fragments or 39 percent of the subsample selected for identification) and white oak (*Quercus spp.*) (70 fragments or 38 percent) were the most common non-carbonized wood types encountered. Also identified were oak (*Quercus sp.*) (21 fragments or 12 percent), red oak (*Quercus spp.*) (nine fragments or five percent), ring porous (six fragments or three percent) and deciduous (five fragments or three percent) (see Figure 02).

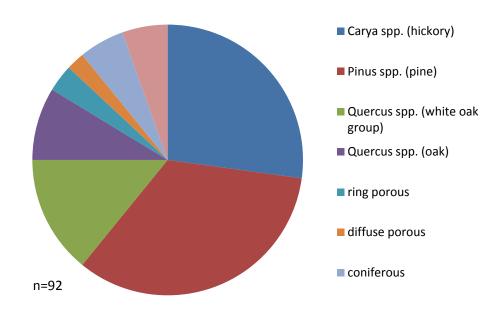
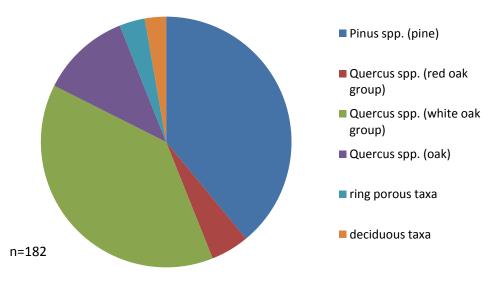
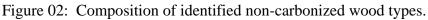


Figure 01: Composition of identified wood charcoal types.





The remains of tree bark were found in concentration within Sample Number 6 (between T3 and T4, from the east side of timber wall). The bark material totaled 594 fragments weighing 14.49 grams.

Wood shavings or wood chips (not carbonized) were found in 25 percent of the flotation samples (Sample Numbers 5, 6, and 10). These totaled 161 > or = 2mm fragments weighing 1.01 grams. Of this total, 32 (a maximum of 20 fragments per sample) were randomly selected for identification, revealing a predominance of pine (*Pinus spp.*) (30 fragments or 97 percent) with some oak (*Quercus spp.*) (two fragments or three percent).

#### Nutshell Remains

Flotation-recovered nut remains were limited to a single fragment of non-carbonized pecan shell *(Carya illinoensis)* from Sample Number 3 (secured from between FN2 and FN3).



Figure 03: Fragment of pecan hickory (*Carya illinoensis*) Sample No. 3 (between FN2 and FN3). *Scale: 1 mm grid* 

Miscellaneous plant remains identified within the assemblage included three deciduous leaf fragments, moss, and a grass stem fragment.

The archeobotanical assemblage from the WTC ship site included an abundance of noncarbonized seed remains (a total of 145 specimens). Twenty-one discrete taxa were identified, representing a variety of growth environments and cultural applications (orchard tree fruits and vine fruits, garden produce, weeds, wild edible fruits). Table 04 presents the seed types identified by cultural application and growth environment. Seeds were recovered from 83 percent of the flotation samples analyzed, but were most abundant within Sample Numbers 9 and 12.



Figure 04:Melon or cucumber seed (Cucumis sp.) seed recovered from Sample No. 3<br/>(Between FN2 and FN3). Scale: 1 mm grid



Figure 05: Squash (*Cucurbita sp.*) seed fragment recovered from Sample Number 9 (around keel and apron). *Scale: 1 mm grid* 



Figure 06:Peach (Prunus persica) seed fragment s a common seed recovered from<br/>Sample No. 3<br/>(Between FN2 and FN3). Scale: 1 mm grid

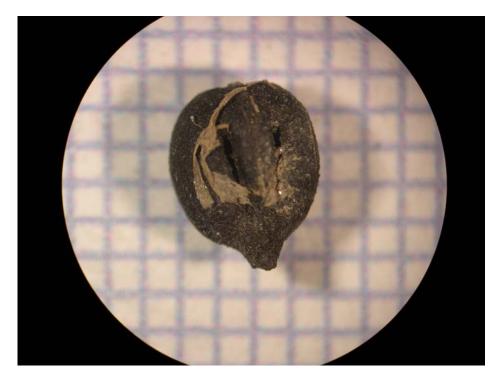


Figure 07:Grape (Vitis sp.) seed recovered from Sample No. 3<br/>(Between FN2 and FN3). Scale: 1 mm grid

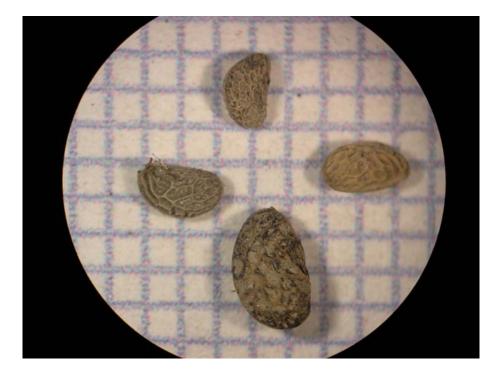


Figure 08:Raspberry (Rubus spp.) was the most abundant seed type encountered (n=34).Photographed specimens recovered from Sample No. 3<br/>(Between FN2 and FN3). Scale: 1 mm grid



Figure 09: Apple (*Pyrus malus*) seed from Sample Number 9 (around keel and apron). Scale: 1 mm grid

Garden-grown vegetables are represented in the WTC ship assemblage by the presence of melon or cucumber (*Cucumis sp.*) (one seed), and squash (*Cucurbita sp.*) two seed fragments.

The remains of orchard tree fruits and vine fruits within the assemblage total 88 specimen. Peach (*Prunus persica*) (one seed fragment), cherry (*Prunus spp.*) (23 specimens), apple (*Pyrus malus*) (nine specimens), blackberry or raspberry (*Rubus spp.*) (35 fragments) and grape (*Vitis spp.*) (20 specimens) were identified.

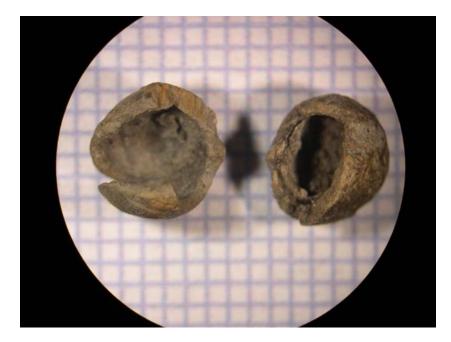


Figure 10: Cherry (*Prunus spp.*) seeds recovered from Sample No. 3 (Between FN2 and FN3). *Scale: 1 mm grid* 

The remains of wild-gathered foods are indicated by the presence of elder (*Sambucus canadensis*) (two seeds) from two separate samples (Number 3 between FN2 and FN3, and Number 8 between FN22 and FN23).

Weedy plant taxa that thrive in disturbed settings were ubiquitous and abundant across the sampled areas of the ship site. Pigweed (*Amaranthus spp.*), jimsonweed (*Datura stramonium*), panic or foxtail grass (*Panicum or Setaria sp.*), poke (*Phytolacca americana*), knotweed (*Polygonum sp.*), cinquefoil (*Potentilla sp.*), carrot (*UMBELLIFERAE*), grass (*POACEA*) and knotweed family (*POLYGONACEAE*) were identified. Some of these taxa produce edible greens in the early springtime, long before the plants produce the mature seeds found archaeologically at the WTC site. It is the opinion of the analyst that the weedy plant seeds recovered through flotation do not represent the remains of food.

	Total number of specimens	146
	Total weight seeds (grams)	0.985
garden crop	Cucumis sp. (melon or cucumber)	1
	Cucurbita sp. (squash) fragment	2
	CUCURBITACEAE (squash family) fragment	1
orchard tree or vine fruit	Carya illinoensis (pecan)	1
	Prunus persica (peach)	1
	Prunus sp. (cherry)	23
	Pyrus malus (apple) seed coat fragments	9
	Rubus sp. (blackberry/raspberry)	35
	Vitis sp. (grape)	20
wild edible	Sambucus canadensis (elder) seed	2
weed	Amaranthus spp. (pigweed)	1
	Datura stramonium (jimsonweed)	33
	Panicum/Setaria (panic/foxtail grass)	1
	Phytolacca americana (poke)	1
	Polygonum sp. (knotweed)	1
	Potentilla sp. (cinquefoil)	3
	UMBELLIFERAE (carrot family) fragment	1
	POACEAE (grass family)	1
	POLYGONACEAE (knotweed family)	5
unknown	SOLACEAE (nightshade)	1
	unidentifiable seed fragments	2
	unidentifiable seed coat fragments	1

Table 04: Recovered comestibles arranged by application and growth environment.

## DISCUSSION

The archeobotanical materials were recovered through soil flotation from 12 discrete contexts directly associated with a partially intact eighteenth century sailing vessel excavated from the WTC site. Plant macro-remains recovered from the ship reveal details of shipboard life and the organization and use of space. Specifically, the excavated contexts yielded information relating to diet, cargo, vessel construction and the historic landscape.

The sampled contexts contained both carbonized and non-carbonized plant remains. Noncarbonized seeds occurring within archaeological soil samples from open-site environments are usually considered to be modern specimens (Minnis 1981; Keepax 1977; Smith 1985). However, anaerobic, water-saturated soil conditions such as those at the WTC ship site constitute an exception to this rule. Organic preservation was excellent, and a wide range of noncarbonized plant elements were preserved and identifiable.

The recovered archeobotanical assemblage provides valuable information about food plants associated with the ship. It is unclear whether the recovered comestibles represented the remains of shipboard dining or the remains of produce hauled as cargo. Abundant vine, orchard and garden seeds attest to an emphasis on fruit, nut and vegetable products to the economy of the vessel. The remains of elder allied with cultivated plant foods suggest that wild foods also made a contribution to the palate of plant foods associated with the ship. The remains of edible plants were recovered from 10 of the 12 flotation samples analyzed from the WTC ship, and they were found in concentration within Sample Number 3 (between FN2 and FN3), Sample Number 9 (around the keel and apron), Sample Number 12 (CS 2/5) and Sample Number 8 (FN 22 and FN 23). The remains of edible plants do not appear to be centralized within one portion of the ship. Rather, comestible plant remains are found from the ship's stern to the eastern limits of the ships remains (amidships). This pattern of distribution suggests that seed and nut remains might have been somewhat evenly distributed throughout the vessel. Alternatively, these minute plant artifacts may have been subjected to movement by water at the time the ship was scuttled and in the early years following ship abandonment or during constant hosing of the vessel by the archaeologists to keep it from drying out until the ship timbers could be removed.



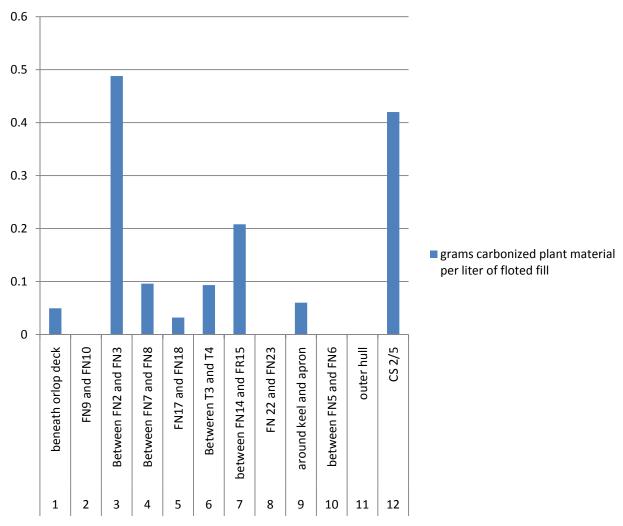
Figure 11: Elder (*Sambucus canadensis*) seed recovered from Sample No. 3 (Between FN2 and FN3). *Scale: 1 mm grid* 

Archeobotanical remains can provide strong markers for seasonality and the data from the WTC ship site suggest some seasonal patterns. Most of the food plants represented in the seed assemblage would have been available for consumption or processing during the summer and early autumn. However, determining seasonality of archaeological fill is difficult, as almost all of the comestible plant remains documented at the site constitute readily storable foods, and the specimens recovered from archaeological contexts may represent preserved foods used at any time of the year.

Examining the density of recovered plant remains by context, some clear patterns emerge (see Figures 12 and 13). Carbonized plant remains are most abundant (based on the measure of grams of carbonized material per liter of fill floted) within Sample Number 3 (between FN2 and

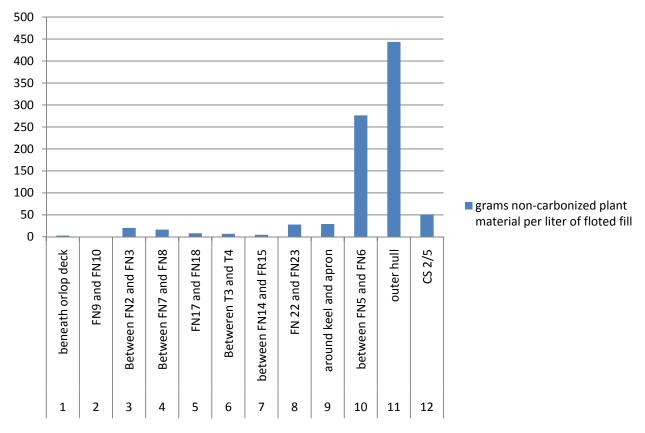
FN3) and Sample Number 12 (Ceiling Plank South 2/5). Non-carbonized archeobotanical materials were most dense with Sample Number 10 (between FN5 and FN6) and Sample Number 11 (the outer hull).

With the exception of Sample Number 2 (FN9 and FN10) all 12 of the flotation samples produced macro-botanical artifacts. The remains of edible plants were recovered from 83 percent of the analyzed samples (none were recovered from Sample Number 1 (beneath the orlop deck) and Sample Number 2 (FN9 and FN10). Sample Numbers 3, 9, 12 and 8 were particularly food-rich. Sample Number 6 (between T3 and T4) was unique in that it contained a concentration of woody bark in association with pine wood shavings.



grams carbonized plant material per liter of floted fill

Figure 12: Density of carbonized plant remains from sampled contexts.



#### grams non-carbonized plant material per liter of floted fill

Figure 13: Density of non-carbonized plant remains from sampled contexts.

The flotation-recovered wood assemblage reveals a predominance of non-carbonized pine and white oak woods and carbonized hickory and white oak species. The recovered wood shavings/chips were predominantly pine. The wood types documented within the flotation samples concur with the results of analysis of ships timbers (Blanchette 2010). All woods identified from the WTC ship site have a wide natural distribution and could have been obtained locally on the Hudson River, or far afield.

Other markers for local environmental conditions provided by the flotation-recovered assemblage include an array of common ruderal weeds (pigweed, jimsonweed, panic or foxtail grass, poke, knotweed, cinquefoil, carrot, grass and nightshade). These taxa are common plants in the middle Atlantic region, growing aggressively in disturbed areas such as the edges of wetlands, floodplains, forests and commonly in anthropogenic habitats such as urban land, house yards, agricultural fields and gardens. The plant taxa documented archeobotanically are highly adaptive, and none provide evidence of *specific* environmental conditions at the site at the time the ship was abandoned.

#### SUMMARY

Plant macro-remains recovered through soil flotation from 12 discrete contexts directly associated with the eighteenth century sailing vessel excavated at the World Trade Center site provide important information about the vessels operation and abandonment in the late eighteenth century. A rich floral dataset provides evidence of an array of edible plant resources in addition to carbonized and non-carbonized wood remains. While it is not possible to fully interpret the nuances of shipboard dining or the ship's cargo based on these archeobotanical data, there is abundant evidence of the importance of garden and orchard products onboard. Details of ship architecture are revealed in the flotation-recovered wood assemblage (white oak, pine, unspecified oak) and in the wide array of minute non-botanical artifacts recovered through the flotation process. Weedy herbaceous taxa indicative of disturbed habitats are well-represented in the non-edible seed assemblage and provide some general information about the local environment at the time of the ship's abandonment.

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Appendix F: Timber Species Identification by Dr. Robert Blanchette

Robert A. Blanchette, Professor Department of Plant Pathology 495 Borlaug Hall, 1991 Upper Buford Circle University of Minnesota St. Paul, Minnesota 55108-6030 U.S.A. *Phone: 612-625-0202 Fax: 612-625-9728 E-mail: robertb@umn.edu http://forestpathology.cfans.umn.edu* 

September 9, 2010

Warren Riess Research Assoc. Professor History & Marine Sciences University of Maine 193 Clarks Cove Road Walpole ME 04573

Dear Warren,

Attached is a table showing the identification of the woods sent from the Manhattan ship. Twenty samples were received and all of these were identified. The wood types include white oak, spruce, hard pine (similar to southern yellow pine) and hickory. If you have questions please let me know.

Sincerely,

Roo G. BL

Robert A. Blanchette Professor

Sample	Notes	Wood Species
CN 2/4		Picea sp. (Spruce)
CN 4/4		Quercus sp. (White oak group)
CN 1/7		Pinus sp. (Hard pine, southern or
		western species, not red pine.
CS 1/3		Quercus sp. (White oak group)
NN 1/1		Quercus sp. (White oak group)
OP 11		Picea sp. (Spruce)
OP 9/1		Picea sp. (Spruce)
SN-1	Soft sample	Picea sp. (Spruce)
ODB 1/1		Quercus sp. (White oak group)
FN 5		Quercus sp. (White oak group)
FN 21	Surface, hard timber	Quercus sp. (White oak group)
FN 7	Hard timber w/ soft spots	Quercus sp. (White oak group)
FS 10-2/1	Deteriorating	Quercus sp. (White oak group)
Keelson	Surface	Quercus sp. (White oak group)
ST-2	Interior	Quercus sp. (White oak group)
AP-3	Surface	Quercus sp. (White oak group)
PS 3-2 B	Interior	Quercus sp. (White oak group)
PN 8-2	Surface	Quercus sp. (White oak group)
Keel A (East)	Surface	Carya sp. (Hickory)
Keel B (West)	Interior	Carya sp. (Hickory)

Manhattan ship wood samples received August 19, 2010 from Carrie Atkins Fulton and Warren Riess.

#### Manhattan Ship Wood Identification

#### Samples received August 19, 2010

The identification of wood samples from the Manhattan Ship were made based on micromorphological characteristics observed under magnification using both a stereo and compound microscope. The samples were identified to the generic level and include 2 softwoods (*Picea* sp. [spruce] & *Pinus* sp. [pine]) and 2 hardwoods (*Carya* sp. [Hickory] & *Quercus* sp. [White oak group]). The microscopic features used to differentiate the samples can be found in Hoadley 1995, InsideWood 2004, Panshin and de Zeeuw 1970, and Schweingruber 1990. Microscopic comparisons were also made with modern woods to confirm the identity. The specific anatomical characteristics used to identify the wood types that were found are as follows:

#### Carya sp. (Hickory)

Growth ring boundaries distinct Wood ring-porous to semi-ring-porous Simple perforation plates Intervessel pits alternate Tyloses common Axial parenchyma vasicentric Axial parenchyma in narrow bands or lines up to three cells wide Axial parenchyma in marginal or in seemingly marginal bands Ray width 1 to 3 cells Larger rays commonly 4 - to 10 seriate All ray cells procumbent

#### Quercus sp. (White oak group)

Wood ring-porous Vessels exclusively solitary (90% or more) Simple perforation plates Intervessel pits alternate Large vessels,  $>= 10 \ \mu m$ Tyloses common Larger rays commonly > 10-seriate Rays of two distinct sizes

#### *Picea* sp. (Spruce)

Resin canals rare Cross field pitting piceoid Ray tracheids with *Picea* type I pits Large bordered pits on radial walls of tracheids seldom paired

#### *Pinus* sp. (Hard pine, southern or western species, not red pine)

Resin canals common Pinoid cross field pitting Dentate ray tracheids

### **Manhattan Ship Samples**

Sample	Notes	Wood Species		
CN 2/4		Picea sp. (Spruce)		
CN 4/4		Quercus sp. (White oak group)		
CN 1/7		Pinus sp. (Hard pine with anatomy		
		similar to wood from 2-3 needle pines		
		such as southern yellow pine. However,		
		the wood is not from red pine which		
		has different characteristics)		
CS 1/3		Quercus sp. (White oak group)		
NN 1/1		Quercus sp. (White oak group)		
OP 11		Picea sp. (Spruce)		
OP 9/1		Picea sp. (Spruce)		
SN-1	Soft sample	Picea sp. (Spruce)		
ODB 1/1		Quercus sp. (White oak group)		
FN 5		Quercus sp. (White oak group)		
FN 21	Surface, hard timber	Quercus sp. (White oak group)		
FN 7	Hard timber w/ soft spots	Quercus sp. (White oak group)		
FS 10-2/1	Deteriorating	Quercus sp. (White oak group)		
Keelson	Surface	Quercus sp. (White oak group)		
ST-2	Interior	Quercus sp. (White oak group)		
AP-3	Surface	Quercus sp. (White oak group)		
PS 3-2 B	Interior	Quercus sp. (White oak group)		
PN 8-2	Surface	Quercus sp. (White oak group)		
Keel A (East)	Surface	Carya sp. (Hickory)		
Keel B (West)	Interior	Carya sp. (Hickory)		

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Appendix G: Dendrochronology Analysis by the Lamont-Doherty Earth Observatory

# **Tree-Ring Dating Results for**

# World Trade Center Vessel Timbers

## Lower Manhattan, New York City

By

Dario Martin-Benito Neil Pederson Laia Andreu Edward R. Cook



Tree-Ring Laboratory, Lamont-Doherty Earth Observatory Columbia University

May 11<sup>th</sup>, 2011

#### Introduction

A significant portion of a wooden vessel was discovered during excavations at the World Trace Center site in July 2010. The World Trade Center (WTC) vessel was thought to have been built in the mid- to late-18<sup>th</sup> century. Because of the potential historical significance of the timbers and WTC site, Molly McDonald contacted the Tree Ring Laboratory of Lamont-Doherty Earth Observatory and Columbia University on behalf of AKRF to determine the feasibility of dating some of the timbers using tree-ring dating techniques. A total of 23 samples were collected and brought to the Tree Ring Laboratory (TRL) for analysis.

The provenance of the ship was unknown. Given that Manhattan was an important economic center, the ship could have been built in either Europe or North America. Therefore, determination of a calendar date for the ship's timbers at the outset seemed potentially difficult if not potentially impossible. However, preliminary analysis by a maritime historian suggested that the vessel was a merchant ship that would have mostly been delivering cargo along the eastern seaboard of North America. Wood identification analysis indicated that the keel was made of hickory (*Carya* spp.), which suggested that the vessel was from temperate eastern North America if the keel and other timbers were from the same location. Hickory is a major tree species in only eastern North America and eastern Asia. Hickory is found from southern New England to the Gulf Coast of North America and inland to the eastern edge of the Great Plains. This improved the possibility that we could successfully identify a cutting date for the timbers that compose the vessel as the TRL likely has the most extensive collection of tree-ring chronologies in eastern North America.

We report on the results to date the timbers in this report.

#### **Tree-Ring Analysis Results**

The 23 samples collected from the WTC vessel were slowly dried prior to analysis. All samples were wet with some being waterlogged. So, slow drying at cooler temperatures was necessary to avoid splitting and cracking associated with rapid shrinking. Further splitting and cracking could impair sample analysis. Another potential issue with dating submerged, historical samples is that the wood could have decomposed to such a degree that the structure of the wood would be too compromised for processing. Therefore, some of the more decayed pieces were glued onto wood boards in order to facilitate processing. After drying, the samples were sanded with progressively-finer sandpaper until tree rings were clearly visible. After sanding, all samples were identified as belonging to locally available broadleaf species. Most of the samples appear to be white oak (*Quercus alba*). The hickory of the keel seems most likely to be shargbark hickory (*Carya ovata*). None of the samples belonged to conifer species. Having multiple samples of the same species for comparison improves the likelihood of dating archaeological timber samples of unknown site origin.

Photographs of the 23 sanded timber samples are shown in **Figure 1**. Samples are identified in **Table 1**. In order to identify the period of construction, we need to determine the year the trees used for these timbers were felled. To do this with certainty requires that the waney edge, or bark edge, of the timber be present. One condition that would hinder identification of waney edge dates is that some have been squared for use in construction. The squaring process reduces the number of available rings for dating and often eliminates the waney edge or the last formed ring. If present, the last ring of formation will correspond to the year of felling.

There are several limitations to the dating of the WTC vessel timbers. First, the keel, keelson, and seven other timbers were squared off prior to construction (Figure 1). Because of this, there is only a small chance that a waney edge is present on these timbers. Second, although eight samples show signs of curvature and sapwood rings, which is indicative of the outer surface of a tree stem, no samples were found to have waney edges with intact bark. Bark is commonly lost after long periods of submersion under water. Third, the sapwood rings, the growth rings located just inside the bark on a stem of a tree, were either extremely narrow or wide with little change in year-to-year growth (**Figure 2**). The patterns of these rings reduced our ability to date the outermost available rings to the level of statistical certainty that we would prefer. Finally, some samples did not have enough rings to adequately identify a calendar date on the sample. Samples with 100 rings are highly desirable as the minimum number of rings for cross-dating historical or archeological samples in the eastern United States. One sample had no discernable rings and was not analyzed.

After sanding, growth rings along two radii of each sample were carefully measured to  $\pm 0.001$  mm precision where possible. Measurements were then compared to master dating chronologies for the appropriate species using the defacto standard computer program to identify potential calendar dates, COFECHA (Holmes, 1983). COFECHA statistically compared the WTC vessel ring measurements to regional master chronologies.

**Table 1** provides the tree-ring dating results. Nine of the dated samples had at least 100 annual rings in them, while 10 had fewer rings than 100 rings. The strongest evidence for the tree felling date prior to construction can be found in sample FN-16-1 as it has the most-recent date of all dated samples, 1773. Also, FN-16-1's outermost sapwood rings indicate a close proximity to missing bark. The t-statistic for FN-16-1 versus the eastern Pennsylvania master chronology is 3.7 while it is 4.0 versus the Philadelphia master. A 't' statistic equal to 3.5 has a probability of about 1 in 1000 of being incorrect. Thus, while these two t-statistics are lower than what we'd prefer, the results indicate that the date for FN-16-1 is unlikely to be incorrect.

A date of 1773 supports the hypothesis of a mid- to late-18<sup>th</sup> century construction date (Table 1). Further supporting this hypothesis, four other samples have outer rings between 1769 and 1770. Therefore, the felling period seems no earlier than 1773. Dates in other samples are harder to understand. For example, Out-8 has a much earlier outer date (1732) and sapwood rings, inconsistent with a 1773 felling period date. This date could suggest an earlier period of construction, repair of the vessel or reuse of older timbers.

The 19 dated oak series from the WTC vessel are strongly correlated with one another (Spearman rank correlation (0.458; *t*<0.001)). The spaghetti plot of these series reflects a strong, interannual agreement (Figure 3). Quite notably, all series drop in ring width in concert during the late-1690s, recover to above-average ring width and then fall in concert again during the 1710s. The strong agreement in ring width variation, especially around the turn of the 18<sup>th</sup> century, suggests a common geographic origin for the WTC vessel timbers. According to maritime historian Norman Brouwer, assembly of the WTC vessel suggests construction in a "small, rural shipyard", not a large shipyard (WYNC.org, 2010).

To further investigate the dating of the WTC vessel oak dates, all measured ring-width series were standardized and converted into an average-annual, radial growth chronology. The World Trade Center vessel oak was compared to independent master chronologies from eastern Pennsylvania, New Jersey and southern New York State (Tables 2 & 3). The strongest correlations and t-statistics are found with the Philadelphia, eastern Pennsylvania and central

New Jersey oak chronologies (Tables 2 & 3). Over the 280-year overlap, the Spearman rank correlation is highly significant (r=0.52-0.53, p<0.001).

Correlations versus other oak chronologies from northern New Jersey and the mid-Hudson River Valley, while significant, are weaker when compared to the Philadelphia, eastern Pennsylvania and central New Jersey chronologies. The correlation matrix among the independent chronologies shows that the Philadelphia area chronologies are more strongly correlated with one another and have weakening correlations moving north. The geographic pattern of correlation for the WTC chronology to the independent chronologies resembles the pattern of the Philadelphia area chronologies. These results indicate that it is most likely that the timbers from the WTC vessel come from eastern PA or central New Jersey and, perhaps, near Philadelphia. Closer examination of the WTC and Philadelphia master in **Figure 4** shows a simultaneous drop in ring width in the late-1690s indicating that the World Trade Center vessel came from timbers in the Philadelphia area. The strong agreement during an abrupt drop in growth during the late-1690s supports this hypothesis. Shipbuilding was an important industry in the eastern Pennsylvania and Philadelphia as soon as 1693 and was very active in the 1770's (Scharf and Westcott 1884, pp 2336).

Finally, the hickory keel was compared to the master chronology built from the oak WTC vessel samples and dated to 1724. While there is some confidence of this date, the statistics for this date are weak and the date should be considered provisional until a hickory chronology can be developed for the area.

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**Table 1**. Dendrochronological dating results for all samples taken from the excavated vessel at the World Trade Center site, New York City. For WANEY, +BE means the bark edge was present or thought to be recovered at the time of sampling; -BE means that the bark edge was not recovered or was completely missing on the timber. All correlations (Correl) are Spearman rank correlations of each series against the oak master chronology from the Philadelphia area. The keel was dated against the chronology developed from the WTC oak samples. See **Figure 1** for photographs of these samples and **Figure 3** for a summary plot of the dating results for the five eastern hemlock samples.

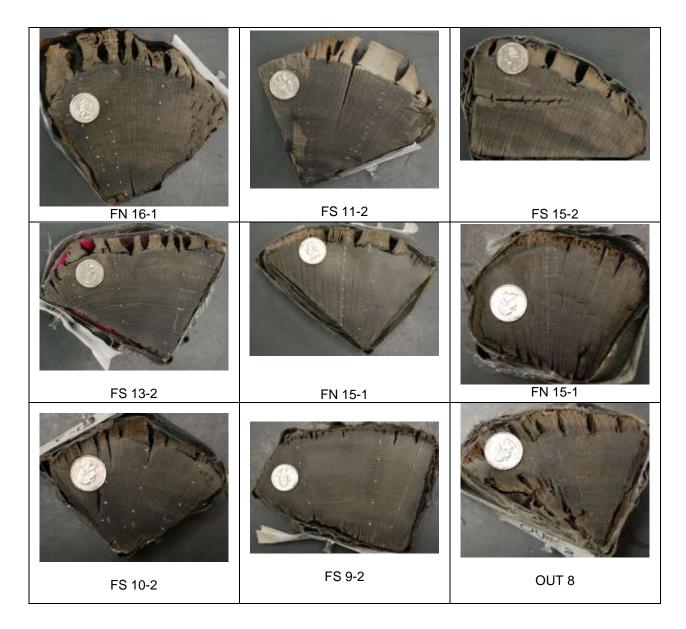
the five eastern hemiock samples.								
sample	Species	Waney	First year Last year		N. years	Correl	Observations	
FN-16-1	oak	-BE	1663	1773	111	0.533	sapwood rings	
FS-11-2	oak	-BE	1571	1770	200	0.290	sapwood rings	
FS-13-2	oak	-BE	1688	1770	83	0.365	sapwood rings	
FS-15-2	oak	-BE	1682	1770	89	0.198	sapwood rings	
FN-15-1	oak	-BE	1627	1769	143	0.224	sapwood rings	
FN-15-1/1	oak	-BE	1662	1764	103	0.251	sapwood rings	
FS-10-2	oak	-BE	1689	1762	74	0.388	sapwood rings	
FS-9-2	oak	-BE	1680	1743	64	0.339	sapwood rings	
Keelson	oak	-BE	1639	1740	102	0.306	squared	
OUT-8	oak	-BE	1641	1732	92	0.213	sapwood rings	
CN-3-1	oak	-BE	1662	1732	71	0.330		
FS-12-2	oak	-BE	1600	1723	124	0.270	squared	
OUT-W	oak	-BE	1660	1721	62	0.353		
PS-1-1	oak	-BE	1665	1716	52	0.456	squared	
CN-6-1	oak	-BE	1644	1705	62	0.136	squared	
PS-2-1	oak	-BE	1602	1687	86	0.403	squared	
PN-2-1	oak	-BE	1559	1685	127	0.215	squared	
CN-3-10A	oak	-BE	1542	1681	140	0.434	squared	
CN-1/1	oak	-BE	1494	1650	157	0.155		
CN-5-1	oak	-BE	No date	No date	Not analyzed		No discernable rings	
OUT ?	oak	-BE	No date	No date	83			
FN-11-1/1	oak	-BE	No date	No date	99		squared	
Keel	hickory	-BE	1581	1724	144	0.253*	squared	

\*dated against WTC oak chronology

<b>Table 2</b> . Correlation <b>m</b> atrix of the WTC vessel oak chronology versus long oak chronologies from eastern Pennsylvania (e. PA), Philadelphia (Phil), central New Jersey (cNJ), nothern New Jersey (nNJ) and the mid-Hudson River Valley of NY State (mHV) from 1650-1750. Correlation value is Spearman correlation.						
Chronology	WTC	e. PA	cNJ	nNJ	mHV	
WTC	-					
e. PA	0.52	-				
Phil	0.53	0.81	-			
cNJ	0.52	0.70	0.59	-		
nNJ	0.45	0.65	0.50	0.68	-	
mHV	0.44	0.60	0.45	0.61	0.76	-
South → North						

Table 3. T-statistic matrix of the WTC vessel oak chronology versus long oak chronologies
from eastern Pennsylvania (e. PA), Philadelphia (Phil), central New Jersey (cNJ), nothern New
Jersey (nNJ) and the mid-Hudson River Valley of NY State (mHV).

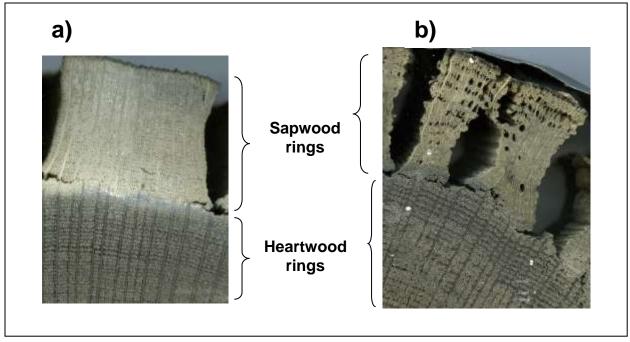
Chronology	WTC	e. PA	Phil	cNJ	nNJ	mHV
WTC	-					
e. PA	6.3	-				
Phil	6.2	23.0	-			
cNJ	5.6	14.1	7.7	-		
nNJ	4.8	11.6	8.7	10.9	-	
mHV	5.0	11.4	7.7	10.8	15.7	-
South → North						



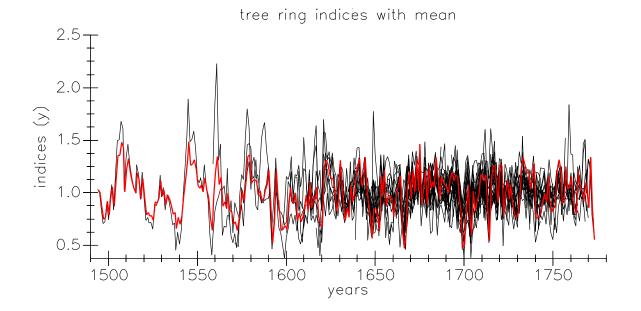
**Figure 1**. Photographs of the 23 WTC vessel timber samples analyzed by tree-ring analysis. Refer to **Table 1** for the wood species and dates of the samples.



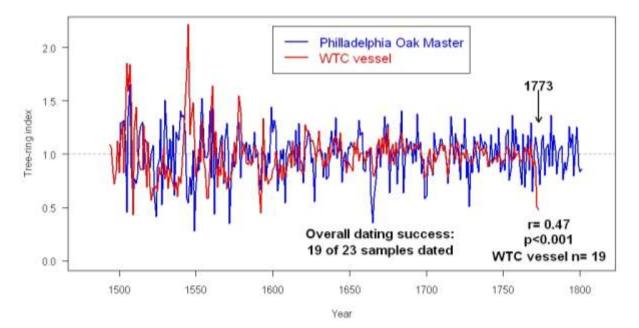
**Figure 1 (continued)**. Photographs of the 23 WTC vessel timber samples analyzed by tree-ring analysis. Refer to **Table 1** for the wood species and dates of the samples.



**Figure 2**. Detail of collapsed (a) and expanded (b) sapwood rings which hindered the exact dating of the last available tree rings. The outer rings of FN 16-1 are shown in (b).



**Figure 3**. The spaghetti plot of the 19 ring-width indices from the World Trade Center vessel oak timbers and their mean (280 years; time span: 1494-1773). The strong mean interseries Spearman rank correlation (0.458; *t*<0.001) suggests a common geographical origin for all the timbers.



**Figure 4**. Comparison of the ring-width index of the World Trade Center vessel oak chronology (19 samples cross-dated) against the Philadelphia area oak master chronology based on living trees and independent archaeological samples. The Spearman rank correlation between the series (r=0.47) is highly significant (p<0.001) with an overlap of 280 years. This strong match suggests that the origin of the oak logs used in the World Trade Center vessel was from the Philadelphia area.