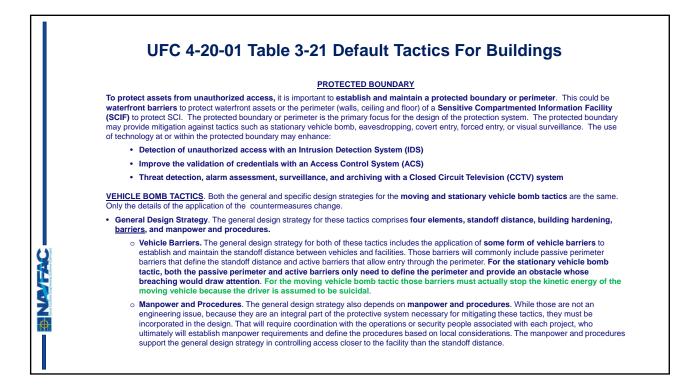




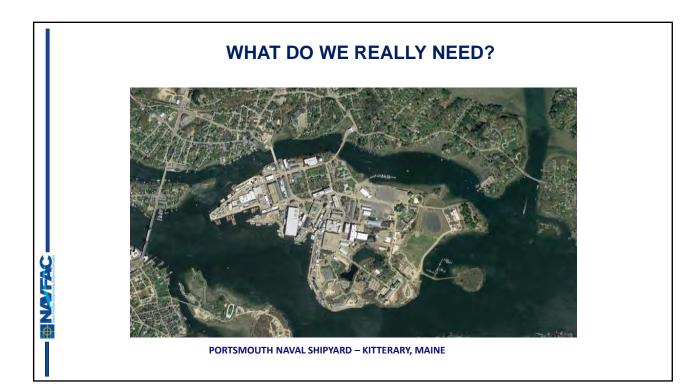
	Applicable Assets						
Default Tactics	People	Equipment and Supplies	Infrastructure	Operations and Activities			
Moving Vehicle Bomb	✓		✓	1			
Stationary Vehicle Bomb	✓	✓	√	1			
Hand Delivered Devices	✓	×	✓	1			
Indirect Fire Weapons	✓	✓	✓	1			
Direct Fire Weapons	✓	✓	✓	✓			
Waterfront Attack	✓	✓	*	1			
Active Shooter	✓			1			
Airborne Contamination	1			✓			
Waterborne Contamination	<ul> <li>✓</li> </ul>		1	1			
Forced Entry	✓	✓	√	1			
Covert Entry	✓	✓	✓	<ul> <li>✓</li> </ul>			
Visual Surveillance	✓		✓	1			
Acoustic Eavesdropping	✓			1			
Electronic Emanations Eavesdropping			✓	~			





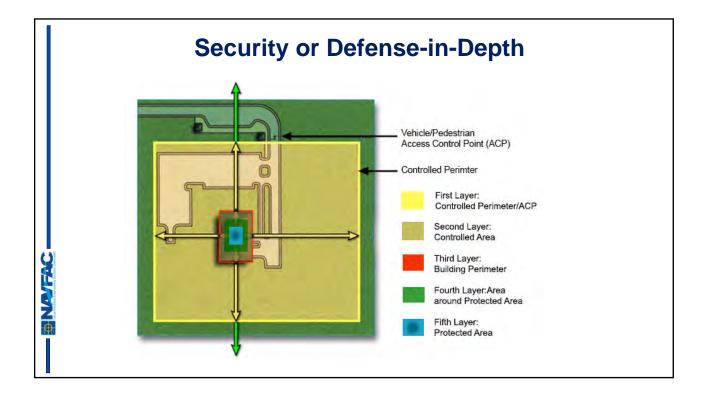


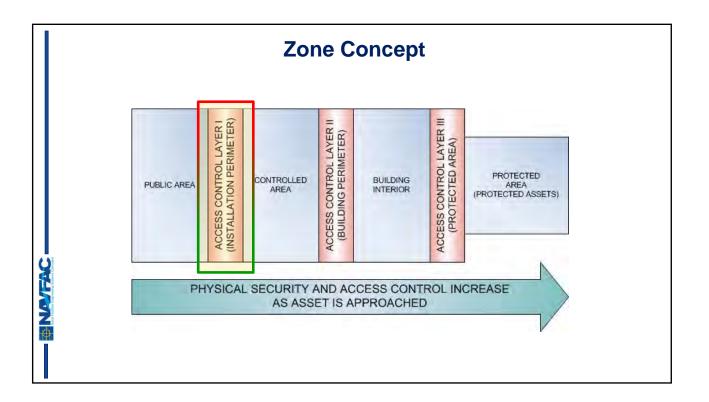


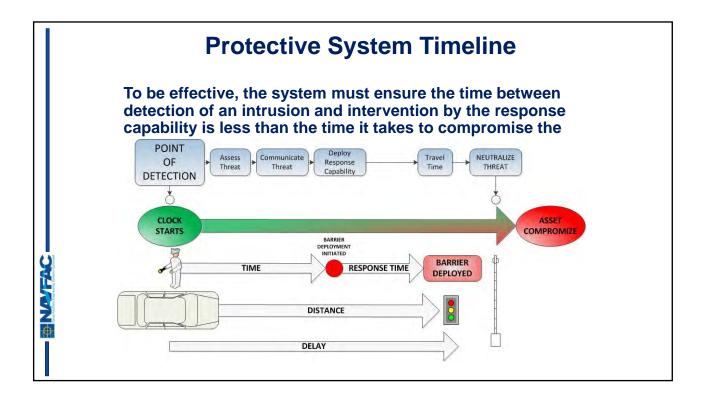


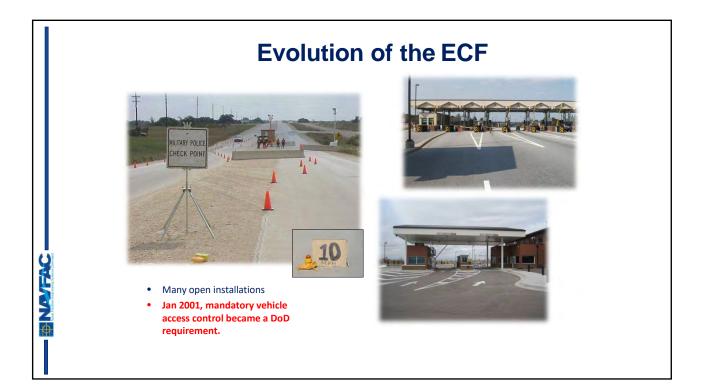


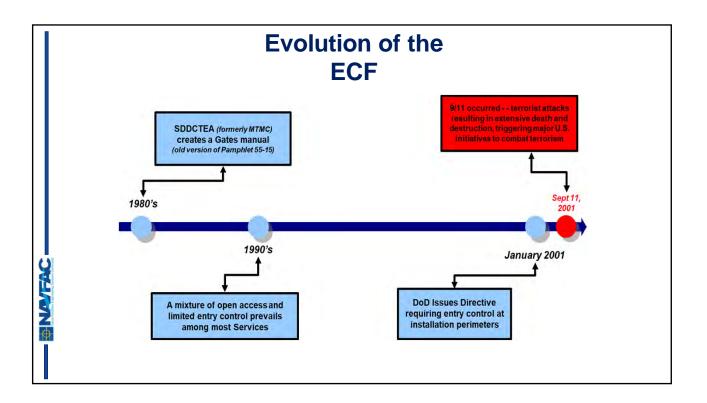


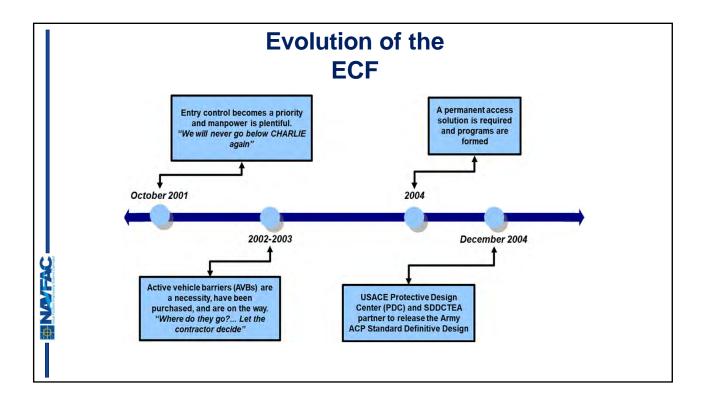


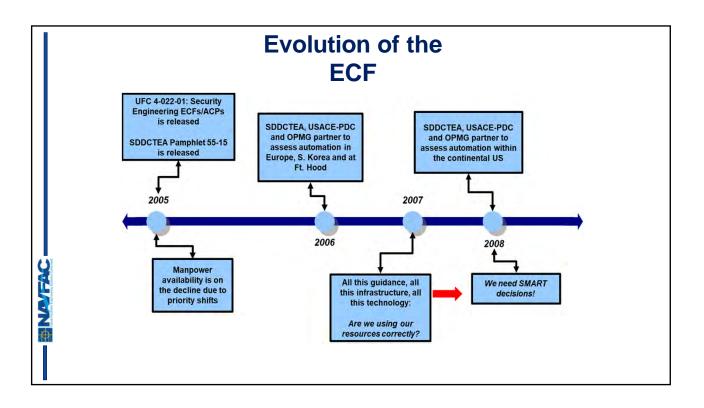


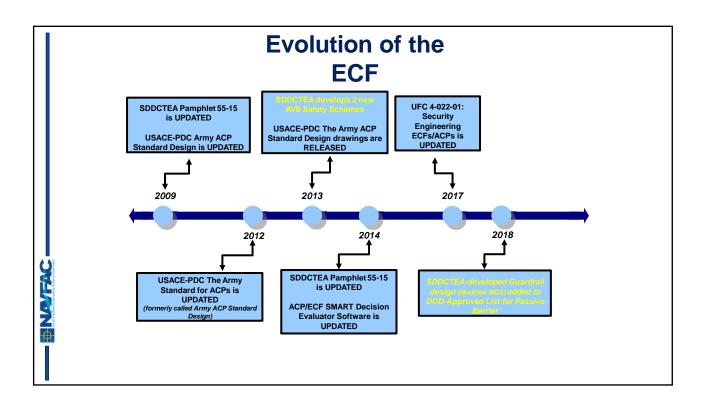


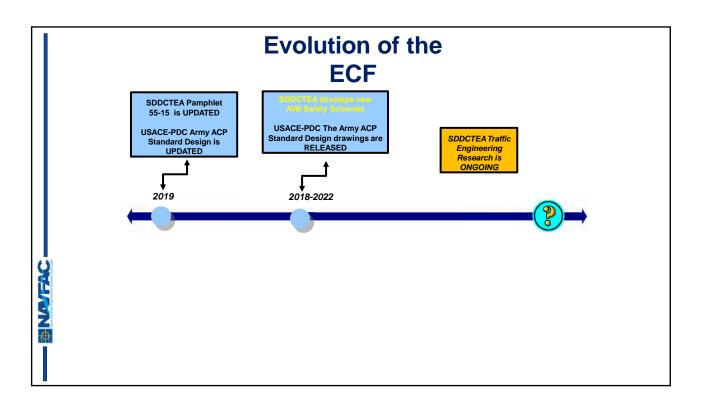


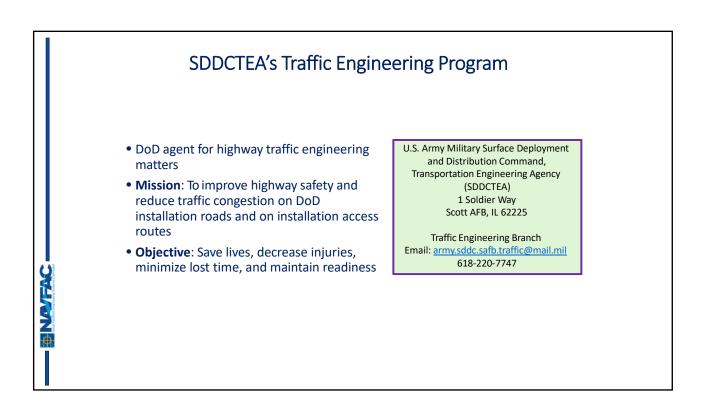


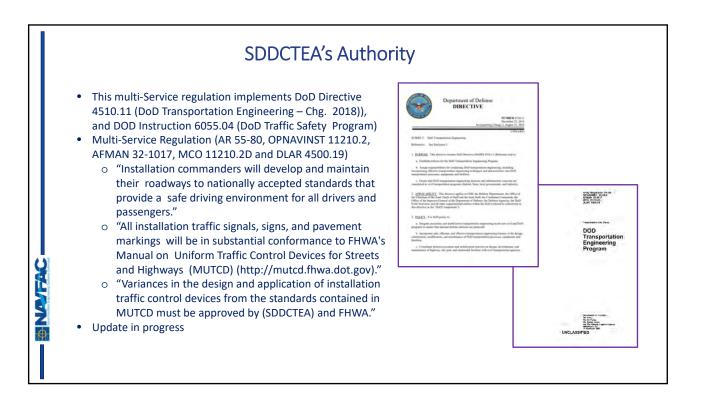


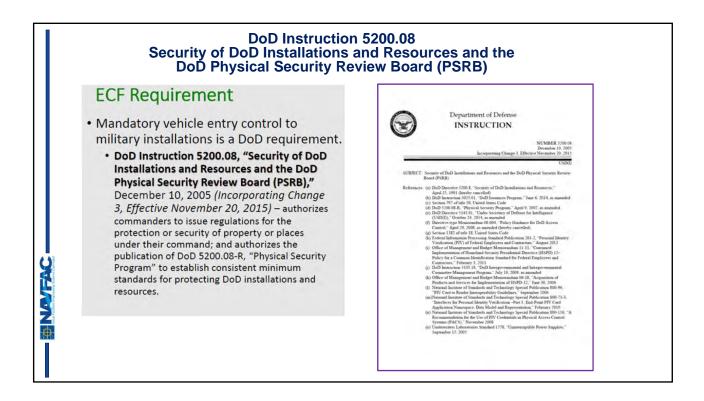


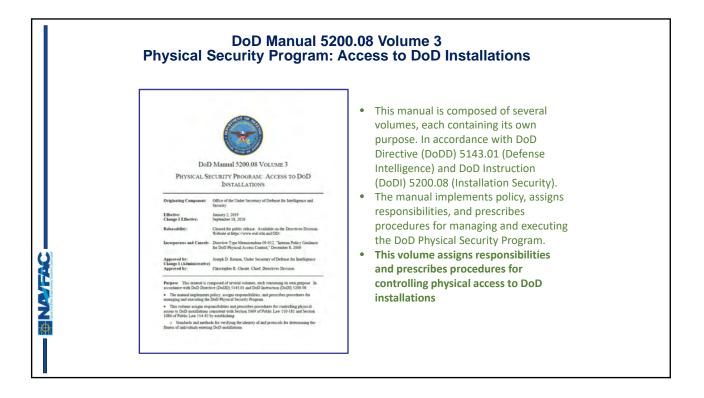


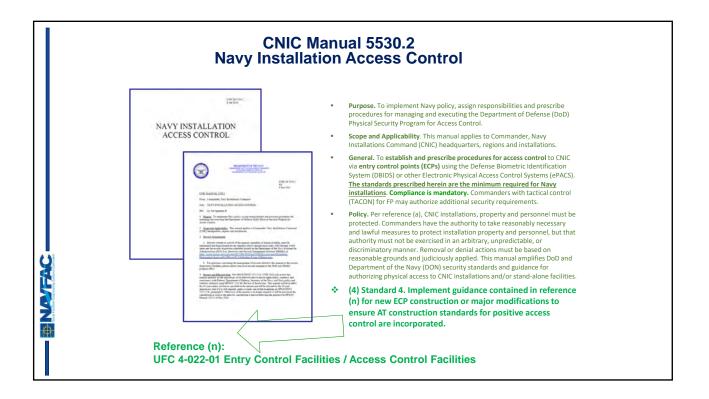




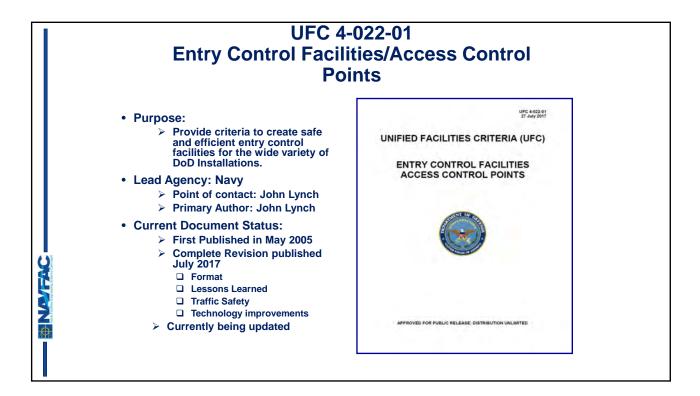


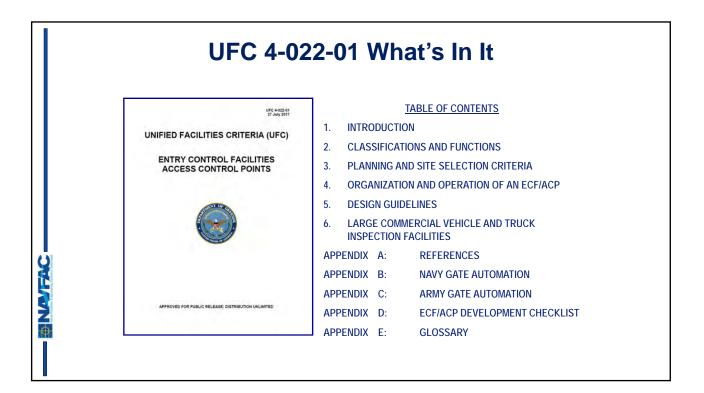


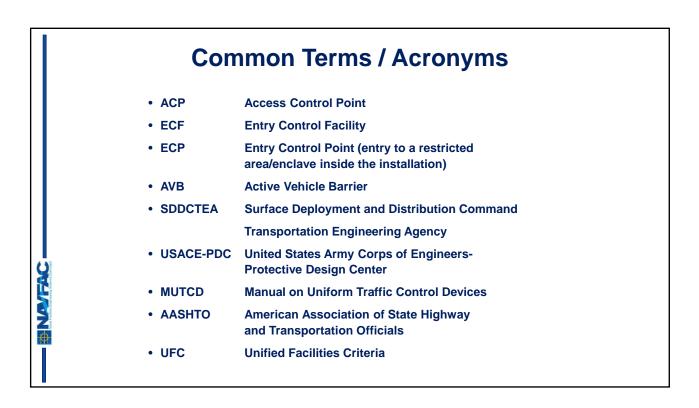


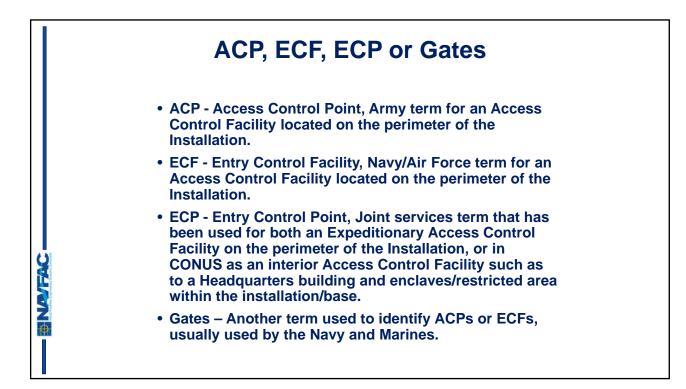


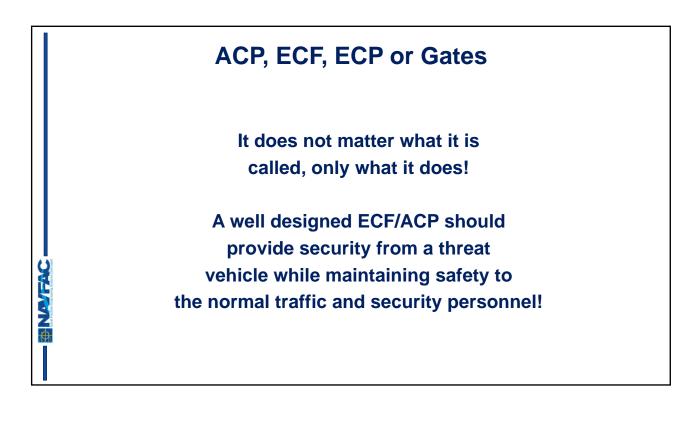


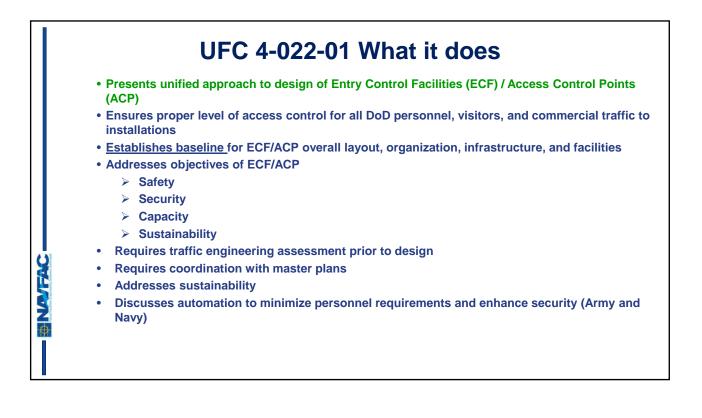


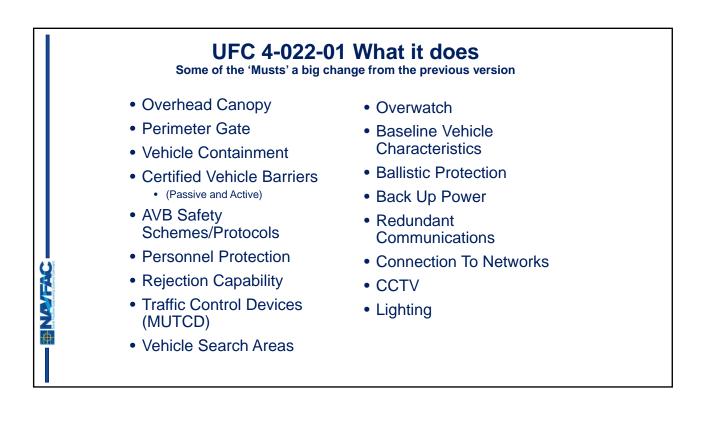


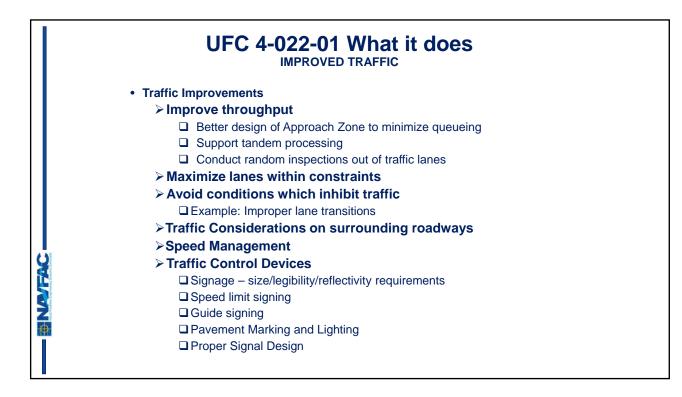




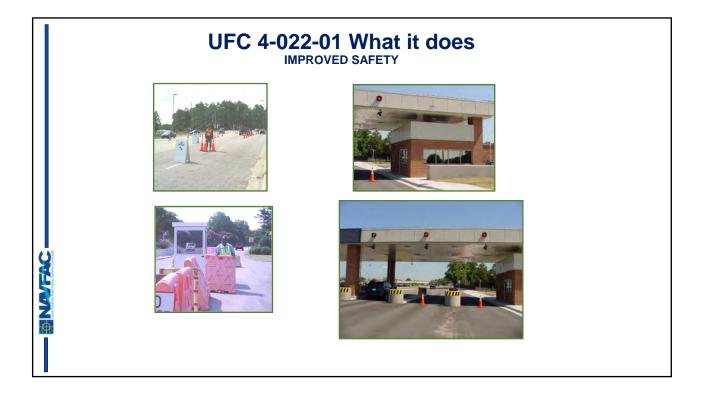


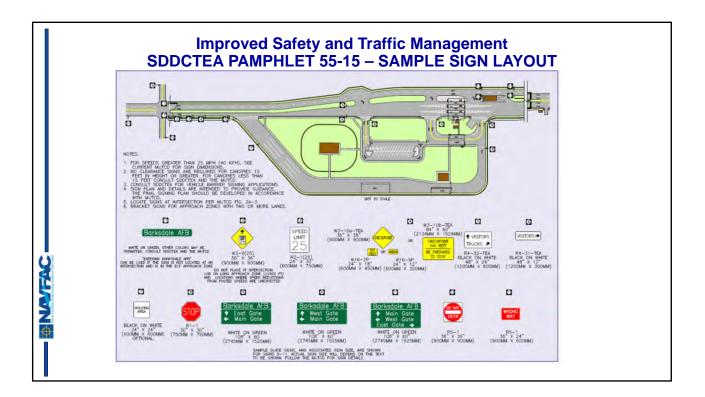


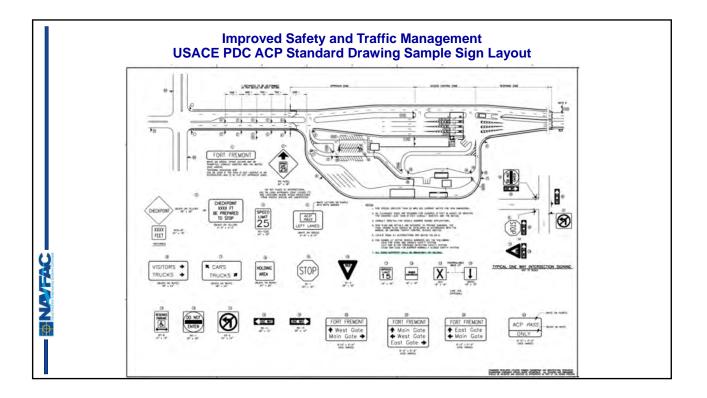


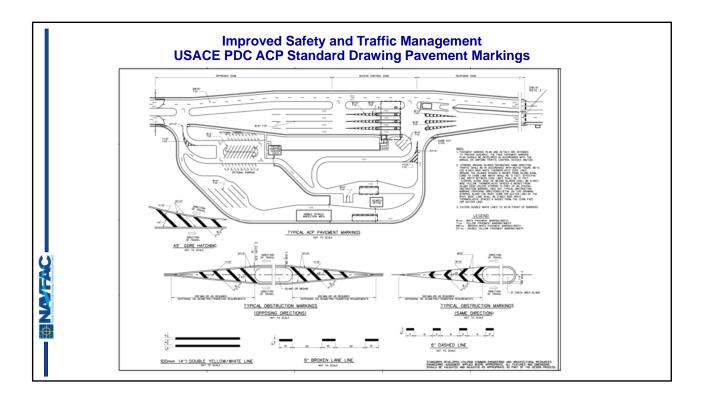


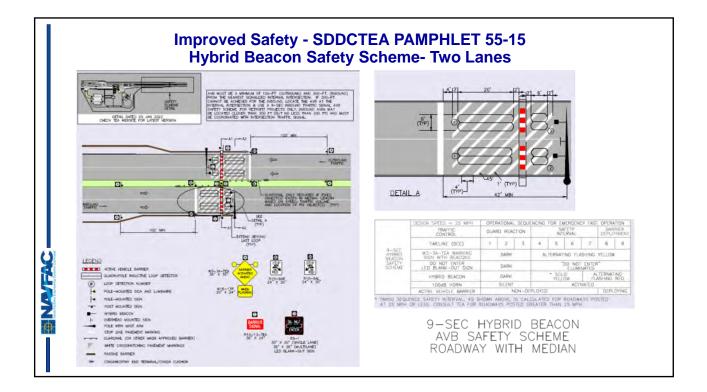
	UFC 4-022-01 What it does
	Safety Improvements
	Personnel Safety & Quality of Service
	Canopy for all inbound lanes and reversible outbound
	Elevated median/island/platforms for security forces personnel
	Barriers at median/island/platforms and facilities
	<ul> <li>Prevent accidental or intentional vehicular impact</li> </ul>
	Improved lighting
	Ballistic resistance provided for all guard facilities
	Public Safety
	Improved lighting
	Improved signage and traffic control
Q	Improved traffic signaling
and Sector	Barrier Design and Safety Considerations
5	Delineation of Active Vehicle Barriers (AVB)
2	Options provided for required safety protocols/schemes
	AVB control requirements (UFGS 34 71 13.19 Crash Rated Active Vehicle Barriers And Controls)
	Vehicle Detection Systems

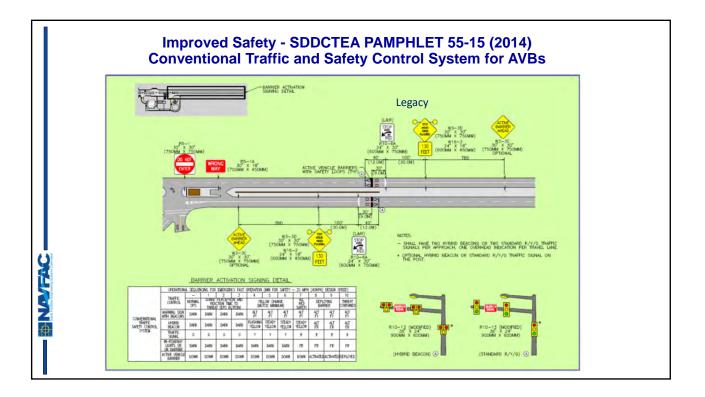


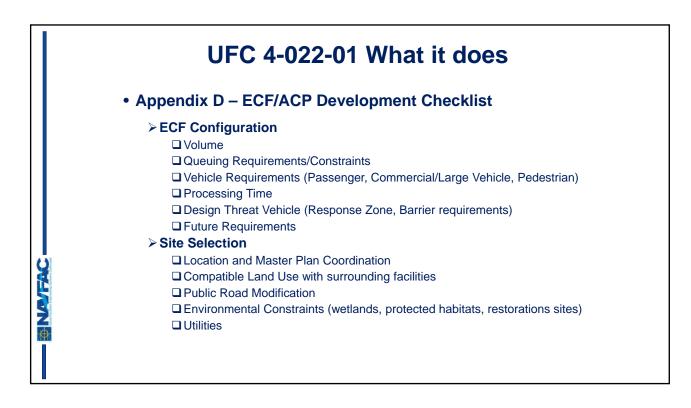




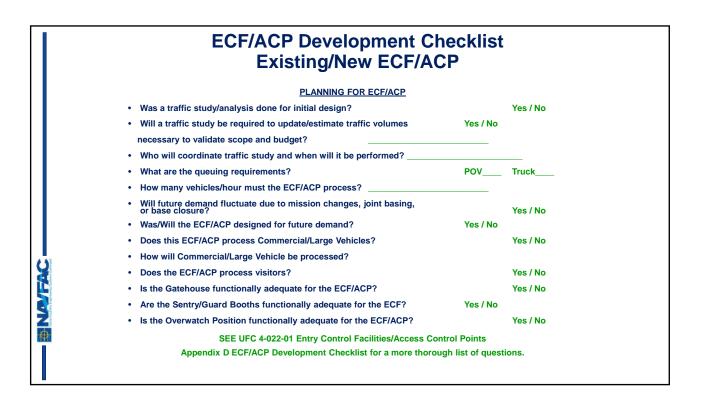


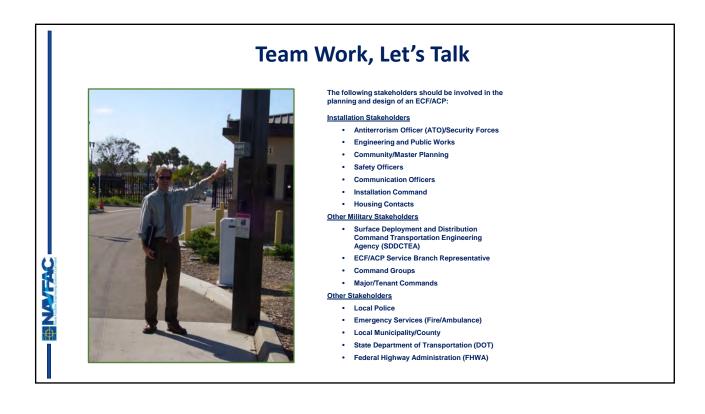


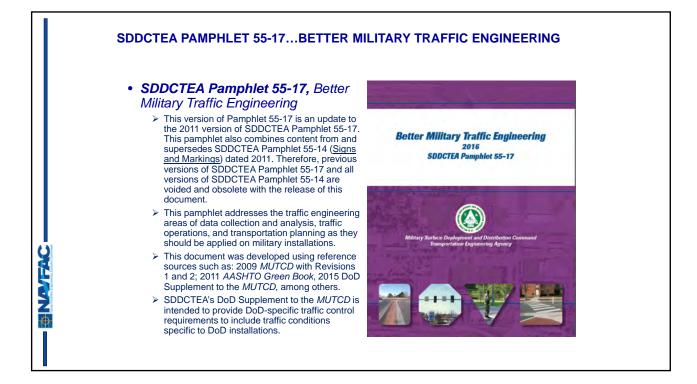


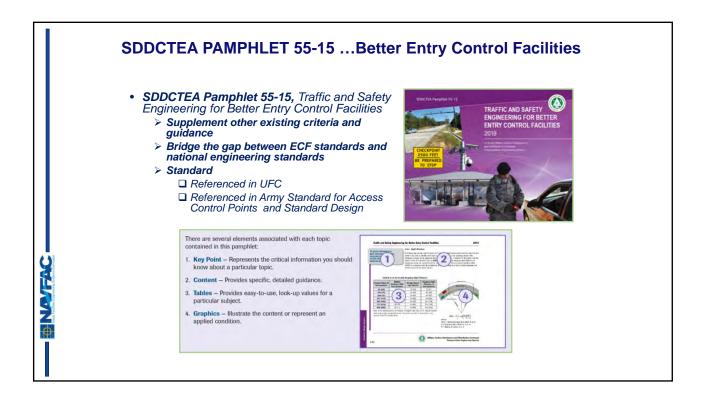


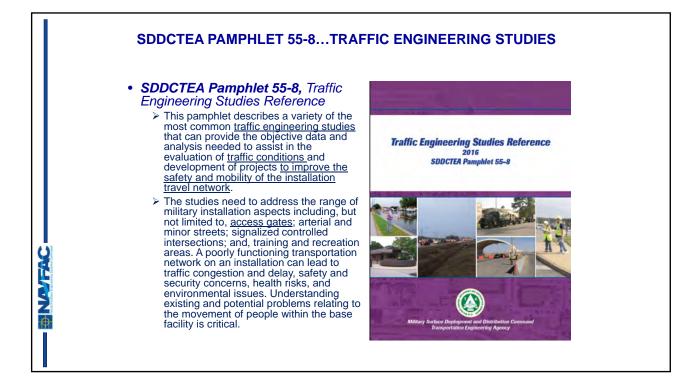
ECF/ACP Developme Existing/New EC	
EXISTING ECF/A	CP
What type of ECF/ACP?     Use/Pedestrian	Primary / Secondary / Limited
• What are the ECF/ACP hours of operation?	
• What are peak times and staffing levels at those times?	
What are the staffing levels at off peak times?	
How many inbound lanes?	
How many outbound Lanes?	
How are POV processed?	Single / Tandem
<ul> <li>Are there traffic queuing issues?</li> </ul>	Yes / No
Does the ECF/ACP traffic affect the local community?	Yes / No
Are current processing times unacceptable?	Yes / No
Is the ECF/ACP a high crash area?	Yes / No



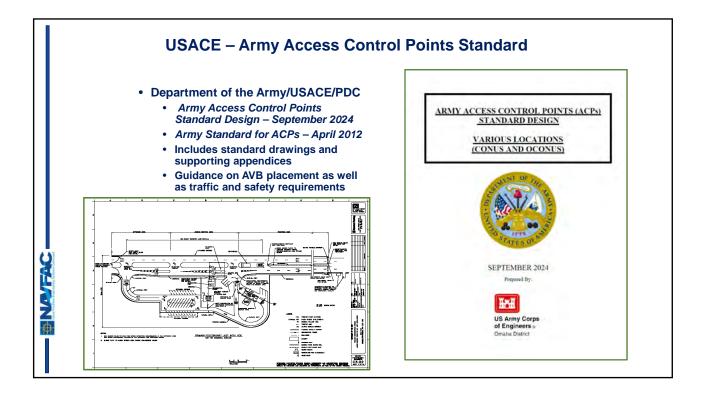


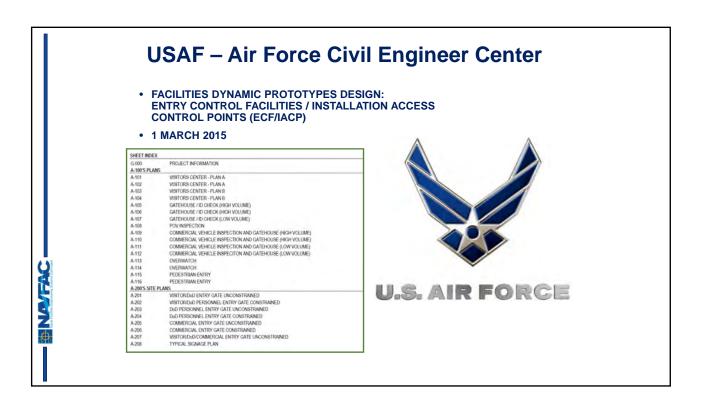




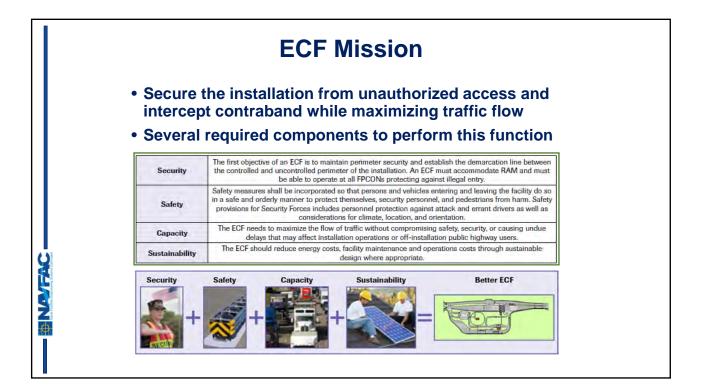


	P/ECF SMART Deci		DECISION
softwa ACP: to the nur guards costs, obtain obtain	rpose of the ACP/ECF SMART De- re is to help decide the best config o provide different scenarios that h nber of ID check lanes, with the op in order to minimize construction minimize risk, minimize environme an acceptable maximum vehicle q the greatest reasonable level of se delay to entering vehicles.	uration for an help right-sizing otimal number of and operating ntal effects, ueue length, and	
Security	What AT measures are required?     How do these requirements impact traffic (processing) and will that impact necessitate additional manpower or lanes?     Can automation enhance security?     Is the system providing positive access control?	SMARI -	Total Association         MAXIM         MAXIM
Manpower	Is manpower utilized efficiently?     Would additional ianes allow for more efficient processing thus     reducing manpower demands?     Will automation help reduce manpower costs?	SECURITY MANPOWER AUTO	MATION ROADS + LANES TRAFFIC + SAFE
Automation	Will automation provide a manpower cost awings?     Will automation provide a security benefit?     Will automation be able to active comparable processing rates to     manual processing?     Can the infrastructure (lanes) support automation initiatives?     Are there policy decisions that need to be implemented to support     efficient automation?		
Roads & Lanes	Are there sufficient lanes to accommodate manual processing?     Are there sufficient lanes to accommodate automation?     If additional lanes were constructed, could manpower be reduced?		and a
Traffic & Safety	How do security decisions impact processing (traffic)?     How do manpower decisions impact processing (traffic)?     How do automation decisions impact processing (traffic)?		

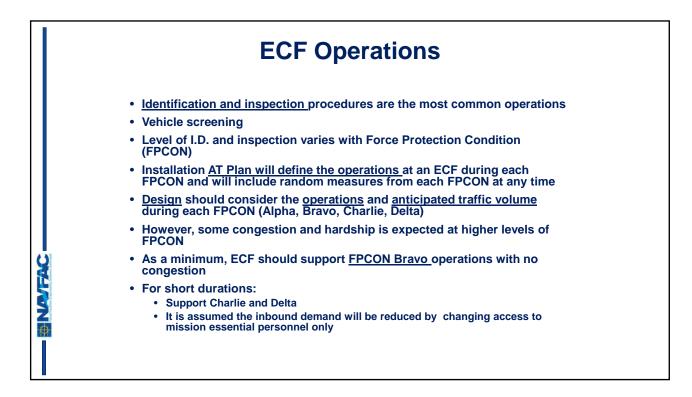


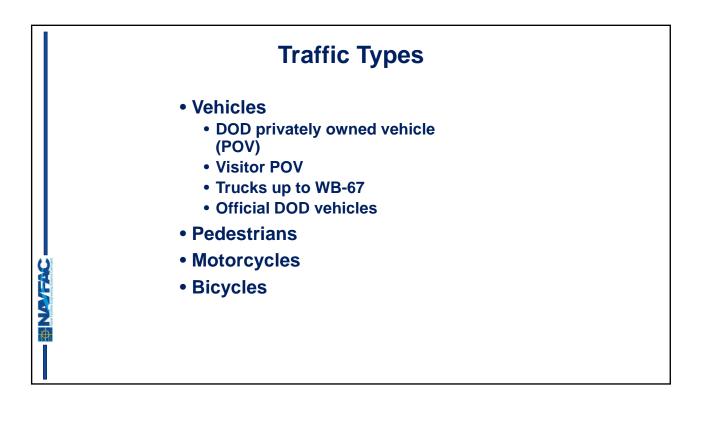


DOCUMENT	CONTENT	WHERE TO FIND
Manual on (ITE), Traffic Engine		https://www.ite.org/technical- resources/
Uniform Traffic Control Devices		https://safety.fhwa.dot.gov/speedm gt/traffic_calm.cfm
for Streets and Highways 11th Edition	Traffic pavement markings, and the rules	https://mutcd.fhwa.dot.gov/
Federal Highway Administr (FHWA), Standard Highway		https://mutcd.fhwa.dot.gov/ser- shs_millennium_eng.htm
American Association of Highway and Transporta Officials (ASAFTO), A Pol Geometric Design of Highwa Stretes (The Green Boc	tion cy on mys and	https://www.fhwa.dot.gov/design/st andards/151112.cfm
AASHTO, Roadside Design	Guide This document provides guidance on design requirements and treatments outside the travel way, but in close proximity to the roadway.	Available on the Whole Building Design Guide / Non-Government Standards https://www.wbdg.org/ffc/dod/non- government-standards
December 2023 Transportation Research R (TRB), Highway Capacity M		http://www.trb.org/Main/Blurbs/1751 69.aspx
Illuminating Engineering So North America (ESNA), IES G-1 - Guide Security Lighting for Pec Property, and Critical Infras	for and implementation of security lighting.	Available on the Whole Building Design Guide / Non-Government Standards https://www.wbdg.org/ffc/dod/non- government-standards



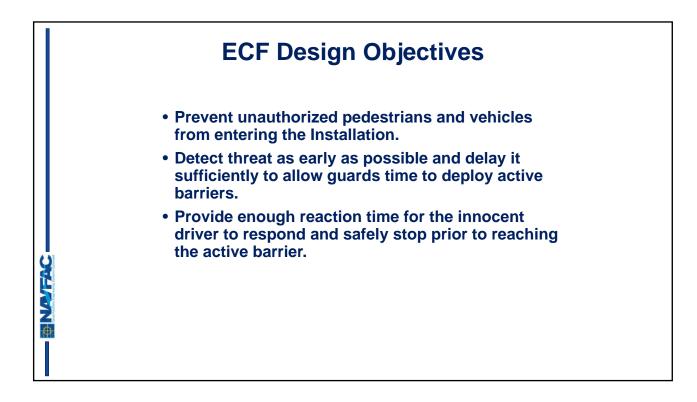
## 26



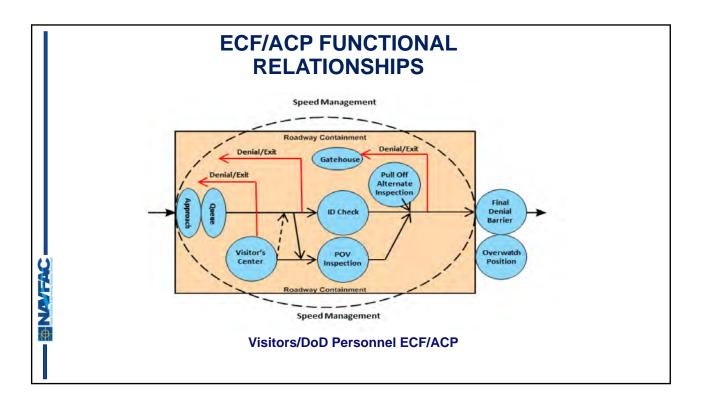


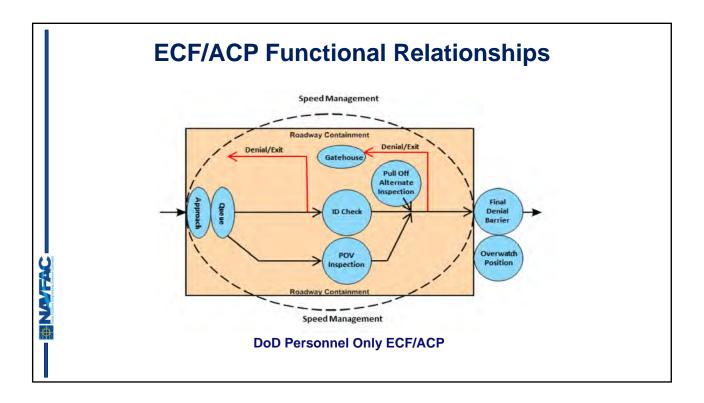
Use Classification	Traffic Volumes	Typical Hours of Operation	Highest FPCON Operation	Services Provided	Visitor Passes	Random Inspection	Authorized Visitors	Truck Processi
Primary	High	24/7 - open continuously	Delta	Optional designation as truck and delivery ECF	~	~	1	×
Secondary	Moderate	Regular hours, but closed at times	Closed at or above Charlie	Optional designation as truck and delivery ECF		*	1	1
Limited Use	Low	Open for special purposes	NA	Tactical vehicles, HAZMAT, special events, etc.				
Pedestrian Access	Varies	Varies	Closed at or above Charlie	Personnel only, could be located near installation housing areas, near schools, or as part of a Main or Primary ECF	1		1	

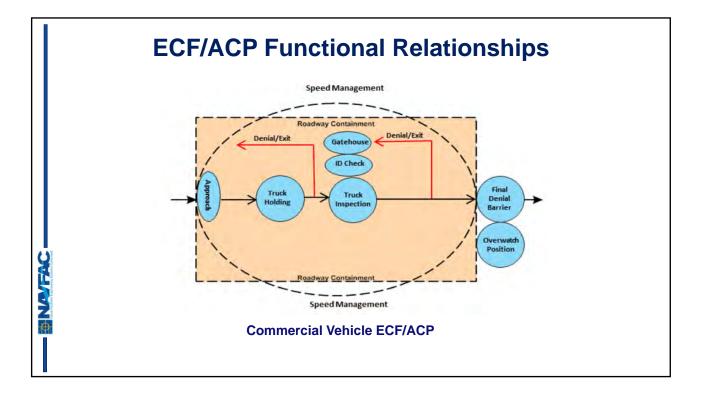
Exhibit 1.5: ECF Classifications							
Use Classification	Traffic Volumes	Typical Hours of Operation	Highest FPCON Operation	Typical Operation			
Primary	High	24/7 - open continuously	Open thru Delta	Vehicle registration/visitor pass capacity. Regula operations, visitors with authorization. Could also designated as truck and delivery ECF/ACP.			
Secondary	High- Moderate	Regular hours, closed at times	Potentially closed at or above Charlie	Regular operations, visitors with authorization. Con also be designated as truck and delivery ECF/AC			
Low-Volume *	Low	Regular hours, closed at times	Potentially closed at or above Charlie	Regular operations, visitors with authorization. Cor be located near installation housing areas. Per th Army Standard for Access Control Points the pea hour entering traffic volume is 290 vph or less.			
Limited Use	Low	Open for special purpose	NA	Tactical vehicles, HAZMAT, special events, etc.			
Commercial * Vehicle-Only ECF	Moderate- Low	Regular hours, closed at times	Potentially closed at or above Charlie	Commercial/contractor access only. Visitors may a be processed.			
Internal ECP *	Low	Regular hours, closed at times	NA	Dependent upon installation mission. UFC does n apply, refer to SDDCTEA for guidance.			
Pedestrian Access	NA	Varies	Potentially closed at or above Charlie	Personnel only, could be located near installation housing areas, near schools, or as part of a Primary Secondary ECF			

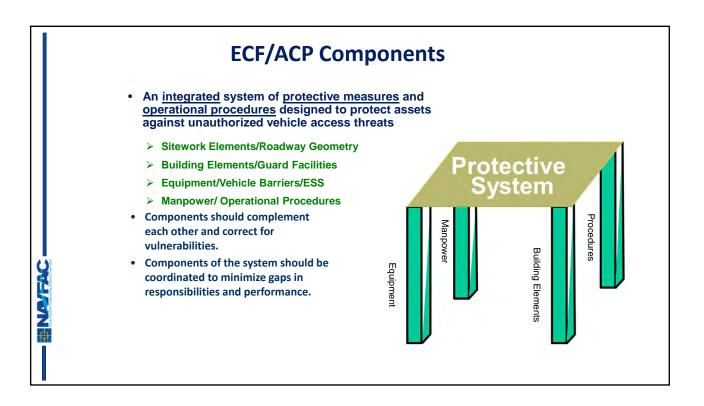


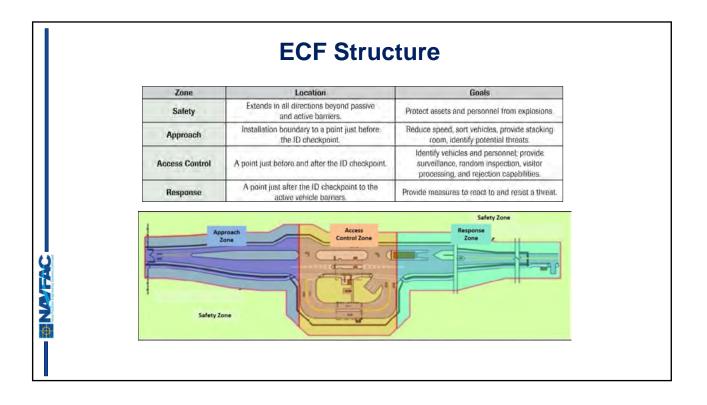


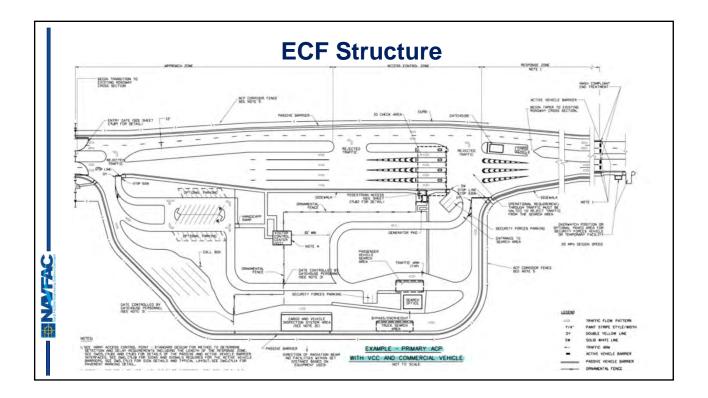




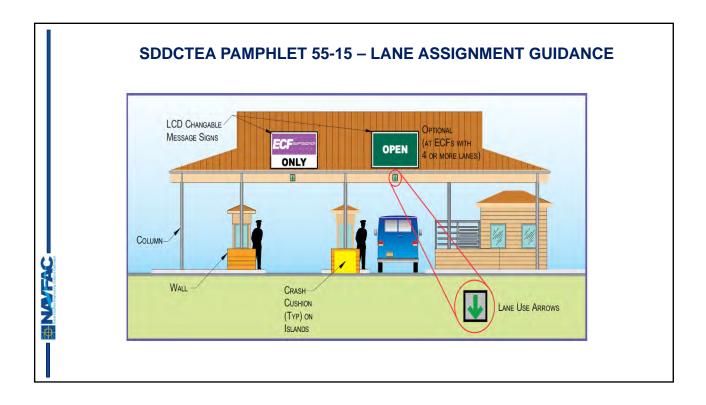


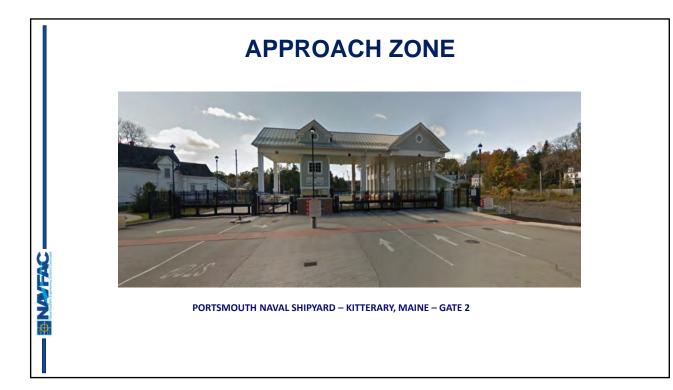


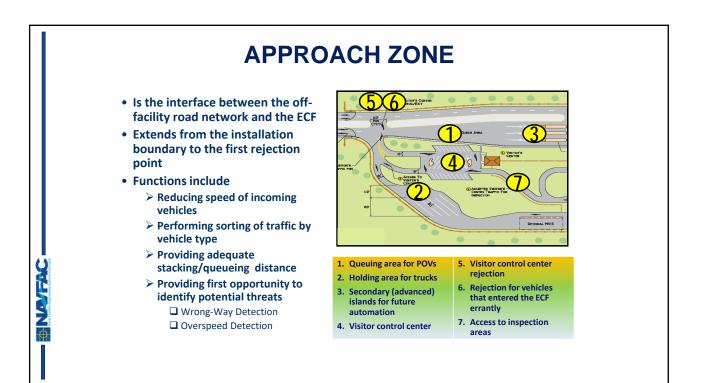


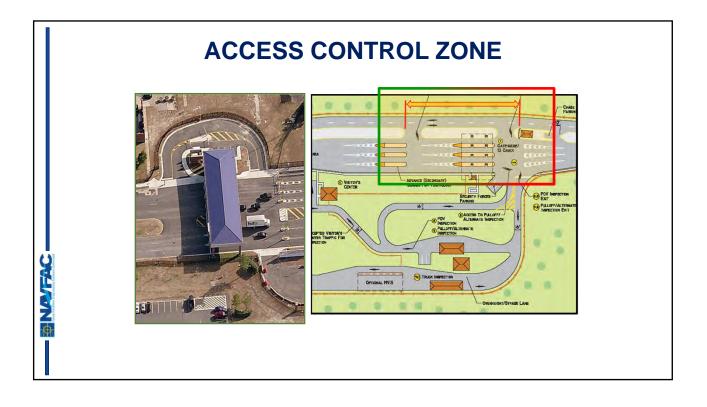


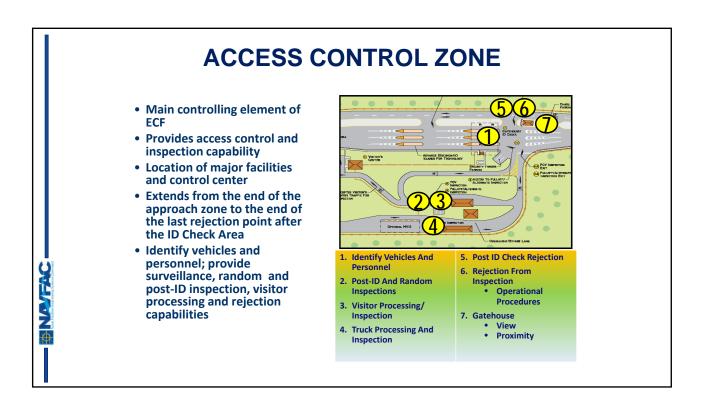


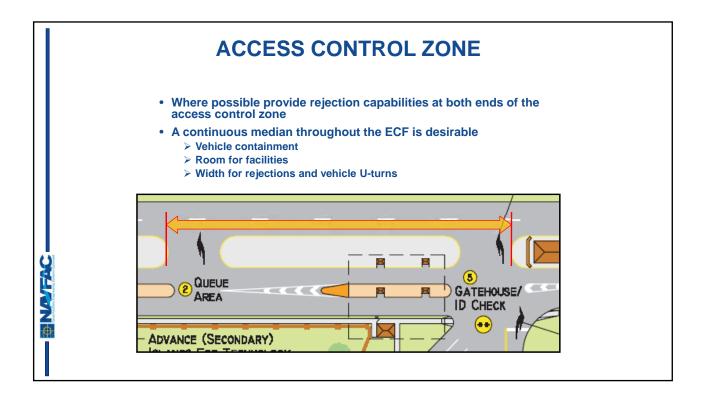


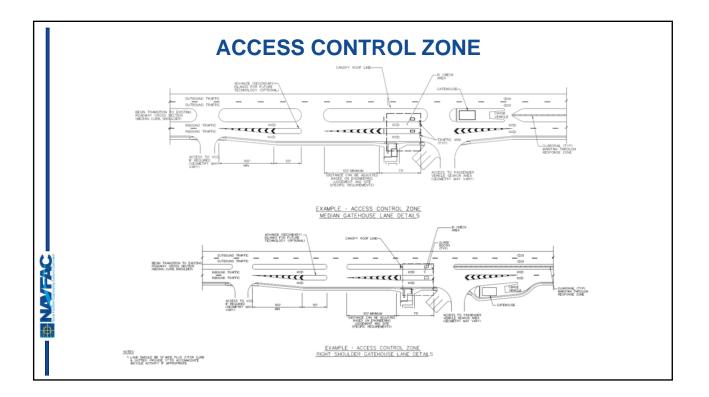




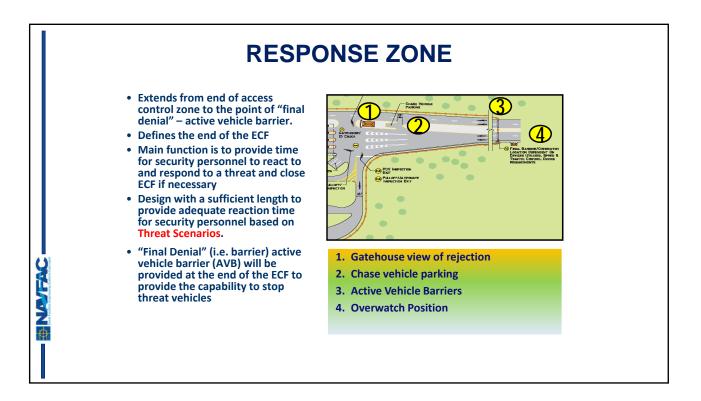


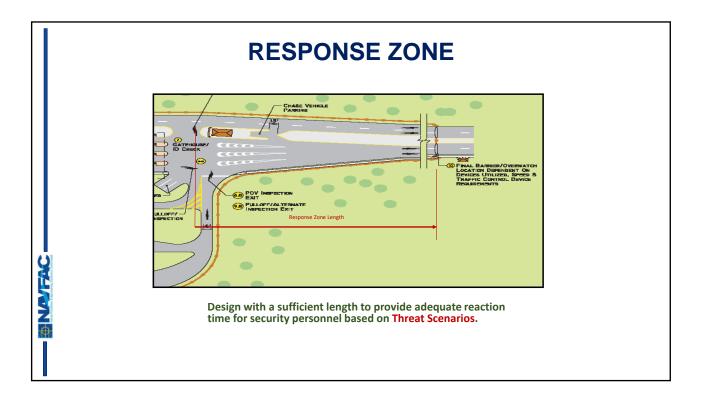


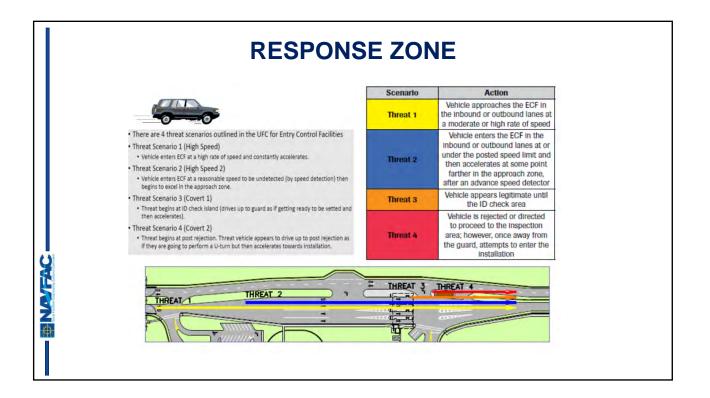


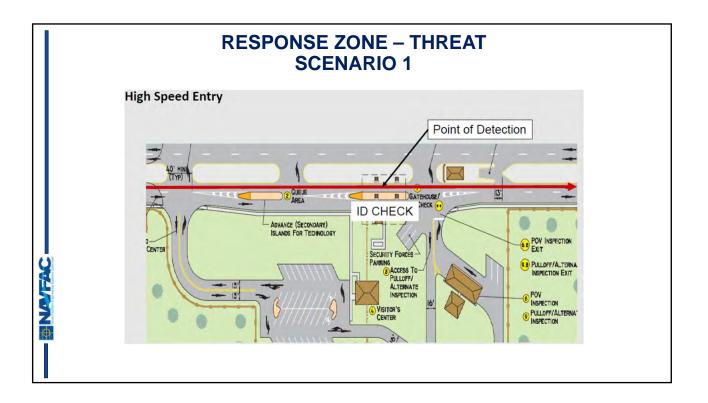


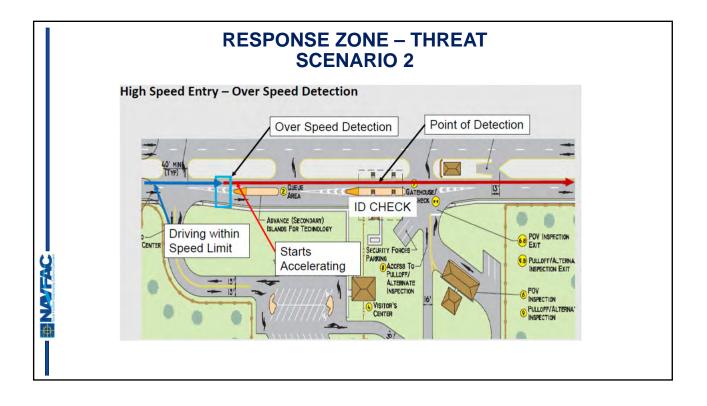


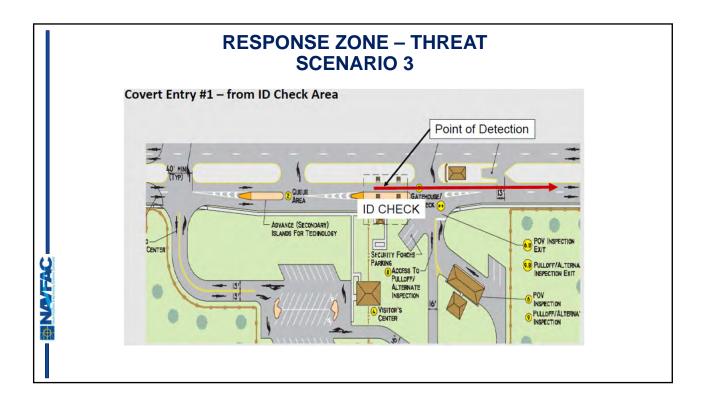


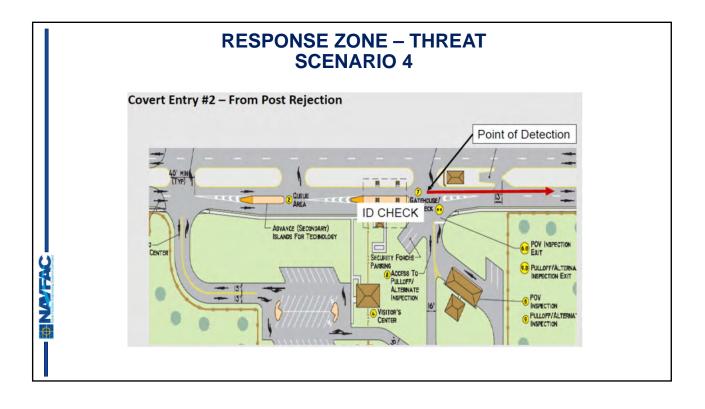


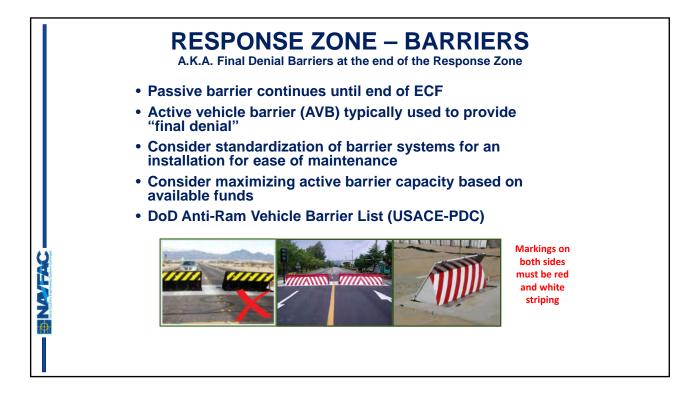


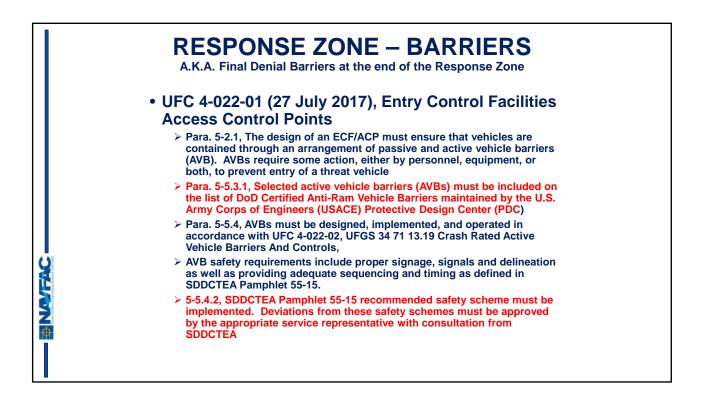








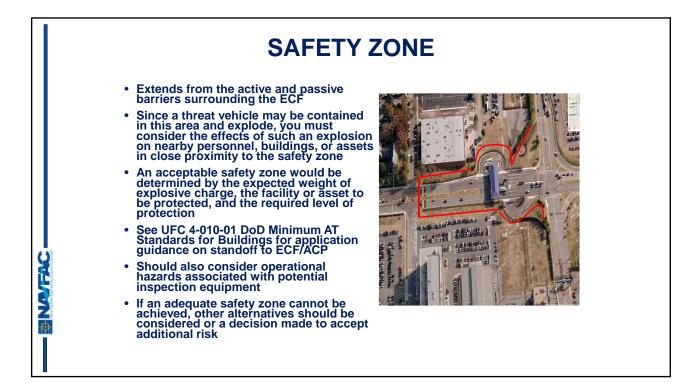


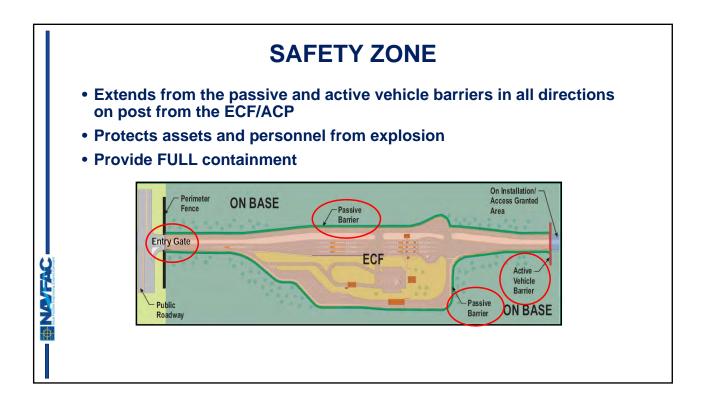


	C Vehicle I	NIC – Pub Barrier (A	olic Safety VB) Capal uipment	oility Base	line
			-		
	B&B ARMR	AUTOGATE	GIBRALTER	RSSI	RSSI
MODEL	828 WEDGE (E)	VPL-CB24	G-2000 P1	RSS2000	RSS3000
TYPE	Finger Wedge Y	Drop Arm Y	Finger Wedge Y	Finger Wedge Y	Drop Arm
EFO	Y	N	Y	Y	Y
E/M PWR	Y	Y	Y	Y	Y
MS0	Y	Y	Y	Y	Y
120 C/HR	Y	Y	Y	Y	Y
TRAVELTIME	3SEC	10-14 SEC	4-8SEC	1.5-3 SEC	
PWR REO	208-240V 20A	120-240V, 20A	208 3PH PREF	240V 30A	
Actuator	Electric	Electric	Electric	Electric	Electric
GATE ARM	OPT	Y	N	OPT	sister
TRLTS	OPT	Y	OPT	OPT	OPT
FLUSH	Y	NA	Y	Y	NA
PLATE OR FINGERS	FINGERS	NA	FINGERS	FINGERS	NA
3RD PARTY CTRLS	Y	Y	Y	Y	Y
DOD INST	N/S	>30 LISTED	<10 LISTED	>50 SITES/ NOT LISTED INDIV	
HOW RATED	MFR	3RD PTY	MFR AND 3RD PTY	3RD PTY	3RD PTY
UNIQUE FX	SHALLOW	LOW PWR	NO SPRINGS	ORIG FINGER WEDGE	
	NO SPRINGS	CUSTOM FABRICATION	HIGH DURABILITY	ONLY AVB AT PGON	
	GALVANIZED	DROP ARM IS THE	EXTREME TEMPS	GOOD TECH SPT	

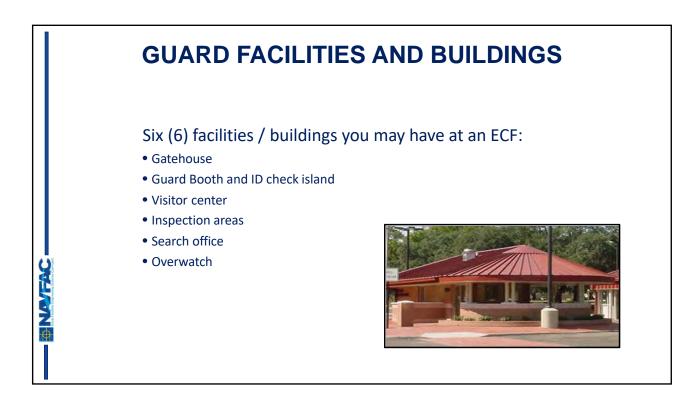


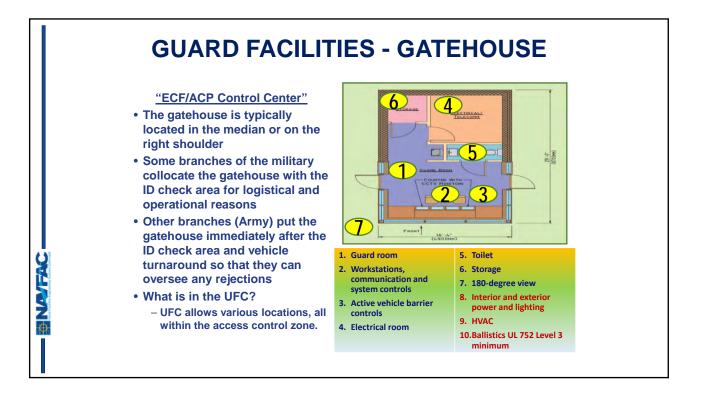
## 42

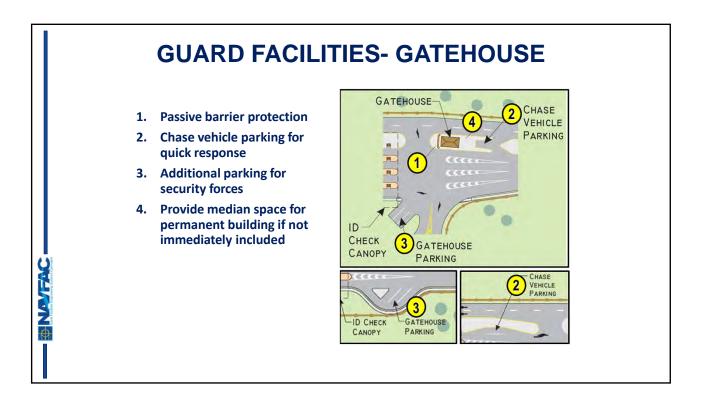


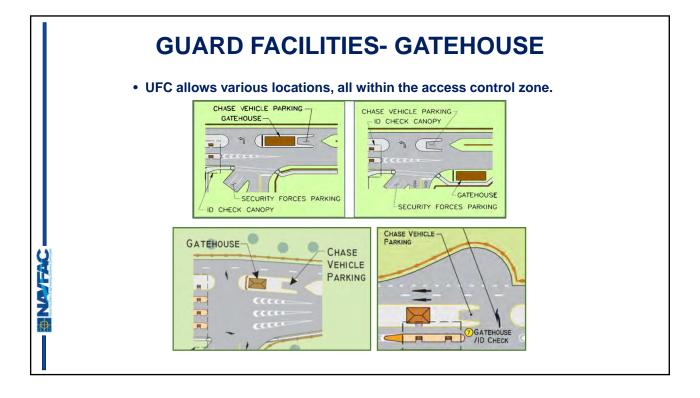


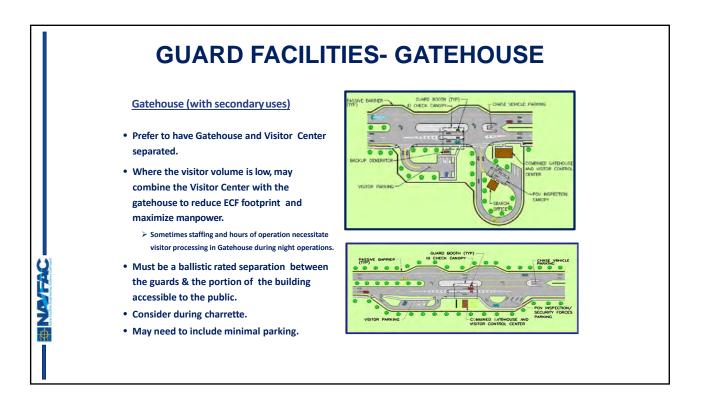


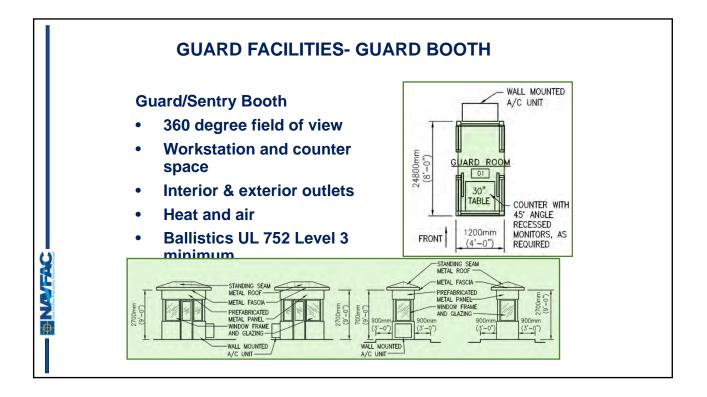


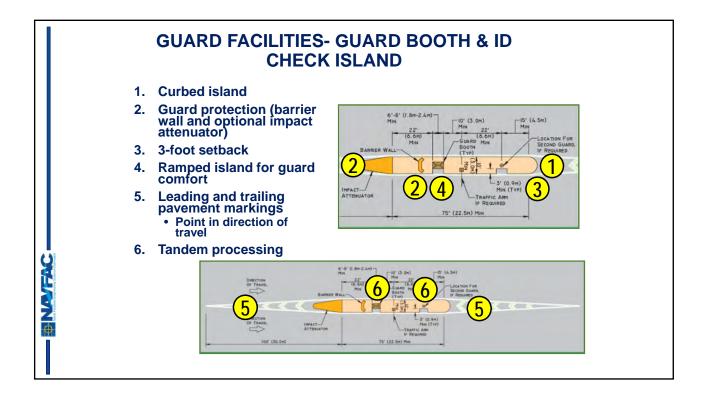


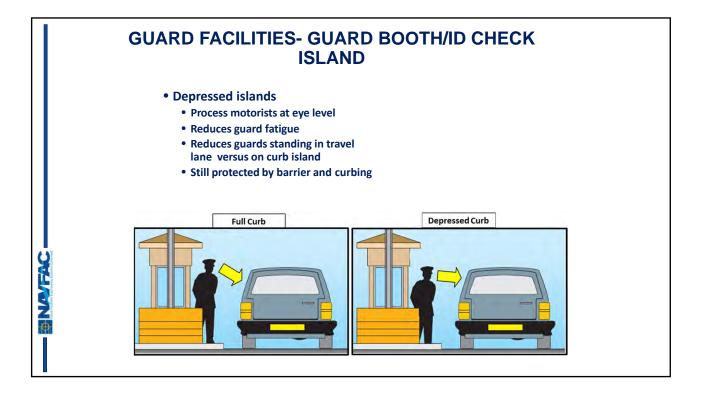






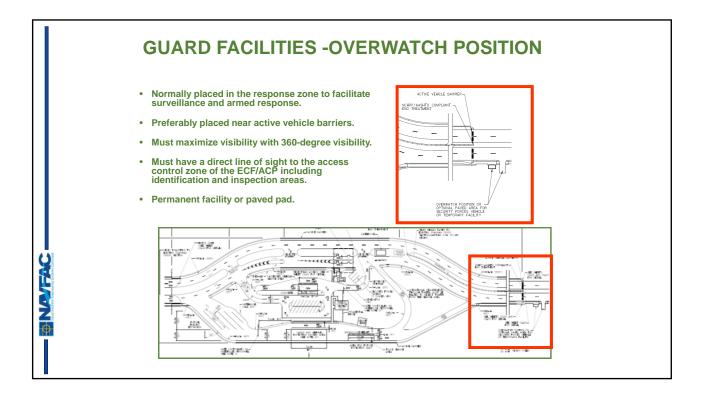


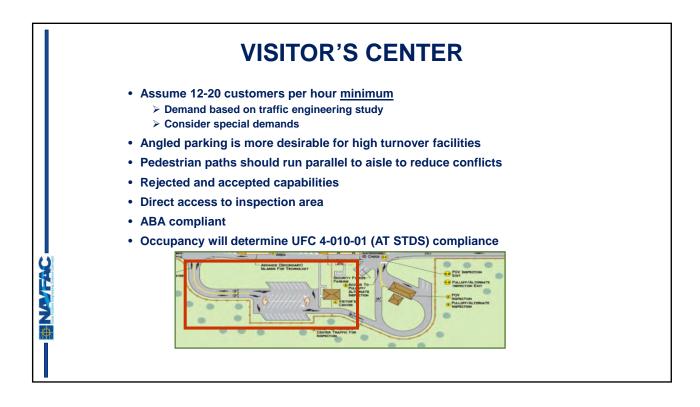




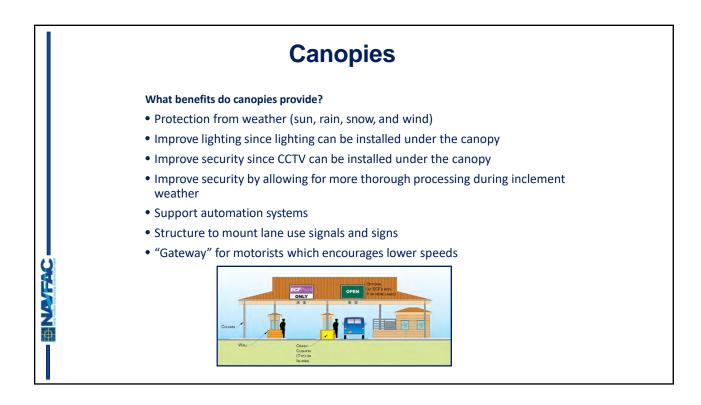


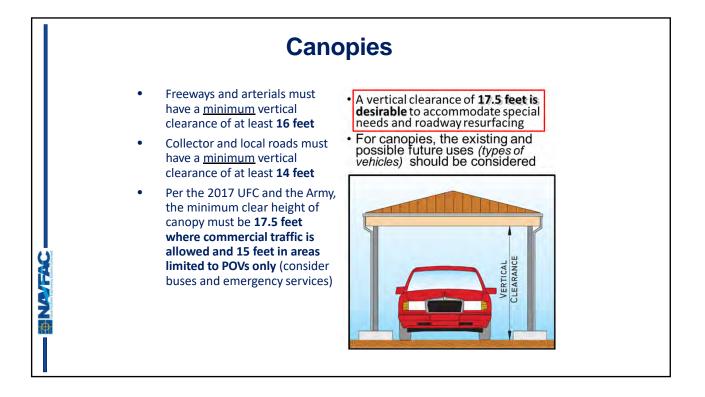
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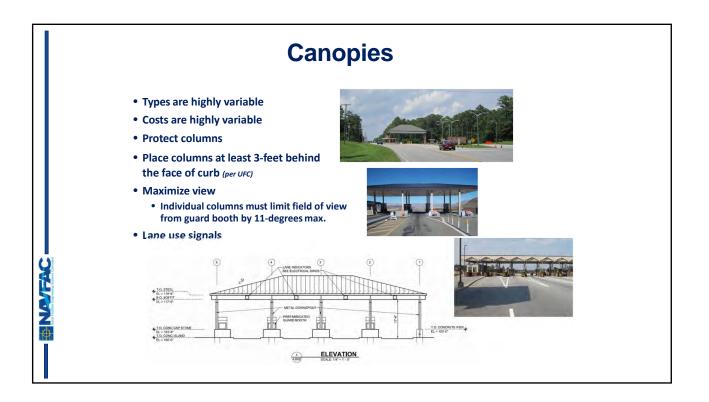


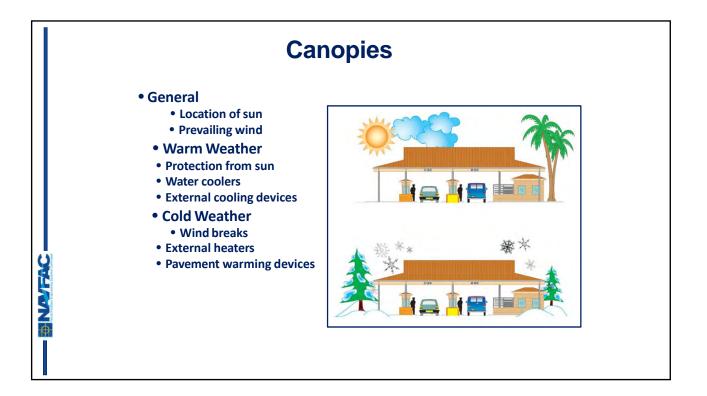


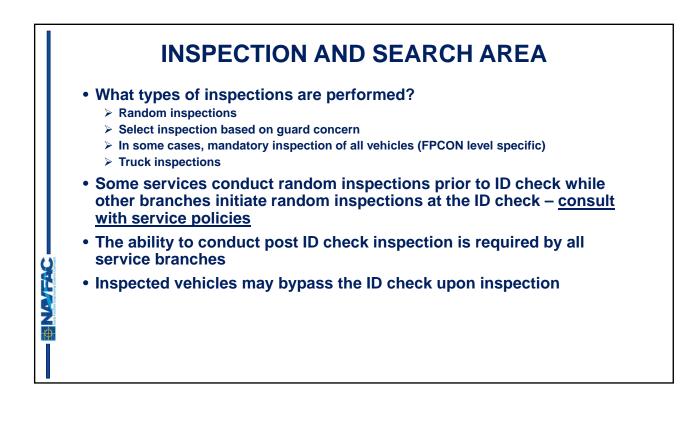


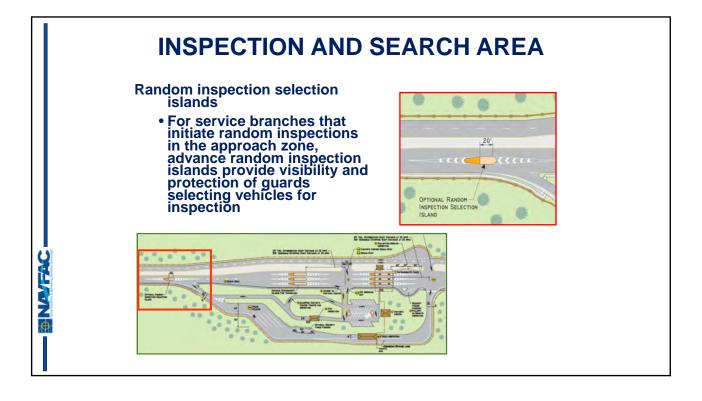


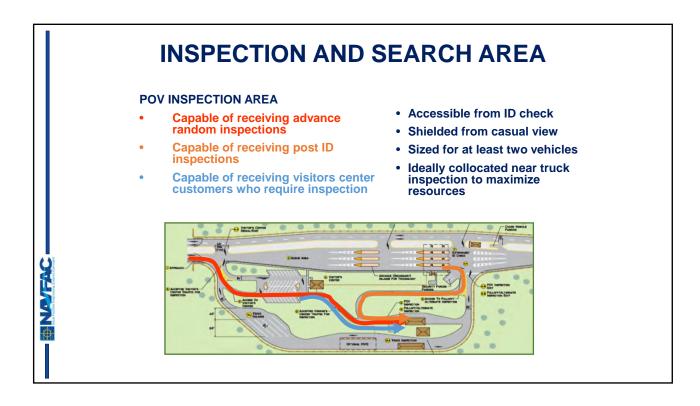


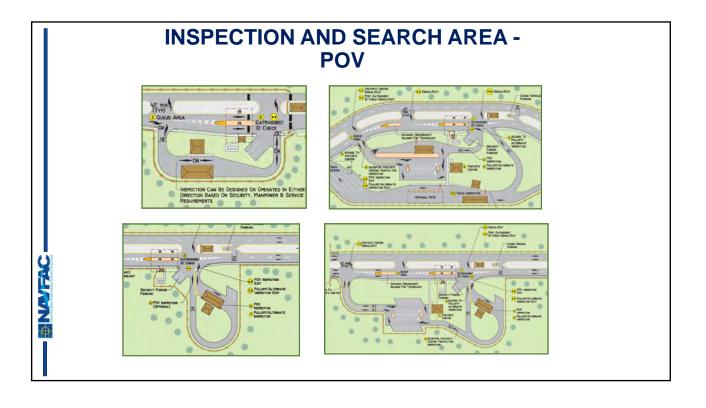


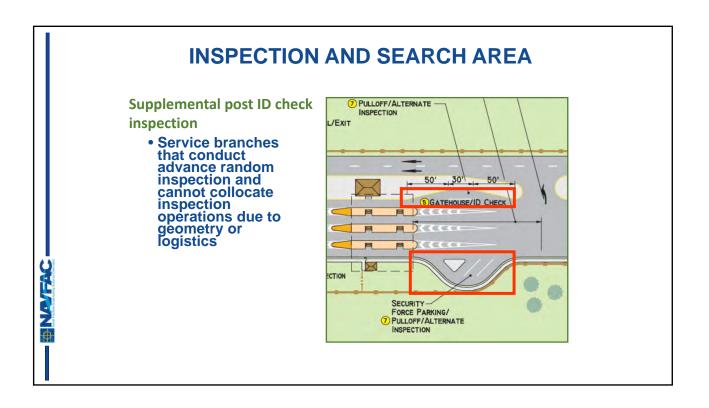






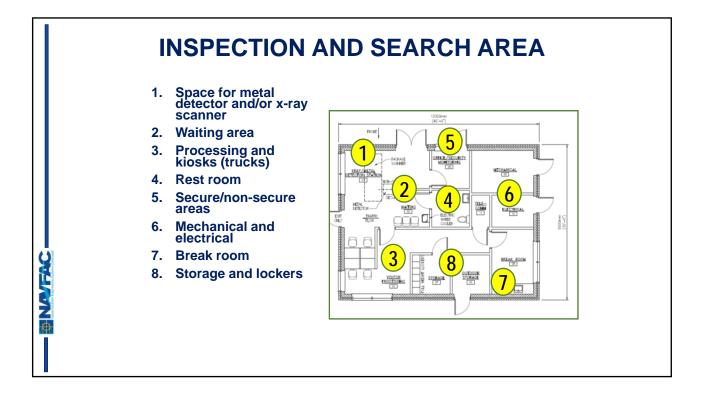


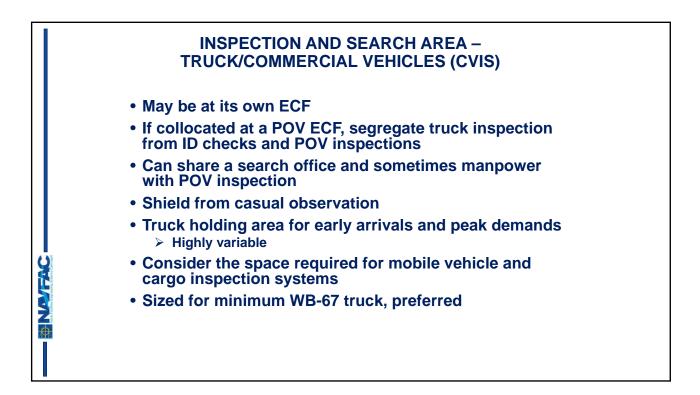


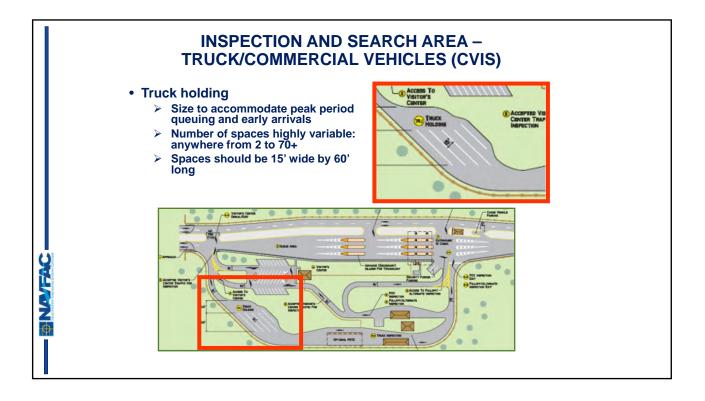


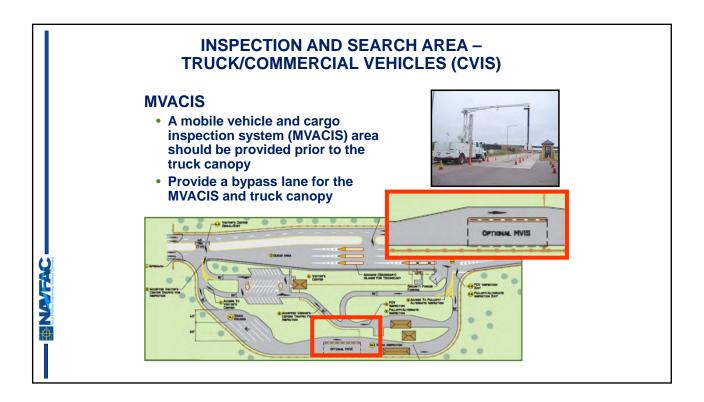


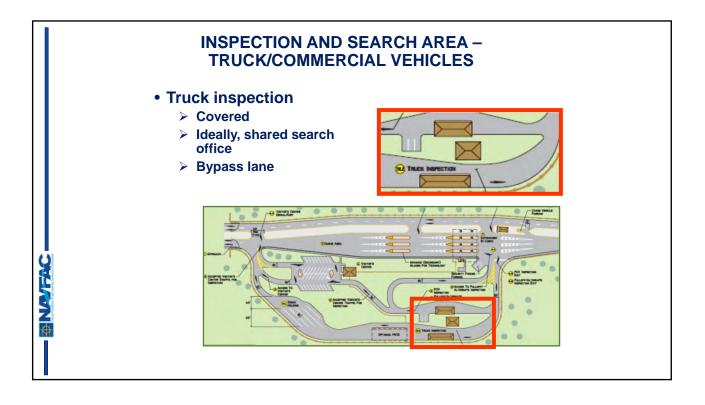


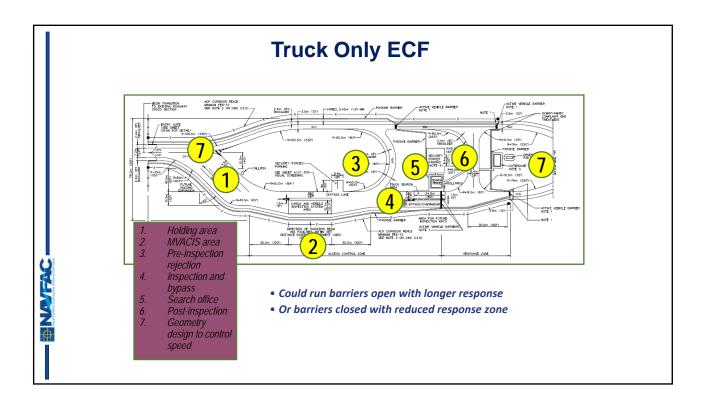


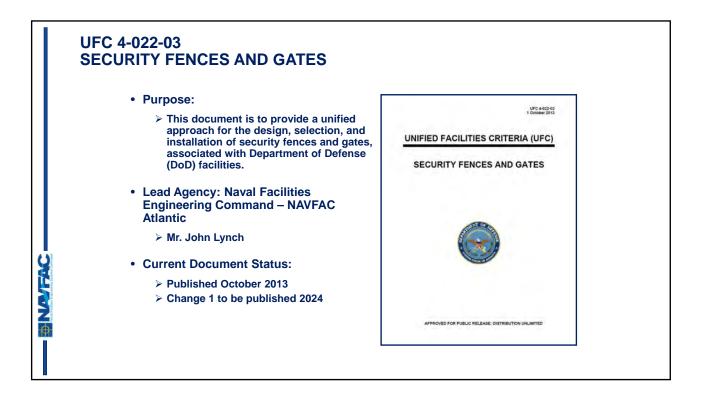




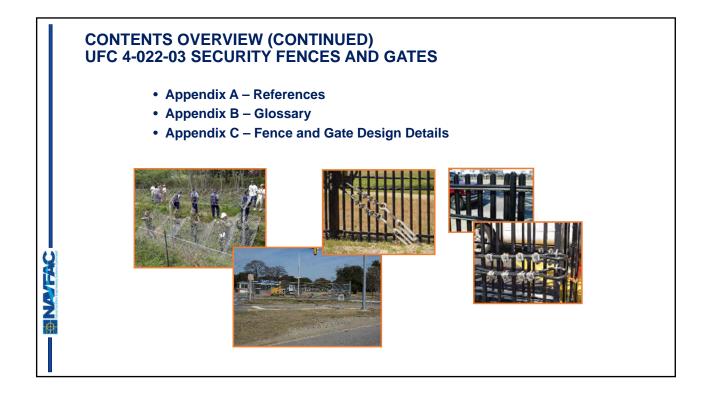




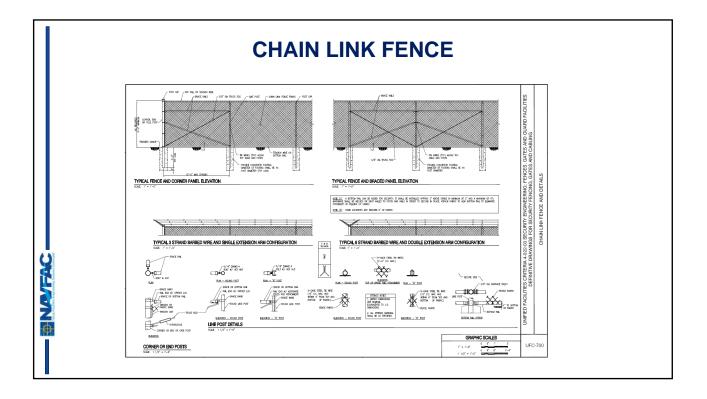


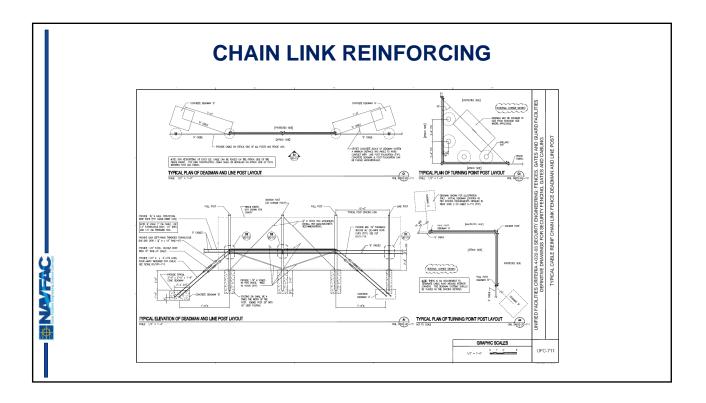


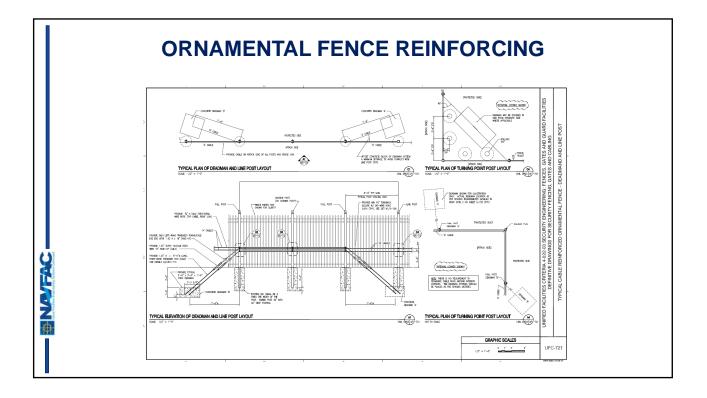


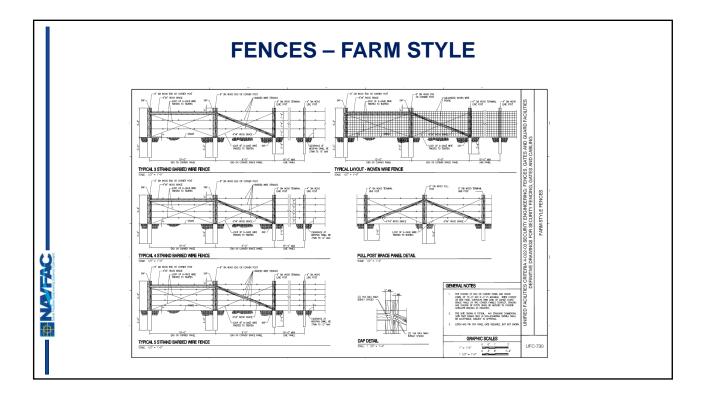


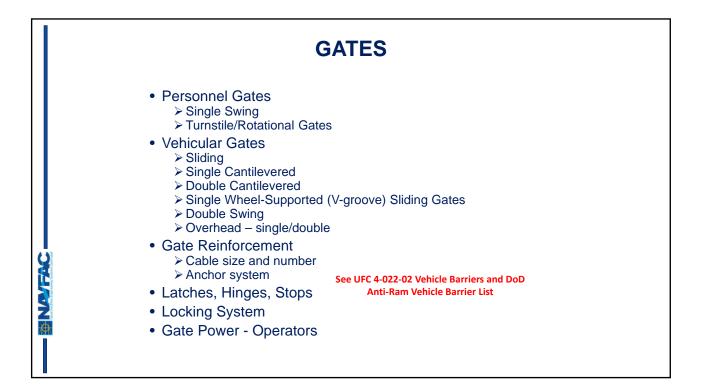
	FENCES
	<ul> <li>What is the "asset" to be secured?</li> <li>&gt; Arms, Ammunition, Explosives, Ships/Vessels, Aircraft, Nuclear, Information, Utilities,</li> <li>&gt; Enclave (Special Training, Waterfront, Air Field, CIA, Weapons Development)</li> <li>&gt; Installation Perimeter</li> </ul>
	<ul> <li>Fencing Fabric or Material</li> <li>&gt; Height (7-foot minimum)</li> <li>&gt; Chain Link</li> <li>&gt; Ornamental</li> <li>&gt; Expanded Steel</li> </ul>
	Posts, Rails, Bracing, Tension Wires
- LAC	<ul> <li>Fittings and Accessories</li> <li>&gt; Top Guards – Outriggers, Flat Wrap Coil, Razor Mesh, Barbed Wire, Barbed Tape, Concertina</li> </ul>
	Grounding     See UFC 4-022-02 Vehicle Barriers and DoD
	<ul> <li>Reinforcement Anti-Ram Vehicle Barrier List</li> <li>Cable size and number</li> <li>Deadman Anchor</li> </ul>

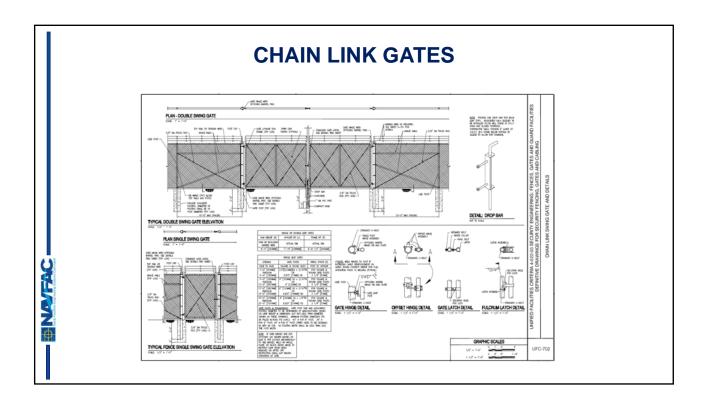


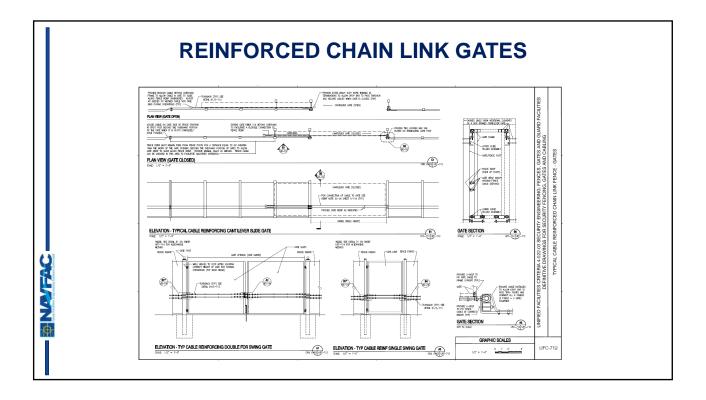


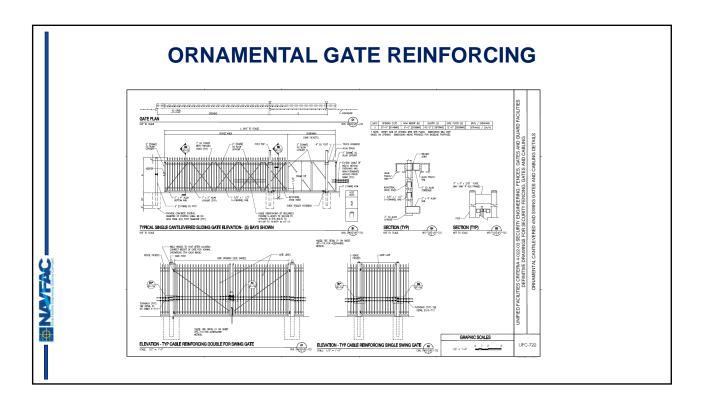


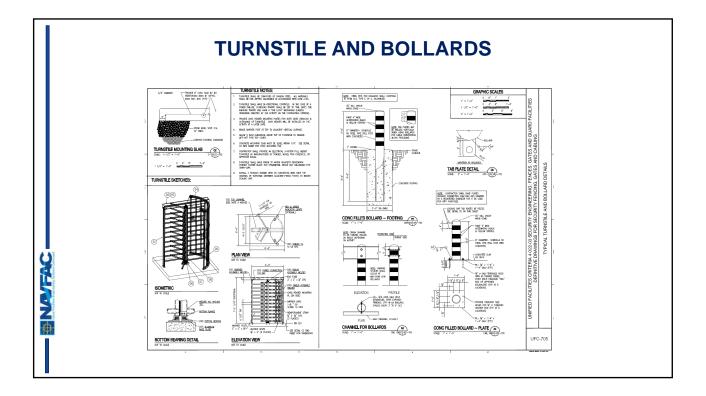


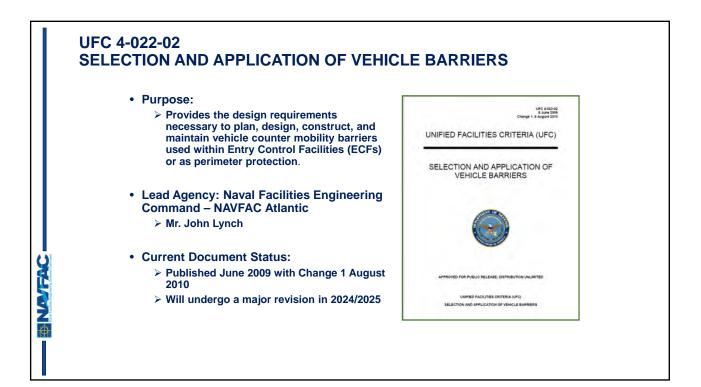


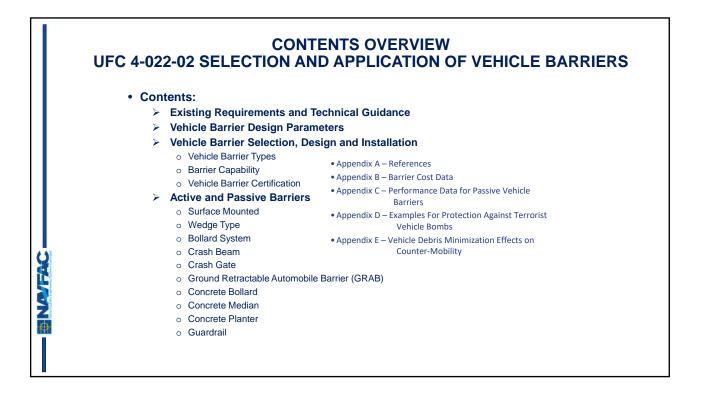


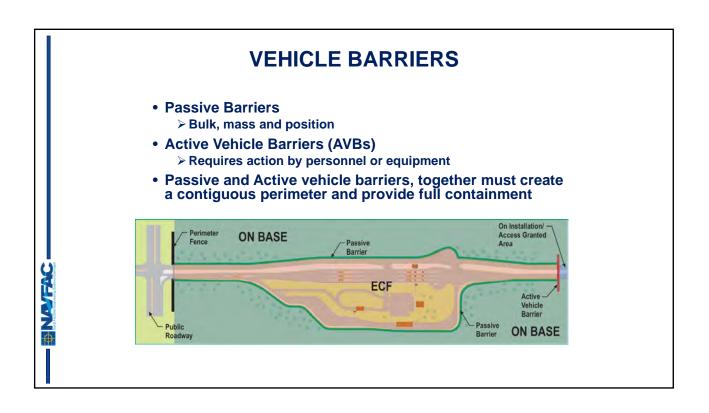


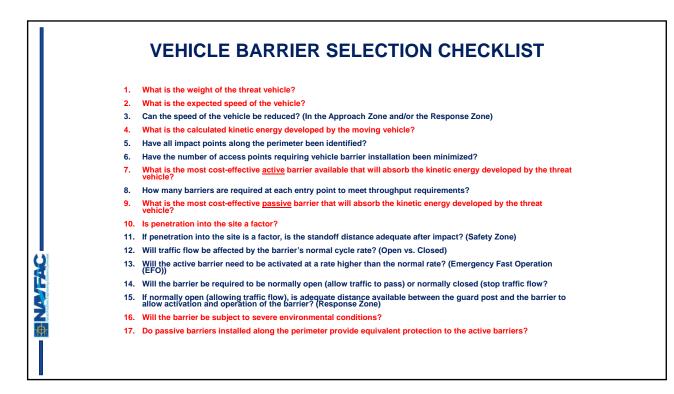


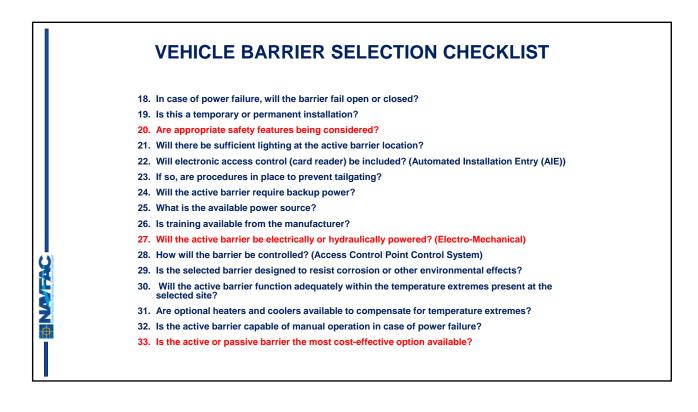




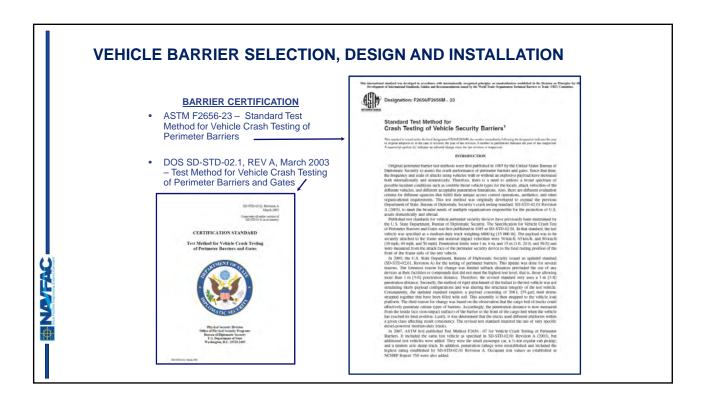












	DADDIE	D GELEC		ECICN A	ND INCT	
	DAKKIE	R SELEU	$\mathcal{F}$	ESIGIN F		ALLATION
			BARRIER CE	ERTIFICATION		
		Oten dead T	t. Mathaal faa	Valsiala Oscal	Testing of Desig	natan Damiana
4				venicie Crasi	n Testing of Perin	neter Barriers
		1 Impact Condition Designat			1	
Test Vehicle/Minimum Test Inertial Vehicle, kg [ibm]	Nominal Minimum Test Velocity, km/h (mph)	Permissible Speed Range, km/h (mph)	Kinetic Energy, KJ [ft-kips]	Condition Designation		
Small passenger car (SC)	50 [30]	45.0-60.0	106 [78]	SC30		
1100 [2430] 1100 + 25 [2420 + 55]	65 [40]	[28.0-37.9] 60.1-75.0	179 [131]	SC40		
	80 [50]	[38.0-46.9] 75.1-90.0	271 [205]	SC50		
		[47.0-56.9]				
	100 [60]	90.1- above [57.0-above]	424 [295]	SC60		
Full-size Sedan (FS) 2100 [4630] 2100 × 50 [4630 + 110]	50 [30]	45.0-60.0	203 [37]	F\$30		
	65 [40]	60.1-75.0	342 (247)	FS40		
	80 (50)	[38.0-46.9] 75.1-90.0	519 [387]	FS50	TABLE	2 Penetration Ratings
	100 [60]	[47.0-56.9] 90.1-above	810 [557]	F560		
Pickup truck (PU)	50 [30]	[57.0-above] 45.0-60.0	222 [164]	PU30	Designation	Dynamic Penetration Rating
2300 [5070]		[28.0-37.9]				
	65 [40]	60.1-75.0 [38.0-46.9]	375 (273)	PU40	P1	≤1 m [3.3 ft]
	80 [50]	75.1-90.0 [47.0-56.9]	568 [426]	PU50	P2	1.01 to 7 m [3.31 to 23.0 ft]
	100 [60]	90,1- above	687 [613]	PU60	P3	7.01 to 30 m [23.1 to 98.4 ft]
Standard Test Truck (M)	50 (30)	[57.0-above] 45.0-60.0	656 (451)	M30	10	7.01 to 00 in [20.1 to 30.4 lt]
6800 [15 000] 11 800-14 970	65 [40]	[26.0-37.9] 60.1-75.0	1110 (802)	M40		
[26 000-33 000]	80 [50]	[38.0-46.9] 75.1-above	1680 (1250)	M50		
		[47.0-above]				
Class 7 Cabover (C7) 7200 [15873]	50 [30]	45.0-60.0 [28.0-37.9]	673 [497]	C730		
11 800-14 970 [26 000-33 000]	65 [40]	60.1-75.0 [38.0-46.9]	1199 [884]	C740		
	80 [50]	75.1-above [47.0-above]	1872 [1381]	C750		
Heavy goods vehicle (H)	50 [30]	45.0-60.0	2850 [1950]	H30		
29 500 (65 000) 27 000 (60 000	65 [40]	[28.0-37.9] 60.1-75.0	4810 (3470)	H40		
\$1,000 len 000		[38.0-46.9]	6.14			

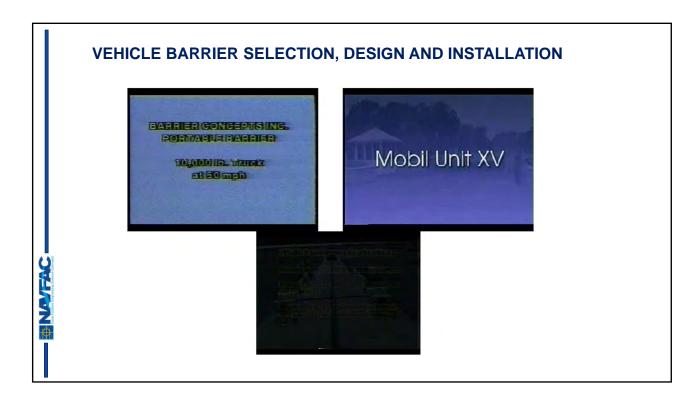
		· · · · · · · · · · · · · · · · · · ·	ation For Veh		<u>TION</u> t Of Perimeter Barriers and Gates Crash Testing of Perimeter Barriers and
	1. Impact condition weight (GV) lbs)	W) of 6,800 kg (1			TABLE TS-4 ASSESSMENT CRITERIA
Nominal impact speed	Permissible impact speed range	Kinetic energy	Desig- nation	Performance Level	Crash Test Assessment
80 kph 50 mph	75.0-above kph 47.0-56.9 mph	1,695,000 J 1,250,000 ft-lb	K12		Vehicle and cargo are to be stopped although vehicle partial penetration and/or barrier deflection of up to 3 feet are permitted. Vehicle and cargo are to be stopped although vehicle partial penetration
65 kph 40 mph	60.1-75.0 kph 38.0-46.9 mph	1,085,000 J 800,000 ft-lb	K8		and/or barrier deflection of up to 20 feet are permitted. Vehicle is disabled and does not travel more than 50 feet after impact.
50 kph 30 mph	45.0-60.0 kph 28.0-37.9 mph	610,000 J 450,000 ft-lb	K4		

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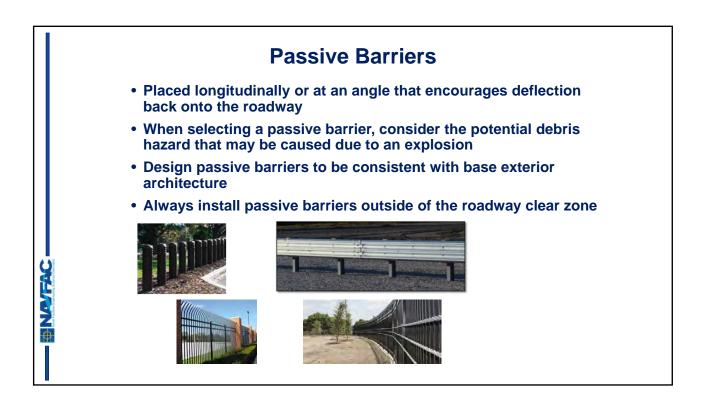








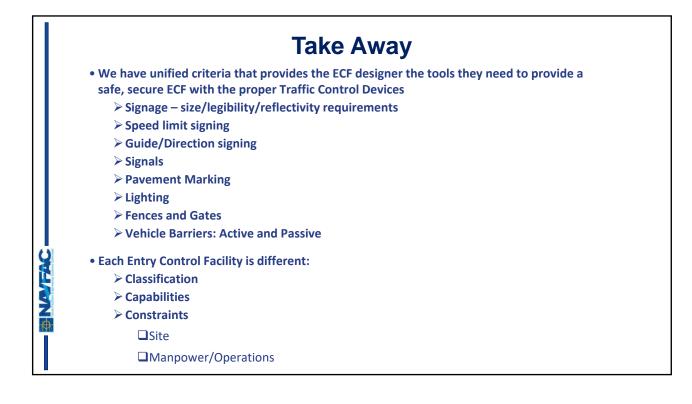








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## WHAT DOES AN ENTRY CONTROL FACILITY LOOK LIKE?

## NOTIONAL AND REAL EXAMPLES

