

UFC 4-020-01 DoD Security Engineering Facilities Planning Manual

NAVFAC Far East
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Capital Improvements Business Line

Engineering Criteria and Programs

September 2019

Problems



- Funding for protection measures is often not budgeted during project planning
- Security is often considered late in design
- Adding protection measures to completed facilities is difficult and expensive
- Security is often not geared to specific threat
- Existing security is geared to mission assets, not always effective for terrorist targets

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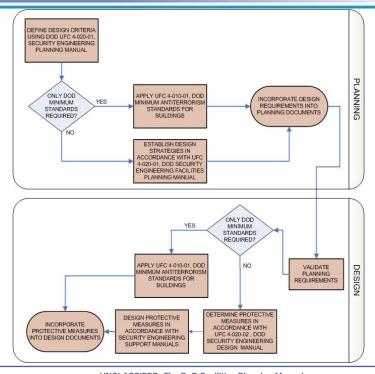
SECURITY ENGINEERING UFC SERIES



- SECURITY ENGINEERING UFC SERIES. Unified Facilities
 Criteria documents that cover minimum standards, planning,
 preliminary design, and detailed design for security and
 antiterrorism. The manuals in this series are designed to be
 used sequentially by a diverse audience to facilitate
 development of projects throughout the planning and design
 cycle.
 - The manuals in this series include the following:
 - □ DoD Minimum Antiterrorism Standards for Buildings.
 - ☐ Security Engineering Facilities Planning Manual.
 - ☐ Security Engineering Facilities Design Manual.
 - ☐ Security Engineering Support Manuals.

SECURITY ENGINEERING UFC SERIES





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Project Development



- Project Planning: incorporate AT and Physical Security requirements and their associated costs into the project scope and budget.
- · Work with our clients to:
 - Determine Asset to be protected
 - Define building occupancy (low occupancy/inhabited building)
 - Identify site constraints
 - Validate Design Basis Threat (DBT) as determined by Installation or Regional AT/Security Personnel
 - > Determine appropriate level of protection
- MUST BE DONE DURING PROJECT PLANNING

UFC 4-020-01, SECURITY ENGINNEERING FACILITIES PLANNING MANUAL



- Purpose:
 - >To provide a unified risk based approach to support planning of projects that include requirements for security and antiterrorism protective measures.
- Lead Agency: Army Corps of Engineers
 Point of contact: Curt Betts
 Protective Design Center
- Current Document Status:
 - **≻Published September 2008**
 - **≻Under Major Revision**

UFC 4-020-01 11 September 2008

UNIFIED FACILITIES CRITERIA (UFC)

DoD Security Engineering Facilities Planning Manual



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UFC 4-020-01, SECURITY ENGINNEEING FACILITIES PLANNING MANUAL



- Chap 1 INTRODUCTION
- Chap 2 AGGRESSOR THREAT AND TACTICS
- Chap 3 DESIGN CRITERIA DEVELOPMENT
- Chap 4 DESIGN STRATEGIES
- Chap 5 MASTER PLANNING CONSIDERATIONS
- Chap 6 PROJECT COST DEVELOPMENT
- GLOSSARY
- APPENDIX A NEW CONSTRUCTION COST TABLES
- APPENDIX B RETROFIT CONSTRUCTION COST TABLES
- APPENDIX C CONSOLIDATED CONSTRCUTION COMPONENT TABLES
- APPENDIX D EXPEDITIONARY CONSTRUCTION COSTS
- APPENDIX E BLANK WORKSHEETS

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UNIFIED FACILITIES CRITERIA (UFC)

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CHAPTER 1 INTRODUCTION



- PURPOSE: The purpose of this UFC is to support planning of projects that include requirements for security and antiterrorism.
- APPLICABILITY: New construction, existing construction or expeditionary and temporary construction.
- INTENDED USERS: Engineering planners responsible for project development and planning teams responsible for developing design criteria for projects.
- The goal is to develop appropriate, effective, unobtrusive, and economical protective designs to a level appropriate for project programming and to provide commanders with the information they need to allocate resources.

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CHAPTER 1 INTRODUCTION PLANNING TEAM



- The planning team
 - > Facility User
 - > Antiterrorism Officer
 - > Intelligence
 - > Operations
 - > Security Officer
 - > Logistics
 - > Engineering
 - > Resource Management
 - > Others as required



CHAPTER 1 INTRODUCTION PLANNING TEAM



The planning team must:

- ➤ Understand related DoD/Service policy/regulations
- Understand the objectives of the system
- ➤ Understand the facility and user's operational requirements and limitations.
- > Understand the security force's capabilities
- Determine the Design Basis Threat
- > Determine the Level of Protection
- Budget for protection measures

10

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CHAPTER 1 INTRODUCTION OTHER REQUIRMENTS



INTEGRATING OTHER REQUIRMENTS:

- Security Regulations: DoD and Service policy and regulations establish baseline requirements for protective measures
- Explosive Safety: Explosive safety regulations may require high level of protection than required by security criteria
- Other DoD Standards: DoD Minimum Standards for Buildings, COCOM OP ORDS
- <u>Historic Preservation</u>: Implementation of security and antiterrorism protective measures cannot supersede the obligation to protect cultural resources
- Sustainable Design: Security and antiterrorism protective measures may pose challenges for sustainable design, but the two are not mutually exclusive.
- Other Facility Requirements: Life Safety, seismic criteria, barrier-free access, and aesthetics may conflict with objectives of protective systems. Planning team must be aware of conflicts and set priorities.

CHAPTER 2 – AGGRESSOR THREATS AND TACTIC



- AGGRESSORS: Aggressors are people who perform hostile acts against assets such as equipment, personnel, and operations.
- AGGRESSOR OBJECTIVES: There are four major aggressor objectives that describe aggressor behavior. Aggressors may use the first three objectives to accomplish the fourth. The four aggressor objectives include:
 - ➤ Inflicting injury or death on people
 - > Destroying or damaging facilities, property, equipment, or resources
 - > Stealing equipment, material, or information
 - Creating adverse publicity
- AGGRESSOR CATEGORIES: There are four broad categories of aggressors considered in the planning manual:
 - ➤ Criminals
 - Protesters
 - Terrorists
 - Subversives

12

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CHAPTER 2 – AGGRESSOR THREATS AND TACTIC



- AGGRESSOR TACTICS: Aggressors have historically employed a wide range
 of offensive strategies reflecting their capabilities and objectives. The security
 engineering series categorize these offensive strategies into 13 tactics that are
 specific methods of achieving aggressor goals.
 - Moving Vehicle Bomb Tactic
 - Stationary Vehicle Bomb Tactic
 - > Hand Delivered Device Tactic
 - > Indirect Fire Weapons Tactic
 - Direct Fire Weapons Tactic
 - > Forced Entry Tactic
 - Covert Entry Tactic
 - Visual Surveillance Tactic
 - Acoustic Eavesdropping Tactic
 - > Electronic Emanations Eavesdropping Tactic
 - Airborne Contamination Tactic
 - Waterborne Contamination Tactic
 - Waterfront Attacks

CHAPTER 2 – AGGRESSOR THREATS AND TACTIC



- TOOLS, WEAPONS, EXPLOSIVES, AND AGENTS. Aggressors use various tools, weapons, explosives, and agents to attain their objectives. The tools, weapons, explosives, and agents included discussed throughout the security engineering series of UFCs represent those that can be reasonably expected in the near future.
 - ➤ Specific tools, weapons, explosives, and agents associated with each tactic are identified in chapter 3 of this UFC. General descriptions of these tools, weapons, explosives, and agents are provided in chapter 2.
 - Tools. Tools are used to breach protective construction components or barriers and include:
 - Forced Entry Tools
 - Vehicles
 - Watercraft
 - Surveillance Tools
 - o False Credentials
 - Weapons
 - Explosives
 - o Chemical, Biological, and Radiological Agents

14

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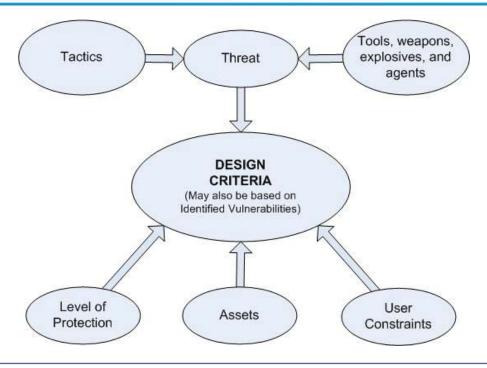
CHAPTER 3 – DESIGN CRITERIA DEVELOPMENT



- Chapter 3 provides a procedure to develop security engineering design criteria for facilities. The procedure:
 - > Captures and applies inputs of the Planning Team.
 - > Identifies assets and considers their value to the users
 - > Evaluates the Likelihood aggressors will target them.
 - > Evaluates preliminary design criteria using a risk/cost analysis.
- The Planning Team may adjust the preliminary design criteria to reflect the risk analysis or the funding required to implement the design criteria.
- The Planning Team may also adjust the criteria as necessary according to the professional judgments of the members of the team based on local and regional considerations.
- The resulting design criteria will be the basis for planning and preliminary design. It may be further adjusted during the design process based on the more detailed risk analysis process in UFC 4-020-02, Security Engineering Facility Design Manual (DRAFT).

CHAPTER 3 – DESIGN CRITERIA DEVELOPMENT





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Risk Level and Acceptability



- With Regard to the Planning Manual
 - > Risk is relative
 - > Used to compare alternatives
 - > May be used for rudimentary benefit/cost analysis

RISK

 Refined in UFC 4-020-02, Security Engineering Design Manual (Draft)

Risk = $A_V \times T_{LH} \times (1-P_E)$

A_v = Asset value rating T_{LH}=highest threat likelihood P_E= effective protection factor 1-P_F reflects "vulnerability" соѕт

Design Criteria Considerations



- Risk management
 - > Cost
 - > Relative risk increase or reduction
- Other criteria
 - Combatant Command "Standards"
 - DoD/Service regulatory requirements
 - > Others such as seismic, wind, and building codes
- Priorities
- Integration

18

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The Road Ahead





If you don't know where

you're going, any road

will get you there

The Problem





20

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Background



- ARMY TM 5-853-1/AFMAN 32-1071, Vol. 1 (Project Development)
- CARVER
 - <u>Criticality</u>/<u>Accessibility</u>/<u>Recuperability</u>/<u>Vulnerability</u>/<u>Effect on Population</u>/<u>Recognizability</u>
- DSHARPP
 - ▶ Demographics/Symbolism/History/Accessibility/Recognizability/Population/Proximity
- MSHARPP
 - <u>M</u>ission/<u>Symbolism/H</u>istory/<u>A</u>ccessibility/<u>R</u>ecognizability/ <u>P</u>opulation/<u>P</u>roximity
- NFESC QRAVA
 - **▶Quantitative** Risk Analysis and Vulnerability Assessment
- JAT Guide (Joint Antiterrorism)
- Others

The Design Criteria Development Procedure Major Steps



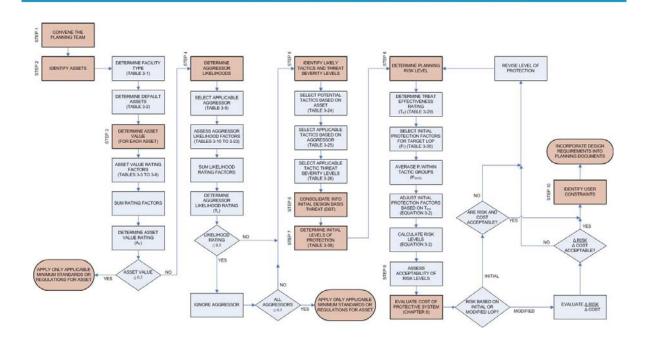
- Step 1: Convene the planning team
- Step 2: Identify assets
- Step 3: Determine asset value
- Step 4: Determine aggressor likelihoods
- Step 5: Identify likely tactics and threat severity levels
- Step 6: Consolidate into initial design basis threat
- Step 7: Determine Initial Levels of Protection
- Step 8: Determine planning risk level
- Step 9: Assess acceptability of risk levels
- Step 10: Identify user constraints

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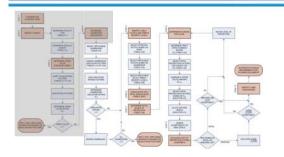
The Design Criteria Development Procedure





The Design Criteria Development Procedure (Steps 1-4)

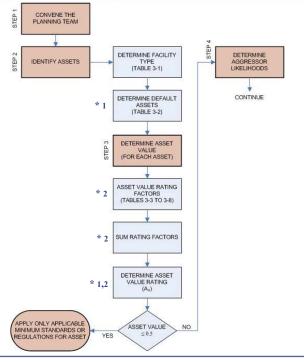




- Indicates value to be entered onto applicable worksheet
- 1. Design Criteria Summary Worksheet
- 2. Asset Value/Aggressor Likelihood Worksheet
- 3. Tactic, Threat Severity, and Level of Protection Worksheet
- 4. Risk Level Calculation Worksheet

24

5. Building Cost and Risk Evaluation Worksheet



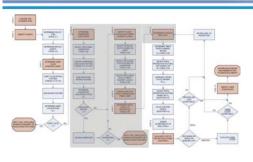
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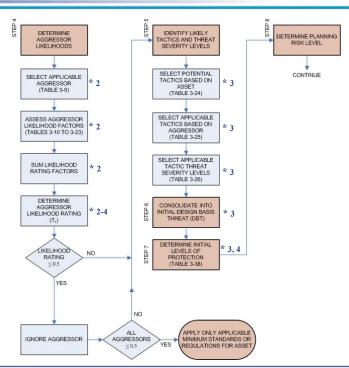
The Design Criteria Development Procedure

(Steps 4-8)



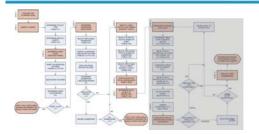


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- 4. Risk Level Calculation Worksheet
- 5. Building Cost and Risk Evaluation Worksheet



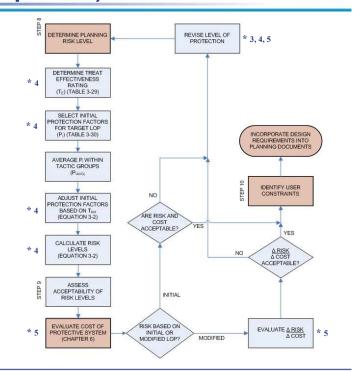
The Design Criteria Development Procedure (Steps 8-10)





- Indicates value to be entered onto applicable worksheet
- 1. Design Criteria Summary Worksheet
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26

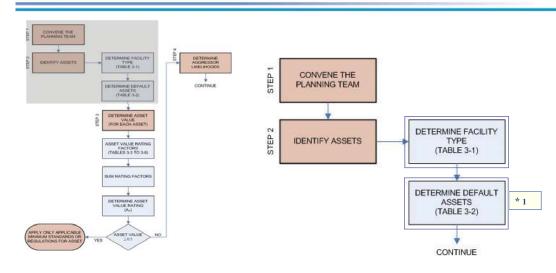


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The Design Criteria Development Procedure





- Indicates value to be entered onto applicable worksheet
- 1. Design Criteria Summary Worksheet

STEP 1 - CONVENE THE PLANNING TEAM



• First Step of the process of developing design criteria is to convene the "Planning Team".



* Minimum

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STEP 2 - IDENTIFY ASSETS



- STEP 2: IDENTIFY ASSETS. Identify assets that are be protected from compromise.
 - > The design criteria developed in this chapter relate primarily to assets associated with facilities
 - Protecting individual assets is generally more cost effective than protecting an entire facility.
 - Buildings should only be considered assets if they are the likely direct target of aggression, as in vandalism or where the buildings have some special significance such as a highly symbolic or historic structure.
 - Determining the assets to be protected is the first step in establishing any protective system.

Table 3-1 Common Facility Types



Table 3-1. Common Facility Types

Categ Administrativ		Headquarters and Opera	tions Facilities	Brigade, Battalion, Company	
ommunity Buildings *			Τ	able 3-1. Common Facility	у Турез
	Bas	eline Building Category		Facility Type	Examples
•		istrative and unity Support		rters and Operations Facilities r Administrative Facilities	Brigade, Battalion, Company Headquarters
	Buildir		0.7155.0000		Airfield Operations Facility
	- 8				Aviation Unit Operations Facility
					Field Operations Facility
					Ship Operations Facility
					Emergency Operations Facility
					Fire / Police Station
					National Guard / Reserve Centers
					Cargo Handling Office
					Dispatch Building
					Courtroom
пассопра					General Administrative Facility
Personnel H			Schools .	and Education Facilities	Education Center
	l	I		Housing	h 1.01 1
				Unaccompanied Officers / Enlisted	
Family Housi	ng	Family Housing		Personnel Housing Family Housing Units	
Dining Facilit		Dining Facilities		Dining Facilities	
				EM Chib	

Table 3-2 Default Assets



								A	sset Ca	tegory								
	A	В	C	D	Е	F	G	H	I	J	K	L	M	N	0	P	Q	I
Facility Type	People (mission critical and general population)	Aircraft and components at aviation facilities	Ships, boats, and other watercraft	Vehicles and carriage mounted or towed weapons systems & components	Petroleum, oils, and lubricants (POL.)	Arms, ammunition, and explosives (AA&E)	Controlled medical substances	Communications/electronics test, measurement, & diagnostic equipment and tool kits and night vision devices	Organizational clothing and individual equipment	Subsistence items at commissaries, warehouses, & troop Issue facilities	Repair parts at installation supply and direct support units	Facilities engineering supplies and construction material	Audiovisual equipment, training devices, & subcaliber devices	Miscellaneous pilferable assets and currency or negotiable instruments	Critical infrastructure & industrial equipment	Controlled cryptographic items	Sensitive information	
Headquarters and Operations Facilities	1		\vdash	=	_	1	-	1	-		-		1	1	1	1	1	١,
Other Administrative Facilities	1		\vdash	-		1		1					1	1	1	1	1	١,
Unaccompanied Personnel Housing	1		-	-		1	-	-	-		-		1	1	1	Ė		H
Dining Facilities	1													1	1			t
Family Housing	1			-							-			1	1			t
Hospitals	1		П				1							1	1		$\overline{}$	Г
Medical Clinics	1						1							1	1			Г
Schools and Education Facilities	1												1	1	1			Г
Religious Facilities	1												1	1	1			Г
Community Facilities	1													1	1			Г
Commissaries and Exchanges	1									1				1	1			Г
Other Retail Facilities	1					1 1							1 1	1	1			Г
Recreational Facilities	1													1	1			Г
Alert Systems, Forces, and Facilities	1	1	1	1	1	1		1							1	1	1	,
Maintenance Facilities	1	1	1	1	1	1		1			1			1	1			,
Motor Pools		✓	1	1	1	1		1						1	1			,
Aircraft Parking Areas		1	1	1	1	1	-	1							1			
Ship or Boat Berths		1	1	1	1	1	3	1							1			,
Arms, Ammunition, and Explosives Storage		1	1	1	1	1									1			,
Petroleum, Oils, and Lubricants Storage		1	1	1	1	1									1			,
Research and Development Facilities	1							1							1		1	
Warehouses		1		1	1	1	1	1	1	1	1	1		1	1	1		
Utilities and Substations															1			

Facility Type



Facility Type	Ē																	
Headquarters and Operations Facilities	$\prod \setminus$																	
Other Administrative Facilities																		
Unaccompanied Personnel Housing	ШΙ																	
Dining Facilities	Ⅱ \																	
Family Housing		\																
Hospitals																		
Medical Clinics	Ш	\																
Schools and Education Facilities	Ш	\																
Religious Facilities	Ш	\																
Community Facilities		\																
Commissaries and Exchanges		\																
Other Retail Facilities	Ш									Acc	nt Calva	erv.					_	_
Recreational Facilities		\	À		c	D 188		y.	0	H I a		2 1	-	М	11	0	0	F
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Aircraft Parking Areas	Ðì	Facility Type Healquarters and Coversions Facilities		Agenta	de la	7 60	Precision (13	8	111	1	d ap	101	11	100	88	1	1
Ship or Boat Berths		Other Administrative Partition Union proposed Personal Housing	H,					1		7			F	1	2	3	11	7
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Petroleum, Oils, and Lubricants Storage	Ш	Religional Facilities Community Facilities Communities and Earthwiges	H											ľ	1	7	F	
Research and Development Facilities	Ш	Other Fetal Fullities Emmelional Fullities Alen Syrimus, Factor, and Fullities	1	,	,	,	,	,					F	F	2	1	,,	-
Warehouses		Manteurer Facilities Mater Profe	Ė	1		1	1	1				1			1	7	Ė	1
Utilities and Substations	Ш	Acres Fulling Acres This or Soul Swills Acres Agents those and Explanation	ŧ	,	1		,	,		-			÷			1		1
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32

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Asset Category



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A B (C	D	E	F	G	1	Н		I	J	_	K]	L	M	N	0	P	Q	R
People (mission critical and general population) Aircraft and components at aviation facilities	Ships, boats, and other watercraft	Vehicles and carriage mounted or towed weapons systems & components	Petroleum, oils, and lubricants (POL)	Arms, ammunition, and explosives (AA&E)	Controlled medical substances	Communications/electronics test,	measurement, & diagnostic equipment and tool kits and night vision devices	Organizational clothing and individual	equipment		warenouses, or noop russue radinaes	Repair parts at installation supply and direct support units	Facilities engineering supplies and	construction material	Audiovisual equipment, training devices, & subcaliber devices	Miscellaneous pilferable assets and currency or negotiable instruments	Critical infrastructure & industrial equipment	Controlled cryptographic items	Sensitive information	Activities and operations
	_		Other Description	Justice Trape Justice Adjustment In Justice	mi	3	Account of the control of the contro	C C C (AAA)	Controlled soft the fact of the control of the cont	Martini film and ogli stetut dentre Oggennesse Gelong, an indicates Organisme Gelong, an indicates organisme	e 1	7		A Controlled organization of	A Avenue and commune					

33 September 2019

Design Criteria Summary Worksheet



Project or Building Motor F	Pool		An	alyst			F	Pla	anı	nir	ng	Т	ea	am	1				Date			T	oc	la	y			
			,	Ex	uplos udias	ive a	end vice	s			idoff pons		E	ntry	Tacti	tics cs				ance			Co		ninat	ion		
Assets	Asset Category	Asset Value Rating	Market Water Property	MINING VOING LOUNCE	4	Stationary Vehicle Devices		Hand Delivered Devices	In the second Place Will construct	indrect Fre Weapons	2	DATAST TITE WEAPONS		Forced Emily	Prove Press	COVER EMBY		Visual Surveillance		Acoustic Eavesdropping	Electronic Emanations	Eavedropping		Arriome Contamination		Waterforme Contamination		Waterfrost Attack
	Asset	Asset	D B T	LOP	D B T	100	B	LOP	DBT	L O P	D B T	LOP	D B T	100	D B T	LOP	DBT	L O P	D B T	LOP	D B T	100	D B T	LOP	D B T	LOP	D B T	100
Tactical Vehicles	D																											
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Asset Value/Aggressor Likelihood Worksheet



Project or B							Asset Ta	actio	al \	Veh	icle	s			Anal	lyst		Pla	anr	nin	g T	ean	n
	Mot	or P	00	ı			Asset Category	[)						Date				da				
Value R	ating Fac	tors	Г									1	ikelih	ood R	ating	Factor	s					w	
Criticality to User/ Population Type 1 Impact on National Defense	Replaceability Bolding Consider	Relative Value to User	Sum of Value Factors	Value Rating 2	Potential Aggressors	Aggressor Goal 3	Aggressors	Installation Location*	Publicity Profile 4	Accessibility 4	Availability*	Dynamics*	Recognizability	Relative Value to Aggressor	Law Enforcement*	Aggressors' Perception of Success	Threat Level	History ⁵ / Intentions ⁶	Operational Capability 6	Operating Environment ⁶	Activity 6	Sum of Likelihood Factors	Likelihood Ratings 7
		Т					Unsophisticated Criminals																
Critical Infr Operations			Г				Sophisticated Criminals																
			ı				Organized Criminal Groups																
Sensitive In	formatio	a					Vandals					T i											
All Other A	ssets		Г				Extremist Protesters																
			1				Domestic Terrorists																
Notes:							International Terrorists																
							State Sponsored Terrorists																
							Saboteurs																
							Foreign Intelligence Services																

- Sum of Value Ratings + 10 for Sensitive Information 15 for General Population; 20 for Critical Infrastructure and Operations and Activities; 25 for all other assets G for mission related goal, P for publicity related goal, M for monetary related go
- Applies to all aggressors other that
 Applies to Terrorists only
 Sum of Likelihood Ratings + 180

STEP 3 - DETERMINE ASSET VALUE



• STEP 3: DETERMINE ASSET VALUE (Av).

- > Asset value refers to the value of an asset to its user.
- It is a reflection of the consequence of having the asset compromised by an aggressor.
- The asset value helps the Planning Team to determine the level of protection that is warranted for the asset.

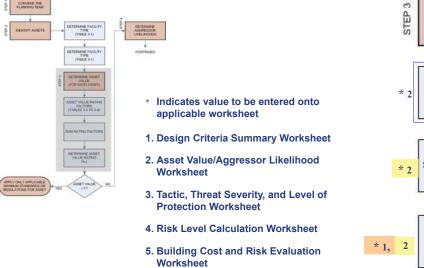
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The Design Criteria Development Procedure



DETERMINE ASSET VALUE (Av)



Value Rating Factors



- Criticality To The User / Population Type
- Impact On National Defense
- Replaceability
- Political Sensitivity
- Relative Value To User

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Value Rating Factors



Table 3-3. Value Rating Factor Applicability

25		Value	Rating F	actor	
Asset Category	Criticality to User / Population Type 1	Impact on National Defense	Replaceability	Political Sensitivity	Relative Value to User
General Population	1		. 100000 100	1	1
Critical Infrastructure and Operations and Activities	1	1	1	*	
Sensitive Information					1
All Other Assets (including Mission Critical Personnel)	1	1	1	1	1

Value Rating Factors



(Input onto Asset Value/Aggressor Likelihood Worksheet)

Project or Building	Motor Pool Asset						Veh	icle	S			Ana	lyst		Pla	anr	nin	g T	ean	n
Motor Po	ol			Asset Category	[)						Date	e		To	da	y			
Value Rating Factors		\blacksquare				_			I	ikelil	nood R	ating	Factor	5				L	10	
Criticality to User/ Population Type ¹ impact on National Defense Replaceability Political Sensitivity Relative Value to User	Sum of Value Factors	Potential Aggressors	Aggressor Goal 3		nstallation Location*	Publicity Profile 4	Accessibility *	Availability*	Dy namics 4	Recognizability	Relative Value to Aggressor	Law Enforcement 4	Aggressors' Perception of Success	Threat Level	History* / Intentions *	Operational Capability 6	Operating Environment ⁶	Activity 6	Sum of Likelihood Factors	Likelihood Ratings 7
General Population	Na Val	Pot	Ags	Aggressors	Inst	Pub	Acc	Ava	Dyr	Roc	Rel	Lav	Age	Ę	His	obo	obo	Act	Sun	Lik
		1		Unsophisticated Criminals																
Critical Infrastructure and Operations and Activities				Sophisticated Criminals														ij		
				Organized Criminal Groups																
Sensitive Information			П	Vandals																
All Other Assets	T			Extremist Protesters																
				Domestic Terrorists																
Notes:				International Terrorists																
				State Sponsored Terrorists																
				Saboteurs																
			T	Foreign Intelligence Services							П		П							

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Assessing Value Ratings



- Assess each applicable factor for each asset
- Select value rating (Varies for each factor)

Criticality to User and Population Type Table 3-4



- General population:
 - Military personnel
 - > DoD civilians and contractors
 - > Dependents and other civilians



42

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Criticality to User and Population Type Table 3-4



- Critical infrastructure
 - > Degradation or failure of specific functions
 - > Degradation of overall mission
- · All other assets:
 - Delay in operations
 - > Impact on output, production, of service

Criticality to User and Population TypeTable 3-4



Table 3-4. Criticality to User / Mission Impact/ Population Type

Asset Category	Population Type, Degradation Installation Mission, or Impact of Asset's Loss or Activity's Compromise on User's Mission	Value Rating Factor
General	Population is primarily military personnel	1
Population	Population is primarily DoD civilians and contractors	3
ropulaton	Population is primarily dependents and other civilians	5
	Loss would degrade or cause failure of specific functions, but have no effect on the installation-wide mission or missions of DoD facilities off installations	1
Critical	Loss would cause failure of specific functions and minimally degrade the installation-wide mission or missions of DoD facilities off installations	2
Infrastructure	Loss would cause failure of specific functions and moderately degrade the installation-wide mission or missions of DoD facilities off installations	4
	Loss would cause installation-wide mission failure or failure of missions of DoD facilities off installations	5

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Criticality to User and Population TypeTable 3-4



	^	
All Other	Asset's loss or operation's factivity's compromise would have no significant effect on operations, output, production, or service	0
Assets (except for sensitive information)	Asset's loss or operation's factivity's compromise would result in halting operations within 1 month or would result in a 10% curtailment in output, production, or service	1
(including mission critical	Asset's loss or operation's factivity's compromise would result in halting operations within 2 weeks or would result in a 25% curtailment in output, production, or service	2
personnel, operations and activities, and	Asset's loss or operation's factivity's compromise would result in halting operations within 1 week or would result in a 50% curtailment in output, production, or service	3
critical industrial equipment)	Asset's loss or operation's factivity's compromise would result in halting operations within 1 day or would result in a 75% curtailment in output, production, or service	4
equipment)	Asset s loss or operation s factivity s compromise would immediately halt operations, output, production, or service. The user cannot function without it.	3

Criticality to User and Population Type



Asset Value/Aggressor Likelihood Worksheet

Project or Building	Asset T	actio	cal '	Veh	icle	s			Ana	lyst		Pla	anr	nin	gΤ	ean	n
Motor Pool	Asset Category	- [)						Date	•		To	da	ıy			
Value Rating Factors			_	_	_	_ 1	ikelil	nood R	ating	Factor	5	_				10	
Critically to User! Population Type! Impact on National Defence Defence Replacability Replacability Relative Value to User Pactors Sum of Value Factors Value Rating 2 Potential Aggressors	Aggressors	Installation Location ⁴	Publicity Profile*	Accessibility 4	Availability*	Dynamics 4	Recognizability	Relative Value to Aggressor	Law Enforcement 4	Aggressors' Perception of Success	Threat Level	History ³ / Intentions ⁶	Operational Capability 6	Operating Environment	Activity *	Sum of Likelihood Factors	Likelihood Ratings 7
	Unsophisticated Criminals										1				-		
Critical Infrastructure and Operations and Activities	Sophisticated Criminals																
	Organized Criminal Groups																
Sensitive Information	Vandals																
All Other Assets	Extremist Protesters													- T			
4	Domestic Terrorists										Ш						
Notes:	International Terrorists																
	State Sponsored Terrorists																
	Saboteurs														25 - 15		
	Foreign Intelligence Services														1		

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September 2019

Impact on National Defense Table 3-5



Loss, destruction, or misuse of the asset or operation's / activity's compromise could:

- have *insignificant impact* on the United States or a region
- have significant mission impact on a regional level
- compromise the defense infrastructure of the United States
- impact the tactical capability of the United States
- be expected to *harm the operational capability* of the United States
- result in great harm to the strategic capability of the United States

■ Value Ratings - 0 through 5



Lesser

"Value"

Greater "Value"

Asset Replacement Table 3-6



- Mission critical personnel
 - > Immediately available
 - Transferred from other local units
 - > Transferred from other units elsewhere
 - Would have to be trained over extended period
 - So critical that replacement isn't realistic
 - Value Ratings 1 through 5



Greater "Value"

- Other assets
 - > In less than 24 hours
 - > In 24 to 72 hours
 - > In 72 hours to 1 week
 - > In 1 week to 1 month
 - > In 1 to 6 months
 - More than 6 months
- □ Value Ratings 0 through 5

4

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Perceived Political Sensitivity Table 3-7



- Negligible: No media attention
- · Minimal: Local media
- Moderate: National media
- High: International media
 - □ Value Ratings 0/1/3/5



Greater "Value"



- Mission critical personnel
 - < 5 or 10% of people needed for mission
 - □ 6 to 10 or 25% of people needed
 - □ 11 to 49 or 50% of people needed
 - □ 50 to 100 or 75% of people needed
 - □ >100 or 90% of people needed
- Value Ratings 1 through 5



Greater "Value"

- General population
 - □ < 11</p>
 - □ 11 to 49
 - □ 50 to 100
 - □ 101 to 500
 - □ 501 to 1000
 - □ > 1000
- Value Ratings 0 through 5

50

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Relative Value to User Table 3-8



Aircraft

- Cargo, refueling, or utility type < company or squadron strength
- Cargo, refueling, or utility type > company or squadron strength
- Tactical or attack type < company or squadron strength
- Tactical or attack type > company or squadron strength
- Strategic aircraft

■ Value Ratings - 1 through 5



"Value"



Watercraft

- > Others
- Patrol coastal, MSC strategic sealift (reduced operational status)
- Surface combatants, other amphibious, auxiliary, MSC, strategic sealift, ammunition ships, mine warfare
- Aircraft carriers, large deck amphibious, other submarines
- > SSBN and Sea Based X-band Radar (SBX)
 - □ Value Ratings 1 through 5



Greater "Value"

52

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Relative Value to User Table 3-8



Number	Tactical vehicles or critical maintenance or support vehicles	Carriage mounted or towed weapons systems	Lesser
< 20	No	No	"Value"
< 20	Yes	No	14>
< 20	Yes	Yes	
<u>≥</u> 20	No	No	
<u>≥</u> 20	Yes	No	
≥ 20	Yes	Yes	Greater
			- "Value"

□ Value Ratings - 1 through 5 (There are two 3's)



- Petroleum, oils, and lubricants
 - □ < 190,000 liters (50,000 gallons)
 - □ ≥ 190,000 l. (50,000 gal.) & < 570,000 l. (150,000 gal.)
 - □ ≥ 570,000 l. (150,000 gal.) & < 1,900,000 l. (500,000 gal.)
 - □ ≥ 1,900,000 l. (500,000 gal.) & < 3,800,000 l. (1,000,000 gal.)
 - \triangle \geq 3,800,000 l. (1,000,000 gal.)
- Lesser "Value"
- Arms, ammunition, and explosives
 - Uncategorized
 - □ Category IV
 - □ Category III□ Category II
 - □ Category I

■ Value Ratings - 1 through 5

Greater "Value"

54

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Relative Value to User Table 3-8



- Controlled substances and medically sensitive items
 - Non-sensitive pharmaceuticals and medical items
 - Sensitive pharmaceuticals and medical items in pharmacies, wards, clinics, or RTD&E facilities
 - Sensitive pharmaceuticals and medical items in bulk storage facilities
 - Controlled substances in pharmacies, wards, clinics, or RTD&E facilities
 - Controlled substances in bulk storage facilities

□ Value Ratings - 1 through 5



Greater "Value"



Asset Re	eplacement Costs
Individual Assets	Inventories of Assets
< \$2500	< \$100,000
≥ \$2500 & < \$10,000	≥ \$100,000 & < \$250,000
≥ \$10,000 & < \$25,000	≥ \$250,000 & < \$500,000
≥ \$25,000 & < \$50,000	≥ \$500,000 & < \$1,000,000
<u>></u> \$50,000 & < \$100,000	≥ \$1,000,000 & < \$2.000,000
> \$100,000	> \$2,000,000



□ Value Ratings - 0 through 5

56

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Relative Value to User Table 3-8

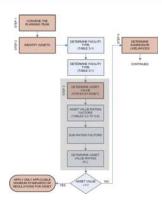


- Controlled Cryptographic Items
 Equipment processes:
 - Unclassified and non-sensitive information (0)
 - Unclassified, but sensitive (i.e. FOUO) information (1)
 - Confidential information (2)
 - > Secret information (3)
 - > Top Secret information (4)
 - Secure Compartmented information (5)
 - □ Value Ratings 0 through 5

- Sensitive Information
 - Unclassified, but sensitive (i.e. FOUO) information (5)
 - Confidential information (7.5)
 - > Secret information (8.5)
 - > Top Secret information (9.5)
 - Secure Compartmented information (10)
- Value Ratings 5 through 10

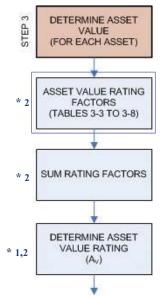
Asset Value Rating (A_V)





Asset Value Rating Sum of Value Rating Factors ÷

- 10 for sensitive information
- 15 for general population
- 20 for critical infrastructure and activities and operations
- · 25 for all others
- * Indicates value to be entered onto applicable worksheet
- 1. Design Criteria Summary Worksheet
- 2. Asset Value/Aggressor Likelihood Worksheet
- 3. Tactic, Threat Severity, and Level of Protection Worksheet
- 4. Risk Level Calculation Worksheet
- 5. Building Cost and Risk Evaluation Worksheet



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September 2019

58

Asset Value Rating (A_V) Documentation Asset Value/Aggressor Likelihood Worksheet



Project or Building			Asset Ta	actio	al \	Veh	icle	s			Anal	lyst		Pla	anı	nin	q T	ean	n
Motor Pool			Asset Category	[)						Date				da				
Value Rating Factors		Т						I	ikelih	ood R	ating	Factor						10	
Criticully to User! Production Type Defined Defense Defined Defense Replaceability Replaceability Replaceability Replaceability Relative Value to User User	Value Rating 2 Potential Aggressors	Aggressor Goal 3	Aggressors	Installation Location ⁴	Publicity Profile*	Accessibility 4	Availability4	Dynamics 4	Recognizability	Relative Value to Aggressor	Law Enforcement*	Aggressors' Perception of Success	Threat Level	History3 / Intentions6	Operational Capability 6	Operating Environment	Activity *	Sum of Likelihood Factors	Likelihood Ratinus?
	┰	T	Unsophisticated Criminals							П		\Box							
Critical Infrastructure and Operations and Activities			Sophisticated Criminals														-		
			Organized Criminal Groups														ì		
Sensitive Information			Vandals																
All Other Assets		T	Extremist Protesters							П	П	П			2				
4 4 4 3 4 19.	76		Domestic Terrorists																
Notes:	~	-	International Terrorists																
			19/	25	=	76			1										
			Succiency						4										
			Foreign Intelligence Services																

Design Criteria Summary Worksheet Input Asset Value Rating



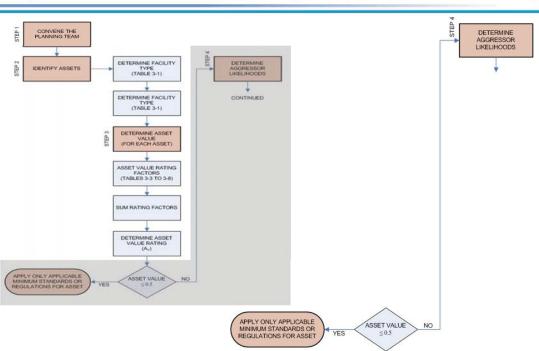
oject or Building Motor P	ool		Ana	alyst			Ρ	laı	٦n	in	g -	Ге	an	n				,	Date		-	Го	da	ıy			
			I		plosiv					Star			E	ntry '		ics				ance		8 [Co	ntan	ninat	ion	
Assets	Asset Category	Asset Value Rating	Mouino Vohish Dariese	MOVING VINCE DOVICES	Stationary Vehicle Devices		Head Delinead Designs	right Lenvered Levices	, at	Indirect Fire Weapons		Direct life weapons		Forced Entry		Covert Entry		Visual Surveillance	4	Acoustic Eavesdropping	Electronic Emanations	Eavesdropping		Airtome Contamination		Waterborne Contamination	War Care Area A
	Asset C	Asset	D B T	400	D B	100	D B T	LOP	D B T	LOP	D B T	LOP	D B T	LOP	D B T	LOP	DBT	LOP	D B T	LOP	D B T	100	D B T	LOP	D B T	LOP	D B T
Tactical Vehicles	D	.76									- 0																
			Ц		Ц	4									L								L				
	_		Н		Н	+	_													H							_
			Н	_	Н	+	_								H		_		H	H			H			Н	_
			Н		H	+																					
						1																					
						1																					

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First Decision Point Asset Value (A_V)





First Decision Point





Project or Building		actio	al \	Veh	icle	s			Ana	*		믿	aņı	nin	gΊ	ean	n
Motor Pool	Asset Category)						Date			10	oaa	ay			
Value Rating Factors						I	ikelil	hood R	ating	Factor	5					12	
Population Type Impact on National Pype Impact on National Impact on National Pype Impact on National Sensitivity Political Sensitivity Relative Value to User Sum of Value Factors Value Rating 2 Value Rating 2 Potential Aggressors	Aggressors	Installation Location ⁴	Publicity Profile4	Accessibility 4	Availability*	Dynamics 4	Recognizability	Relative Value to Aggressor	Law Enforcement4	Aggressors' Perception of Success	Threat Level	History5 / Intentions6	Operational Capability 6	Operating Environment	Activity 6	Sum of Likelihood Factors	Likelihood Ratines 7
	Unsophisticated Criminals														G 0		
Critical Infrastructure and Operations and Activities	Sophisticated Criminals																
	Organized Criminal Groups																
Sensitive Information	Vandals																
All Other Assets	Extremist Protesters										7						
4 4 4 3 4 19.76	Domestic Terrorists																
Notes:	International Terrorists																
	State > 0.5	so th p				ie]										

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The Design Criteria Development Procedure

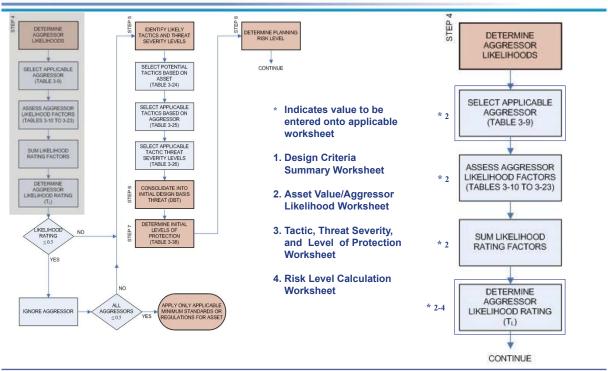


STEP 4: IDENTIFY AGGRESSOR LIKELIHOODS

- ➤ The next step in the procedure after identifying the assets and their values is to look at those assets from the perspective of potential aggressors. This step includes:
 - ☐ Identifying potential aggressors
 - ☐ Determining the likelihoods that they will attempt to compromise the assets.

STEP 4: AGGRESSOR LIKELIHOODS



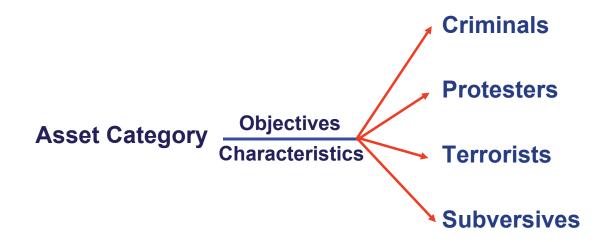


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Identify Likely Aggressors





Aggressor



- Criminals
 - > Unsophisticated, Sophisticated, Organized
- Protesters
 - > Vandals, Activists and Extremists
- Terrorists
 - > Domestic, International, Paramilitary
- Subversives
 - > Saboteurs and Foreign intelligence services

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Potential Aggressors Table 3-9



Table 3-9. Potential Aggressors and Default Goals

		_			Defa	ult Aggr	essor	Types			
	Asset Categories	Unsophisticated Criminals	Sophisticated Criminals	Organized Criminal Groups	Vandals	Extremist Protest Groups	Domestic Terrorists	International Terrorists	State Sponsored Terrorists	Saboteurs	Foreign Intelligence Services
Α	People			G	P	P	P	P	P.	G	
В	Aircraft and Components at Aviation Facilities	М	M	М	P	P	P	P	P	G	
C	Snips, Boats, and Other Watercraft	7/1	7/1	M	r	P	r	P	P	U	
D	Vehicles and carriage mounted or towed weapons systems	M	М	М	P	P	P	P	P	G	
	Carolina, City and Edition	- 1.1	1.1	1.6					-	-	
F	Arms, Ammunition, and Explosives	M	M	M	P	1	1	1	1	G	
G	Controlled Medical Substances and Medically Sensitive Items	M	М	М							
H	Communications / Electronics Equip. and Night Vision Devices	M	М	М							
1	Organizational Clothing and Individual Equipment	M	М	м							
J	Subsistence Items at Commissaries, Warehouses, & Troop Issue Facilities	M	М	М							
K	Repair Parts at Installation Supply and Direct Support Units	М	М	М							
L	Facilities Engineering Supplies and Construction Material	М	М	М							
М	Audiovisual Equipment, Training Devices, and Subcaliber Devices	М	М	М							
N	Miscellaneous Pilferable Assets (other than above) and Money	М	М	М							
0	Critical Infrastructure and Industrial Equipment				P	P	P	P	P	G	
P	Controlled Cryptographic Items		M	M				1		G	G
Q	Sensitive Information			G			in the			G	G
R	Activities and Operations			G		G	P	P	P	G	G

Potential Aggressors Table 3-9

	Table 3-9. P	ctentia	al Agg	res		10		- 22*	Ass	et	ate	egories
_					Α	80	Peo	ple				
		ophisticated sinals	icated	Organized Criminal	В	- 1	Airc Faci			d C	omp	onents at Aviation
	**************************************	Un ophisti	Sophisticated Criminals	rgani	C		Ship	s, I	Boat	ts, e	nd (Other Watercraft
	Asset Categories People	-	w. 0	G	E		TT - 1-	1.1.	and the second	. 4 .	on district	
В	Aircraft and Components at Aviation Facilities	М	М	М	D	- 1						age mounted or
C	Ships, Boats, and Other Watercraft	M	M	M	2.0		tow	ea v	veaj	pon	s sy	stems
D	Vehicles and carriage mounted or towed weapons systems	М	М	М	Ē		Peir	oie		Oil	s, aı	id Lubricanis
E	Petroleum, Oils, and Lubricants	M	M	M	_	-			-			
F	Arms, Ammunition, and Explosives	M	M	M	F		Arm	18 /	mt	mun	ition	n, and Explosives
G	Controlled Medical Substances and Medically Sensitive Items	M	М	М	- 33	_	1.00	200	Tel Marie	0.80000		
Н	Communications / Electronics Equip. and Night Vision Devices	M	M	М	G		7373	111076				d Substances and
I	Organizational Clothing and Individual Equipment	M	M	М		_						re Items
J	Subsistence Items at Commissaries, Warehouses, & Troop Issue Facilities	М	М	М	H		Con	nmu	mic	atic	ns/	Electronics Equip.
K	Repair Parts at Installation Supply and Direct Support Units	М	М	M			and	Nig	tht '	Visi	on I	Devices
L	Facilities Engineering Supplies and Construction Material	M	M	M	I		Org	aniz	zatio	nal	Clo	thing and
M	Audiovisual Equipment, Training Devices, and Subcaliber Devices	М	М	М	200	- 1					ipm	시시 : (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)
N	Miscellaneous Pilferable Assets (other than above) and Money	М	M	М		130		1 200				
0	Critical Infrastructure and Industrial Equipment				P	P	P	P	P	G		
P	Controlled Cryptographic Items		M	M						G	G	
Q	Sensitive Information			G						G	G	
R	Activities and Operations			G	ble 3-16	G	P	P	P	G	G	

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Potential Aggressors Table 3-9



			7				Defa	ult Agg	ressor	Types			_			
	Asset	Categories		Unsophisticated Criminals	Sophisticated Criminals	Organized Criminal Groups	Vandals	Extremist Protest Groups	Domestic Terrorists	International Terrorists	State Sponsored Terrorists	Saboteurs	Foreign Intelligence	200.000		
A						C			, n			C			4	
В	Facilities	mponents at		M	M	М	P	P	P	P	P	G				
Ċ		and Other Wa		M	M	M	P	P	P	P	P	G				
D	towed we	carriage mour	ited or				-		-	-	-	_				
E	Petroleum					D	efa	ult A	OOt	esso	T T	vnes	3			
F	Arms, An			_			Old	CTLU I	-98	0000		Po	<u> </u>			
G	Controlled Medically			-	=					68						a)
Н	Communi and Night	***		Č	i			世		T ST						ep G
1	Organizat Individual	ate c	75	9.				ote		8		1900011) tec		155
J	Subsisten Warehous	tic.	ate "	7	3			P.		H		ladi		บรูบ	43	of e
K	Repair Pa and Direc	his rad;	stic	0	d on	١,	22	Ti St	CS.	tic.		trong t	2	po	ig.	n In
L	Facilities Construct	op rii	五百	8	a Br		ğ	1 E	8	ne		E !	5	9 G	ote	20.2
M		Unsophisticated Criminals	Sophisticated Criminals	Organizad Criminal	Groups		v andals	Extremist Protest	Groups	Domestic Terrorists		International Terrori #1	8	State Sponsored Terrorists	Saboteurs	Foreign Intelligence Services
N	Miscellan	20	02 0	_		,		щ	\sim						1955	щ 02
_	(other tha							1 4	/			_/		_/	/	1
0	Equipment	structure and I					P	P	P	P	P	G				
P	Controlled Co		tems		M	M						G	G			
Q	Sensitive Info					G			200			G	G	_		
R	Activities and	Operations ssion, publicit				G		G	P	P	P	G	G	_		

Documentation of Potential Aggressors Asset Value/Aggressor Likelihood Worksheet



Project or								Asset Ta	actio	al '	Veh	icle	s			Anal	lyst		Pla	anı	nin	g٦	ean	n
	M	oto	r P	00	1			Asset Category	[)						Date				da		_		
Value	Rating	Facto	es							_		_	1	ikelil	nood R	ating	Factor	5					20	
Criticality to User/ Population Type 1 Impact on National Defense		Political Sensitivity	Relative Value to User	Sum of Value Factors	Value Rating 2	Potential Aggressors	Aggressor Goal 3	Aggressors	installation Location4	Publicity Profile 4	Accessibility 4	Availability*	Dynamics4	Recognizability	Relative Value to Aggressor	Law Enforcement*	Aggressors' Perception of Success	Threat Level	History ³ / Intentions 6	Operational Capability 6	Operating Environment*	Activity 6	Sum of Likelihood Factors	.lkelihood Ratings 7
General F	орции	l l	П		_	✓	M	Unsophisticated Criminals	_				1	-	-	_	7.0	-						_
Critical In Operation						V	M	Sophisticated Criminals																
						/	M	Organized Criminal Groups																
Sensitive !	Inform	ation				1	P	Vandals																
All Other	Assets					1	Р	Extremist Protesters																
4 4	4	3	4	19	.76	1	Р	Domestic Terrorists																
Notes:						1	Р	International Terrorists																
						1	Р	State Sponsored Terrorists																
						1	G	Saboteurs																
								Foreign Intelligence Services			- 0	Î												

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Assess Likelihood of Aggression









Likelihood Ratings



- Asset Location (1-5)
- Publicity Profile (1-5)
- Asset Accessibility (0-10)
- Asset Availability (0-5)
- Asset Dynamics (1-5)
- Recognizability (3-15)
- Relative Value to Aggressor (0-15)
- Law Enforcement Visibility (0-30)
- Aggressors' Perception of Success (6-30)

- Threat Level (5-20 for terrorists & 6-30 for others)
- History or Intentions * (2-10 for terrorists & 6-30 for others)
- Operational Capability * (2-10)
- Operating Environment * (2-10)
- Activity * (2-10)
 - * Terrorists only

Sums lead to ratings between 0 and 1

72

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Likelihood Rating Distribution

1/3



- Asset Location
- Publicity Profile
- Asset Accessibility
- Asset Availability
- Asset Dynamics
- Recognizability
- Relative Value to Aggressor

1/3

- Law Enforcement Visibility
- Aggressors' Perception of Success
- Threat Level
- History or Intentions *

1/3

- Operational Capability *
 Operating Environment *
- Activity *
- * Terrorists only

Grand Total Is 180

Asset Location Table 3-10



Table 3-10. Asset Location

Installation or facility Location	Likelihood
	Rating Factor
Located within the Continental United States away from major metropolitan areas	1
Located within the Continental United States near a major metropolitan area	2
Located outside the Continemal United States away from major metropolitan areas	4
Located outside the Continental United States near a major metropolitan area	5

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Asset Value/Aggressor Likelihood Worksheet



Aggressor Likelihood Value Ratings

Projec									Asset Tactical Vehicles				Analyst Planning Team												
		Mo	oto	r P	00	l			Asset Category	1	5						Date				da		3		
Value Rating Factors								_	_	_	I	ikelil	hood R	ating	Factor	s	_			_	n				
	Impact on National Defense	Replaceability	Political Sensitivity	Relative Value to User	Sum of Value Factors	Value Rating 2	Potential Aggressors	Aggressor Goal 3	Aggressors	Installation Locatin	Publicity Profile 4	Accessibility 4	Availability*	Dynamics 4	Recognizability	Relative Value to Aggressor	Law Enforcement*	Aggressors' Perception of Success	Threat Level	History* / Intentions 6	Operational Capability *	Operating Environment	Activity 6	Sum of Likelihood Factors	Likelihood Ratings 7
Gener	al Po	pulati	on	_	Su	V _o	P.	-	Unsophisticated		Ž.	×	4	6	×	A A	2	A of	F	田	ò	5	~	S	- 13
							$ \checkmark $	M	Criminals	2		1													
Critic							1	M	Sophisticated Criminals			1													
							1	М	Organized Criminal Groups			1											= 1		
Sensit	ive Ir	form	ation				1	Р	Vandals																
All O	ther A	ssets					1	P	Extremist Protesters	\vdash			1			П		П							
4	4	4	3	4	19	.76	1	P	Domestic Terrorists		Г	Г	1												
Notes							1	P	International Terrorists		Г			1		П									
							1	P	State Sponsored Terrorists					1											
							1/	G	Saboteurs					1											
							Ť	_	Foreign Intelligence Services						1										

Publicity Profile Table 3-11



Installation or facility is:

- Relatively unknown locally and regionally
- Well known locally, but relatively unknown regionally
- Well known locally and regionally, but relatively unknown nationally
- Well known locally, regionally, and nationally, but relatively unknown internationally
- Well known locally, regionally, and nationally, and internationally
 - □ Value Ratings 1 through 5



More likely

76

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Asset Accessibility Table 3-12



Facility asset is in is:

- On closed installation in separate access controlled compound in interior of installation
- On closed installation in interior of installation
- On closed installation w/in 100 m of installation perimeter
- On open installation in interior of installation
- On open installation w/in 100 m of installation perimeter
- Not on an installation

□ Value Ratings - 0 through 10@ 2 point intervals



More likely

Asset Availability Table 3-13



Similar assets are:

- Widely available both on and off installation or site
- Have limited availability off installation, but widely available on installation
- Not available off installation, but widely available on installation
- Limited availability on installation, and not available off installation
- Available at fewer than 3 locations on installation and not available off installation
- · Located only at this site
 - □ Value Ratings 0 through 5



More likely

78

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Asset Dynamics Table 3-14



Asset Dynamics

- Moved frequently on random basis
- Moved frequently on predictable basis
- Moved periodically on random basis
- Moved periodically on predictable basis
- Not moved

□ Value Ratings - 1 through 5



Recognizability Table 3-15



Table 3-15. Recognizability

Recognizability	Likel	ihood Rating	Factor
	Uncophisticated Criminals Sophisticated Criminals Varilals	Organized Criminal Groups Extremist Botest Groups Domestic Terrorists	International Terrorists State Sponsored Terrorists Saboteaus Foreign Intelligence Services
The asset's existence can be recognized only by aggressors who are experts or who have expert intelligence support	3	6	9
The asset's existence can be recognized only by aggressors with a significant amount of training or intelligence support	6	9	12
The asset's existence can be recognized only by aggressors with a moderate amount of training or intelligence support	9	12	15
The asset's existence can be recognized only by aggressors with a minor amount of training or intelligence support	12	15	15
The asset's existence is obvious to the aggressor. It can be recognized by aggressors with little or no training or intelligence support	15	15	15

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Recognizability Table 3-15



The asset's existence can be recognized only by aggressors who are experts or who have expert intelligence support

The asset's existence can be recognized only by aggressors with a significant amount of training or intelligence support

The asset's existence can be recognized only by aggressors with a moderate amount of training or intelligence support

The asset's existence can be recognized only by aggressors with a minor amount of training or intelligence support

The asset's existence is obvious to the aggressor. It can be recognized by aggressors with little or no training or intelligence support

	E S P	QQ MA	N Tagara
The asset's existence can be recognized only by aggressors who are experts or who have expert intelligence support	3	6	9
The asset's existence can be recognized only by aggressors with a significant amount of training or intelligence support	6	9	12
The asset's existence can be recognized only by aggressors with a moderate amount of training or intelligence support	9	12	15
The asset's existence can be recognized only by aggressors with a minor amount of training or intelligence support	12	15	15
The asset's existence is obvious to the aggressor. It can be recognized by aggressors with little or no training or intelligence support	15	15	15

Recognizability Table 3-15



	Like	lihood Rating	Factor				
	Unsophisticated Criminals Sophisticated Criminals Vandals	Organized Criminal Groups Extremist Protest Groups Domestic Terrorists	International Terrorists State Sponsored Terrorists Saboteurs Foreign Intelligence Services	rizabil	50		
	Unsophi Sophistic Vandals	Organiz Groups Extremi Domest	Internation State Sport Saboteurs Foreign Ir Services		-j	ihood Rating	sts ronists
	3	6	9		icated Crim	Criminal Protest G Terrorists	ral Terro reored Te relligeno
	6	9	12		Unsophisticated Criminals Sophisticated Criminals Vardals	Organized Criminal Groups Extremist Protest Groups Domestic Terrorists	International Terrorists State Sponsored Terrorists Saboteurs Foreign Intelligence
	9	12	15	re	3	6	9
7	12	15	15	3	6	9	12
-	33334	2000	S (5)		9	12	15
	15	15	15	minor	12	15	15
	by aggressors w	ith little or no training	or intelligence support	ized	15	15	15

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Relative Value to Aggressor Table 3-16



				Table 3-16. Relative Value to Aggres	sors	
100	sset egory ¹	Aggressor	Measure	Relative Value	Likelihood Rating Factor	
	A B	Saboteurs and	Value to mission or	Compromising assets would have negligible utility to accomplishment of aggressor's mission or future goals.	0	
_	C D	Foreign Intelligence	future goals	Compromising assets would have minor utility to accomplishment of aggressor's mission or future goals.	3	
destruction ²	E F ⁴	Agents, or Organized		Compromising assets would have moderate utility to accomplishment of aggressor's mission or future goals.	6	
destru	O P	Criminal Groups ⁵	_	Compromising assets would have significant utility to	8	
death or	Q R	**		Compromising assets would have major utility to accomplishment of aggressor's mission or future goals.	12	
9				compromising assets would likely be critical to accomp- lishment of aggressor's mission or success of future goals.	15	
subject 1	A B C	Terrorist / Extremist Protest	Publicity value	Aggressor is likely to believe asset's compromise would result in publicity limited to local media	3	
Assets	D E F4	Group, Vandals		Aggressor is likely to believe asset's compromise would result in publicity that would likely extend to national media	9	
	O P R			Aggressor is likely to believe asset's compromise would result in publicity that would likely extend to international media	15	

Relative Value to Aggressor Table 3-16



Table 3-16 (continued)

						Likelihood Ratin	g Factors	
		Aggressors ⇔		Relative Value	Unsophisticated Criminals	Sophisticated criminals	Organized criminal groups	Terrorists ⁶
	B C	Individual assets	Monetary value	Asset value is less than \$2500	9	3	0	3
theft ³	D E F4			Asset value is greater than or equal to \$2500 and less than \$10,000	12	6	3	6
bject to t	G H			Asset value is greater than or equal to \$10,000 and less than \$25,000	15	9	6	9
<u>ā</u>	I			Asset value is greater than or equal to \$25 000 and less	15	12	9	12

Notes:

- Select the upper pair of factors if the goal of the aggressor is likely to be to destroy or kill the asset and the lower pair if the aggressor's goal is likely to be to steal it except as noted for asset category F (arms ammunition, and explosives).
 - Select between factors based on aggressor type
- Select between factors based on aggressor type.
 Select between factors based on whether analyzing individual assets or inventory of assets.
 For arms, ammunition, and explosives (AA&E) subject to action by terrorists or extremist protest groups, select the upper factor if the goal is to steal the AA&E for use in future attacks, select the second if the goal is to destroy it, and among the lower two if the goal is to steal and sell it.
 Only use this factor for organized criminal groups where it is likely they would kill or destroy an asset to further their goals. See paragraph 3-6.2.7.1.
 Use only where terrorists are likely to steal assets to sell them.

- Applies only for aircraft components.

Ī	ST.	K	\$500,000 and less than \$1,000,000					Г
	Assets	L M	Asset inventory value is greater than or equal to \$1,000,000 and less than \$2,000,000	12	15	12	15	١,
l		N P	Asset inventory value is greater than \$2,000,000	9	15	15	15	

- Select the upper pair of factors if the goal of the aggressor is likely to be to destroy or kill the asset and the lower pair if the aggressor's goal is likely to be to

- Select between factors based on aggressor fye.

 Select between factors based on aggressor type.

 Select between factors based on aggressor type.

 Select between factors based on whether analyzing individual assets or inventory of assets.

 For arms, ammunition, and explosives (AA&E) subject to action by terrorists or extremist protest groups, select the upper factor if the goal is to steal the AA&E. for use in future attacks, select the second if the goal is to destroy it, and among the lower two if the goal is to steal and sell it.

 Only use this factor for organized criminal groups where it is likely they would kill or destroy an asset to further their goals. See paragraph 3-6.2.7.1.

 Use only where terrorists are likely to steal assets to sell them.

- Applies only for aircraft components.

Relative Value to Aggressor Table 3-16



					353	Asset egory ¹	Aggressor	Measure
	Asset Legory A B C D E F O P Q R B C D D	Aggressor Saboteurs and Foreign Intelligence Agents, or Organized Criminal Groups Terrorist / Extremist Protest Group,	Measure Value to mission or future goals Publicity value	Compromising assets accomplishment of ag Compromising assets ishment of aggressor is likely to in publicity limited to Aggressor is likely to	to death or destruction ²	A B C D E F ⁴ O P Q R	Saboteurs and Foreign Intelligence Agents, or Organized Criminal Groups ⁵	Value to mission or future goals
Ass	E F ⁴ O P R	Vandals		in publicity that would Aggressor is likely to in publicity that would	Assets subject	A B C D E F ⁴ O P	Terrorist / Extremist Protest Group, Vandals	Publicity value

85 September 2019

Assets Subject to Destruction

Table 3-16 (Mission/Publicity)



For saboteurs, foreign intelligence agents, or organized criminals likely to kill to advance their goals

Value to mission/ future goals

- Negligible utility
- Minor utility
- Moderate utility
- Significant utility
- Major utility
- Critical to goals

■ Value Ratings - 0 through15 @ 3 point intervals

Less likely For terrorist/extremists protest groups, vandals

Publicity value

- Local media
- National media
- International media
- **☐** Value Ratings 0, 3, 9, 15

More likely

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Relative Value to Aggressor

Table 3-16



Ta.	ble 3-1	6 (continue	d)				Aggressors ⇔					
		Aggressors ⇔		Relative V		B	Individual assets	Monetary value	icated als	Likelihood Ratin Sophisticated criminals	Organized criminal groups	Terrorists ⁶
	B C D	Individual assets	Monetary value	Asset val	m,	D E F ⁴	45506	Value	-	3	0	3
theft3	E F ⁴			Asset val than \$10,	theft3					6	3	6
ject to	G H I			Asset val than \$25,	ct to	G H				9	6	9
Assets subject to theft ³	J K			Asset val than \$50, Asset val	subject to	I J			<u> </u>	15	12	15
As	M N			than \$100	ssets	K			-	15	15	15
	P B ⁷	Asset	Monetary	Asset inv	Ą	L M				3	0	3
heft ³	E F ⁴ G	inventories	value	Asset inv \$100,000		N P				6	3	6
# p	H			Asset inv \$250,000	Y	B ⁷	Asset	Monetary				
Assets subject to theft ³	J K			Asset inv \$500,000	m,	E F ⁴	inventories	value		12	9	12
Assets	L M			Asset inv \$1,000,00	theft3	G			H	15	12	15
	N P			Asset in	2	H I				15	15	15
Not	 Selestera Selestera Selestera For form Only Use 	ect the upper particle except as no control except as no control except as arms, ammunituse in future at y use this factor only where tealies only for a	oted for asset stors based on stors based on tion, and expl tacks, select t or for organize crorists are lik	category F (aggressor t) whether an losives (AA) he second if ed criminal g ely to steal (Assets subject	J K L M N P		1	ct the u	if the aggressor's pper factor if the id sell it. goals. See parag	goal is to stea	I the AA&E

87

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Assets Subject to Theft

Table 3-16 (Monetary)

Individual Assets

- · < \$2500
- · \$2500 \$10,000
- \$10,000 \$25,000
- · \$25,000 \$50,000
- \$50,000 \$100,000
- · > \$100,000

Less likely



likely

Asset Inventories

- \$100,000
- \$100,000 \$250,000
- \$250,000 \$500,000
- \$500,000 \$1,000,000
- \$1,000,000 \$2,000,000
- · > \$2,000,000

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Relative Value to Aggressor Table 3-16 (Monetary)



					Likelihood Ratin	g Faciors	
Aggresso				Unsophisticated Criminals	Sophisticated criminals	Organized criminal groups	Terrorists
	Likelihood Ratin	gracus		9	3	0	3
Unsophisticated Criminals	Sophisticated criminals	Organized criminal	Terrorists ⁶	12	б	3	6
		groups		15	9	6	9
9	3	0	3	15	12	9	12
0200000				12	15	12	15
12	6	3	6	9	15	15	15
7				9	٤	U	٥
15	9	6	9	12	6	3	6
				15	9	6	9
15	12	9	12	15	12	9	12
4300		12 14 14 14 14 14 14 14 14 14 14 14 14 14		12	15	12	15
12	15	12	15	9	15	15	15
9	15	15	15	sset and the lower pair	if the aggressor's	goal is likely	to be to

- ror arms, ammunuon, and exposives (Arace) suggest to action by terrorisis or exactinists project groups, select the upper factor if the goal is to steal the AA&E for use in future attacks, select the second if the goal is to destroy it, and among the lower two if the goal is to steal and sell it.

 Only use this factor for organized criminal groups where it is likely they would kill or destroy an asset to further their goals. See paragraph 3-6.2.7.1.

 Use only where terrorists are likely to steal assets to sell them.
- - Applies only for aircraft components.

Law Enforcement Visibility Table 3-17



Table 3-17. Law Enforcement Personnel Visibility

		Freq		e in Vicinity of Fa	
		None	Occasional	Frequent	Continuous
at Installation	Occasional	30	24	18	12
	Scheduled	24	18	12	6
Frequency Perimeter	Continuous 18		12	6	0

90

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Perception of Success Table 3-18



Based on visible countermeasures present or likely to be present, aggressor would likely perceive:

- Very low possibility of compromising or destroying the asset and escaping
- Low possibility...
- Moderate possibility...
- · High possibility...
- Very high possibility...
 - □ Value Ratings 6 through 30@ 6 point intervals



likely

Threat Level

Table 3-19



From DoD, DOS, Combatant Command or local assessment

- Low
- Moderate
- Significant
- High



Table 3-19. Threat Level

Terrorist, Criminal, Vandal, Protestor, Foreign Intelligence, or Saboteur Threat Level	Likelihood l	Rating Factor
	Terrorists	All Other Aggressors
Low	5	6
Moderate	10	14
Significant	15	22
High	20	30

More likely

92

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History or Intention Table 3-20

Less

likely

History (other than terrorists)

- No history of attacking or otherwise compromising assets of this type
- Little or no history...
- History...but not locally or regionally
- Local or regional history...in past 10 years
- Strong history...locally or regionally in past 3 years
 - Value Ratings 6 through 30 @ 6 point intervals

Intention (terrorists)

- No history of attacks
- Anti-US ideology, but no history
- Anti-US ideology, with history outside region
- Recent attacks against US interests regionally
- Recent attacks against US interests locally

■ Value Ratings - 2 through 10 @ 2 point intervals



likely

Terrorist Operational CapabilityTable 3-21



- Very incapable
- Incapable
- Somewhat capable
- Very capable
- Extremely capable



□ Value Ratings - 2 through 10 @ 2 point intervals

94

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Terrorist Operating EnvironmentTable 3-22



- Favors US or host nation
- Neutral
- Favors terrorist
- □ Value Ratings 2 through 10@ 4 point intervals



More likely

Terrorist Activity Table 3-23



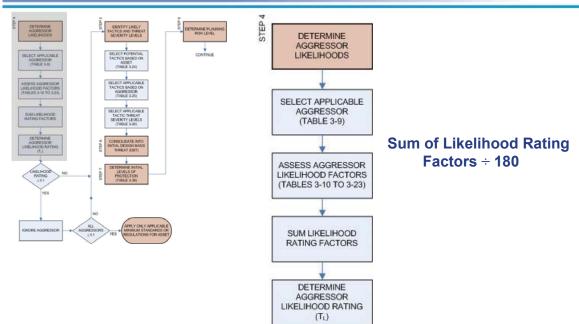
- Present but inactive
- · Recruiting, fund raising, or non-directed activity
- Suspected surveillance, threats, and suspicious incidents
- Incidental cell activity (operational or support)
- Credible indications of targeting US assets
 - □ Value Ratings 2 through 10 @ 2 point intervals

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Determine Aggressor Likelihood Rating (T_L)





96

CONTINUE

Documentation of Aggressor Likelihood Ratings



Asset Value/Aggressor Likelihood Worksheet

Project or Building		Asset	actio	cal	Veh	icle	s			Ana	lyst		Pla	anı	nin	g٦	ean	า
Motor Pool		Asset Category	[0						Date	9			da		_		
Value Rating Factors				_	_			Likelil	nood I	Rating	Factor	5					e	
Criticanty to User! Population Type! Import on National Defence Defence Political Sensitivity Political Sensitivity User User User Sum of Value Factors Value Rating 2	Potential Aggressors		Location*	@le⁴				ity	neto	ment 4	Perception		/Intentions 6	crational Capability 6	erating Environment		of Likelihood Factors	ikelihood Ratings 7
Continued Defense impact on 1 Defense Defense Political Se Political Se Relative V/ User User O'Value Rating 2	Potential Aggress		nstallation			94	/18	30	= .	52			11/50	tional	ting E	, Ai	of Like	pood
General Population	Poten	Aggressors	Instal	Pub	Acc	Ava	Dyr	Rec	Rela	Law	Agg of 3	Hr.	Hiso	Opera	para	Activity	Sum	Likeli
	√ N	Unsophisticated Criminals	2	4	2	2	3	12	12	18	24	6	6				94	.52
Critical Infrastructure and Operations and Activities	√ N	Sopmsticated Criminals	2	4	2	2	3	12	12	18	24	6	6				91	.51
	√ N	Organized Criminal Groups	2	4	2	2	3	15	9	18	30	6	6				97	.54
Sensitive Information	√F	Vandale	2	4	2	2	3	12	6	18	24	6	6				85	.47
All Other Assets	√F	Extremist Protesters	2	4	2	2	3	15	6	18	24	6	6				88	.49
4 4 4 3 4 19.76	√ F	Domestic Terrorists	2	4	2	2	3	15	9	18	24	5	4	4	6	4	102	.57
Notes:	√ F	International Terrorists	2	4	2	2	3	15	9	18	30	5	8	6	10	2	116	.64
	√F	State Sponsored Terrorists	2	4	2	2	3	15	9	18	30	5	10	10	10	10	130	.72
	10	Saboteurs	2	4	2	2					30						91	.51
		Foreign Intelligence Services																

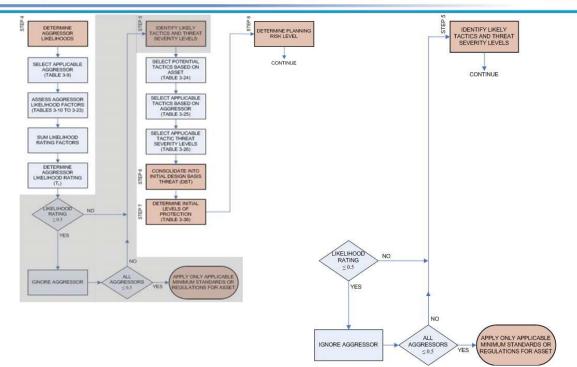
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98

Second Decision Point – Likelihood Rating





Evaluate Likelihood Ratings



Asset Value/Aggressor Likelihood Worksheet

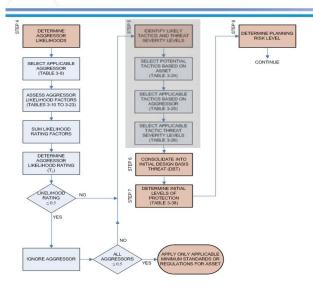
Project or Building		Asset Ta	actio	cal	Veh	icle	s			Ana	lyst		Pla	anı	nin	g٦	Tean	า
Motor Pool		Asset Category	[)						Date			To	da	ıy	_		
Value Rating Factors	Т						I	ikelil	ood F	Cating	Factor	s					Si	
Circumy to coert Transmy to c	Potential Aggressors Aggressor Goal 3	Aggressors	Installation Location*	Publicity Profile 4	cessibility 4	allability*	namics*	cognizability	fative Value to	1 2	gressors' Perception Success	- 5	story3 / Intentions 6	orational Capability 6	orating Environment	Activity *	Sum of Likelihood Factors	Likelihood Ratings 7
ocatia reputatea 57	/ N	Unsophisticated Criminals	2	4	L	ike									е		94	.52
Critical Infrastructure and Operations and Activities	✓ N	Cartiniana	2	4		a	gg	res	SSC	ors	dr	op	OU	t			91	.51
	√ N	Organized Criminal Groups	2	4	2	2	3	15	9	18	30	6	6			\	97	.54
Sensitive Information	VP	Vandals	2	4	2	2	3	12	6	18	24	6	6				85	.47
All Other Assets	VP	Extremist Protesters	2	4	2	2	100	100000		1000	24	Distance of the last	6				88	.49
4 4 4 3 4 19 .76	/P	Domestic Terrorists	2	4	2	2	3	THE OWNER OF TAXABLE PARTY.	-	Name and Address of the Owner, where	24	-	4	4	6	4	102	.57
Notes:	/P	International Terrorists	2	4	2	2					30		8	6	10	2	116	.64
	/P	State Sponsored Terrorists	2	4	2	2					30						130	.72
I .	/ G	Saboteurs	2	4	2	2			2000	10000	30	1000					91	.51
		Foreign Intelligence Services																

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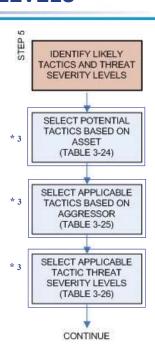
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STEP 5 - IDENTIFY LIKELY TACTICS AND THREAT SEVERITY LEVELS



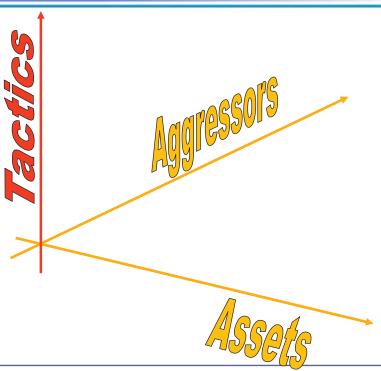


- * Indicates value to be entered onto applicable worksheet
- 3. Tactic, Threat Severity, and Level of Protection Worksheet



Threat





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Applicable Asset/Tactics Table 3-24



							Ass	et C	ateg	gorie	es			
		Bomb		Α	Pe	ople	S		- 15	0451				
		Moving Vehicle Bomb Tactic	i	В	33/32	ircra acilit		d Co	mpo	nent:	s at A	Aviat	ion	
	Asset Categories	Movi Tacti		C	Si	ups,	Boar	ts, ar	ıd Ot	her \	Wate	rcraf	t	
Α	People	1		D	T	abiat	00.00	nd ca	wi o a	0 400 0	11mt a	4 00	+ 03777	A
В	Aircraft and Components at Aviation Facilities			D	0.00			ysten		e mc	une	u or	LOW	u
C	Ships, Boats, and Other Watercraft		_	77	D	4 4		0:1		T . 1	Of a sec	. 1		
D	V ehicles and carriage mounted or towed weapons systems			E				Oils						
E	Petroleum, Oils, and Lubricants			F	A	rms.	Amı	nuni	tion,	and	Exp1	osiv	es	
F	Arms, Ammunition, and Explosives		_	and the		1000			- 27	2				
G	Controlled Medical Substances and Medically Sensitive Items			G	3900			Med				es ar	id	
Н	Communications / Electronics Equipment				_	_		Sens:	_					
	and Night Vision Devices			H	C	o en en	unic	ation	s/F	lectr.	onice	E.c.	iin m	ent.
I	Organizational Clothing and Individual Equipment				50.000			Visio				-4		
,	Subsistence Items at Commissaries,		-	T.				1 /	711-41	1	4 7	a Alas		•
K	Warehouses, & Troop Issue Facilities Repair Parts at Installation Supply and			T	0	rgan	zauc	nal (Lioti	mug	and I	naiv	idua	1
V	Direct Support Units				F	nin	ment							
L	Facilities Engineering Supplies and			1-		J anela,		7				- 17		
X10000	Construction Material						-	1						
M	Audiovisual Equipment, Training Devices, and Subcaliber Devices						1	1						
N	Miscellaneous Pilferable Assets (other than						/	/						
rened	above) and Money						•	,						
0	Critical Infrastructure and Utility		1	1	1	1	1	1						1
P	Equipment Controlled Cryptographic Items		- 57	0000		- 88	/	1	_		-			5880
0	Sensitive Information	0		1			1	1	/	/	_			
		1		1	1	1	V	V	V	V	V		1	1

103

102

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Applicable Asset/Tactics Table 3-24



										Appli	cable T	actics	9 90			-	
		set Categori	es		Moving Vehicle Bomb Tactic	Stationary Vehicle Bomb Tactic	Hand Delivered Devices	Indirect Fire Weapons	Direct Fire Weapons	Forced Entry	Covert Entry	Visual Surveillance	Acoustic Eavesdropping	Electronic Emanations Eavesdropping	Airbome Contamination	Waterborne Contamination	Waterfront Attack
A	People		<u> </u>		/	/	1	/	/	/	/				/	/	
В	Aircraft an	id Component	s at Aviation			1	1	1	1	1	1						
C		ts, and Other	Watercraft			1	1	1	1	1	1					_	/
D	V ehicles a	nd carriage m	ounted or tow	ed		1	-	-	,	,	1						1
	100						1:1-	1- T	: .								
97		9 9			- 0	App:	ncac	ile T	actic	S		170					10.71
				- 1				l .	- 1		1	- 1				1	
Moving Vehicle Bomb Tactic	Stationary Vehicle Bomb Tactic	Hand Delivered Devices	Indirect Fire Weapons	Direct Fire Weapons	2	Forced Entry	t to the total of	1000	Visual Surveillance	2	Acoustic Eavesdropping	Electronic Emanations	Eavesdropping	Airborne		Waterbome Contamination	Waterfront Attack
Moving Vehicle Bomb Tactic		-	Indirect Fire Weapons	Direct Fire Weapons		Forced Entry	t ease C	(contrained	Visual Surveillance		Acoustic Eavesdropping	Electronic Emanations	Eavesdropping	Airborne	Contratinianon	. Waterborne Contamination	Waterfront Attack
	above) and	i Money frastructure ar		Direct Fire Weapons	2	-	total tesso	1000	Visual Surveillance	•	Acoustic Eavesdropping	Electronic Emanations	Eavesdropping		TIO PROTITITION OF		Waterfront Attack
,	above) and Critical Ini	i Money frastructure ar	nd Utility	Direct Fire Weapons		,	-	•	J. Comm.	. 85	· ·	Electronic Emanations	Eavesdropping		ר מווימיוווימיין מיו		
0	above) and Critical Int Equipment Controlled	i Money frastructure ar	nd Utility	Direct Fire Weapons		,	-	•	J. Comm.	· · · · · · · · · · · · · · · · · · ·	1	Lectronic Emanations	- Eavesdropping		TID PRITTING O		

Applicable Aggressor/Tactics Table 3-25



			00 D 1		76,07 37,97	70.	17/2	7000 70	1 (0) 10(0)				
		Ta	ble 3-2	5. A	policable	Addres	sor/T	actic S	election I				
	Explo	sives Ta	ctics		Aggr					and ping		nination tics	
	ic cla	seo	2	1	Unsor		cated	1					ttack
Aggressors	Moving Vehicle Devices Tactic	Stationary Vehicle Devices Tactic	Hand Delivered Devices	Indicant Tira	Sophi		ted C	rimir	nals	Electronic Emanations Eavesdropping	Airborne Contamination	Waterborne Contamination	Waterfront Attack
Unsophisticated Criminals Sophisticated Criminals				-	Organ Group		Crim	nina1					
Organized Criminal Groups			L M										
Vandals			L		Vanda	als							
Extremist Protesters			L M		Extre	mist l	Prote	sters					L
Domestic Terrorists		L M	M H								L	L	L
International Terrorists	L M H	L M H	M H		Dome	estic '	Terro	rists			L M	L M	L M
State Sponsored Terrorists	L M H VH	L M H VH	M H	VI	H VH	***	VH				L M H	L M H	L M H
Saboteurs			M H	L IV H VI	Н	M H VH	L M H VH	Yes			L M H	L M H	L M H
Foreign Intelligence Services						L	H VH	Yes	Yes	Yes			

Applicable Aggressor/Tactics Table 3-25



		Ta	hle 3-2	5 Ann	licable	Addres	sor / T	actic	Selection						
	I	10	DIO 0-2	.o. /¬pp	iicabic		olicable							1	
	Explo	sives Ta	ctics		ndoff	En	try	Sı	urveillance			nination			
	\rightarrow			Wea	ipons	Tac	TICS	_ E	av esdrop	ping	Tac	tics	- u		
Aggressors	Moving Vehicle Devices Tactic	Stationary Vehicle Devices Tactic	Hand Delivered Devices	Indirect Fire Weapons	Direct Fire Weapons	Forced Entry	Covert Entry	Visual Surveillance	Acousac Eavesdropping	Electronic Emanations Eavesdropping	Airborne Contamination	Waterborne Contamination	Waterfront Attack		
Unsophisticated Criminals	\					L	L								
Sophisticated Criminals				12		L M H	L								
Organized Criminal						т								1	\rightarrow
Groups	\											Appl	licable	e Tactio	CS.
	_		F	vnlo	sive	s Ta	eties	3 1	Star	ndoff		Entr	W	Su	nv.
Vandals	\		-		3110	0 10	OHO.	_							
Extremist Protesters					cri-		335		VV 08	apons		Tacti	CS	Ea	dV)
Domestic Terrorists	\	L M	Vehicle	lactic	Stationary	evices	Hand Delivered		ire	يو ا	otry		ıtry	10e	
International Terrorists State Sponsored	L M H	L M H		Devices I	ionar	ide D tic	d Del	Devices	Indirect Fire Weapons	Direct Fire	Forced Entry		Covert Entry	Visual Surveillance	
Terrorists	L M H VH	L\ M\ H VH	Mo	2 C	Stat	Vehicle Tactic	Ham	Dev	Indi	Dire	For		Cov	Visual Survei	
Saboteurs		122				. IVI	1			1	1		i L		8
			M H	M H VH	M H VH	H VH	M H VH	Yes		ø	M H	M H	M H		
Foreign Intelligence Services						L	H VH	Yes	Yes	Yes					
DOI 11003		_							yaa.	41				eptember	2019

Documentation of Aggressor LikelihoodTactic, Threat Severity and LOP Worksheet



Project or Building		Asset		Tac	ctical	Vehicl	es		Analyst		Plan	ning	Tea	m		
Motor Pool		Explosives and Incendiary Devices	D	As	et Value		76	Date		Toda						
Tactics		Incendiary Devices			doff pons	En	try		veillance vesdroppi		Contan	nination				
Aggressors	Aggressor Likelihood	Moving Vehicle Devices	Stationary Vehicle Devices	Hand Delivered Devices	Indirect Fire Weapons	Direct fire weapons	Forced Entry	Covert Entry	Visual Surveillance	Acoustic Eavesdropping	Electronic Emanations Eavesdropping	Airbome Contamination	Waterborne Contamination	Waterfront Attack		
Applicable Tactics			/	1	_	1	/	V						1		
Unsophisticated Criminals	.52															
Sophisticated Criminals	.51															
Organized Criminal Groups	.54															
Vandals	<0.5														From App	
Extremist Protesters	<0.5														Asset/Ta (Table 3	
Domestic Terrorists	.57											-			(10000	,
International Terrorists	.64															
State Sponsored Terrorists	.72															
Saboteurs	.51															
Foreign Intelligence Services																
Initial Design Basis Threat (highest Threat Severity Level for each tactic)																
Initial Level of Protection for Applicable Tactic (Table 3-28)																

Assess Threat Severity Level



(Based on aggressors' likelihoods of aggression)



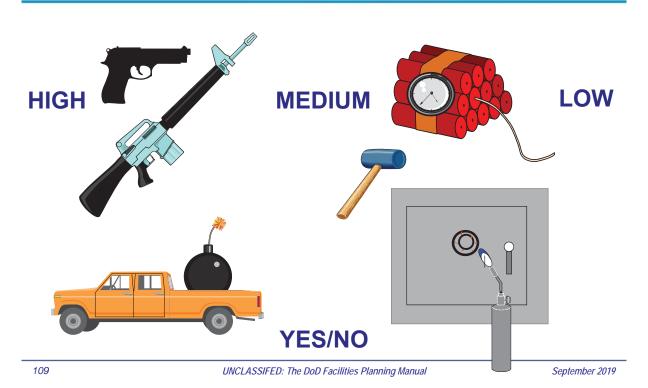
108

Threat Severities From Table 3-25

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September 2019



Threat Severity Level Selection Table 3-25



Table 3-25. Applicable Aggressor / Tactic Selection

							plicable		CS .				533 (6)		
	Explo	sives Ta	ctics		ndoff pons		try tics		rveillance avesdrop				mination octics		
Aggressors	Moving Vehicle Devices Tactic	Stationary Vehicle Devices Tactic	Hand Delivered Devices	Indirect Fire Weapons	Direct Fire Weapons	Forced Entry	Covert Entry	Visual Surveillance	Acoustic Eavesdropping	Electronic	Emanations Eavesdropping	Airborne Contamination	Waterbome Contamination	Waterfront Attack	
Unsophisticated Criminals						L	L					,			
Sophisticated Criminals						L M H	L					L	L		
Organized Criminal Groups			L M		L M H	L M H	L			-		L.	L		
Vandals			L		L	L	L				1	VI	M		
Extremist Protesters			L M	L	L M H	L M	L M					L	L M	Y	20
Domestic Terrorists		L M	M H	L M	L M H	L M	L M H	Yes			33.43	M	Н	1	-0
International Terrorists	L M H	L M H	M H	L M H	L M H	L M H	L M H	Yes			I	VI	L M	Y	es
State Sponsored Terrorists	L M H VH	L M H VH	M H	L M H VH	L M H VH	M H VH	L M H VH	Yes		2		H VI	H L		
Saboteurs			M H	L M H VH	L M H VH	M H VH	L M H VH	Yes			1	H 'H	M H VH	Y	es
Foreign Intelligence Services						L	H VH	Yes	Yes	ᄖ	1 62		1 1	-	эрі

Threat Severity Level Selection Table 3-26



Table 3-26. Threat Severity Selection

Number of Threat	8	Li	kelihood Rati	ng	
Severity Level Choices *	≤ 0.5	0.51 - 0.74	0.75 – 0.89	0.90 - 0.94	0.95 – 1
4	Minimum	1 5 7	2 ^{nl}	3nl	4 th
3	Minimum	1 5 7	2 ^{nl}	3nl	3^{nl}
2	Minimum	1 5 †	15†	2 ^{nl}	2ml
1	Minimum	157	15†	157	157
See Table 3-25	300	···			

Documentation of Threat Severity Level Tactic, Threat Severity and LOP Worksheet



Project or Building		Asset		Tac	tical	Vehicle	es		Analyst		Plan	ning	Tea	m
Motor Pool		Asset C	ategory	D	Ass	set Value	1	76	Date		Toda	ıy		
Tactics	po		plosives a ndiary De			doff pons	En	try		veillance vesdropp		Contan	ination	
Aggressors	Aggressor Likelihood	Moving Vehicle Devices	Stationary Vehicle Devices	Hand Delivered Devices	Indirect Fire Weapons	Direct fire weapons	Forced Entry	Covert Entry	Visual Surveillance	Acoustic Eavesdropping	Electronic Emanations Eavesdropping	Airborne Contamination	Waterborne Contamination	Waterfront Attack
Applicable Tactics			V	/	V	/	V	/						1
Unsophisticated Criminals	.52					10			1					
Sophisticated Criminals	.51											2		
Organized Criminal Groups	.54												2 2	
Vandals														
Extremist Protesters														
Domestic Terrorists	.57													
International Terrorists	.64													
State Sponsored Terrorists	.72													
Saboteurs	.51													
Foreign Intelligence Services														
Initial Design Basis Threat (highest Threat Severity Level for each tactic)									5 (1)					
Initial Level of Protection for Applicable Tactic (Table 3-28)														

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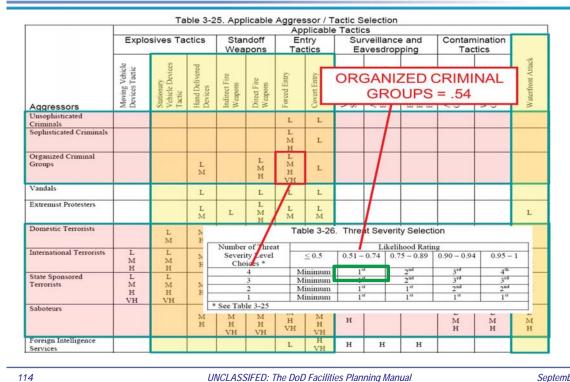
Documentation of Threat Severity Level Tactic, Threat Severity and LOP Worksheet



Table 3-25. Applicable Aggressor / Tactic Selection Applicable Tactics **Explosives Tactics** Standoff Surveillance and Contamination Tactics Weapons **Tactics** Eavesdropping Waterfront Attack Vehicle Tactic Visual Surveillance Direct Fire Aggressors Unsophisticated Criminals Sophisticated Criminals L Organized Criminal Groups L M L L L L L Extremist Protesters Domestic Terrorists H International Terrorists L M L M L M M H н State Sponsored Terrorists L M H VH Н Saboteurs L M H Н Foreign Intelligence

Documentation of Threat Severity Level Tactic, Threat Severity and LOP Worksheet





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September 2019

Documentation of Threat Severity Level Tactic, Threat Severity and LOP Worksheet



Project or Building		Asset		Tact	tical	Vehicl	es		Analyst		Plan	ning	Tea	m
Motor Pool		Asset C	ategory	D	As	set Value		76	Date		Toda			
Tactics	B		plosives andiary De			ndoff spons	En	itry		veillance vesdropp		Contan	ination	
Aggressors	Aggressor Likelihood	Moving Vehicle Devices	Stationary Vehicle Devices	Hand Delivered Devices	Indirect Fire Weapons	Direct fire weapons	Forced Entry	Covert Entry	Visual Surveillance	Acoustic Eavesdropping	Electronic Emanations Eavesdropping	Airborne Contamination	Waterborne Contamination	Waterfront Attack
Applicable Tactics			1	1	V	1	_/	V		-				/
Unsophisticated Criminals	.52		20 1											
Sophisticated Criminals	.51			27						-				
Organized Criminal Groups	.54						L							
Vandals														
Extremist Protesters														
Domestic Terrorists	.57													
International Terrorists	.64													
State Sponsored Terrorists	.72													
Saboteurs	.51													
Foreign Intelligence Services														
Initial Design Basis Threat (highest Threat Severity Level for each tactic)														
Initial Level of Protection for Applicable Tactic (Table 3-28)														

Documentation of Threat Severity Level



Tactic, Threat Severity and LOP Worksheet

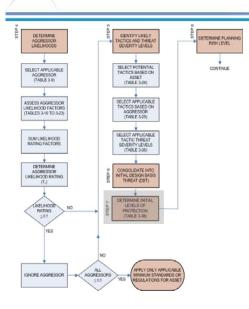
Project or Building		Asset		Tac	tical	Vehicl	es		Analyst		Plan	ning	Tea	m
Motor Pool		Asset C	ategory	D	As	set Value		.76	Date		Toda			
Tactics	8		plosives andiary De			ndoff spons	En	itry		veillance vesdropp		Contan	nination	
Aggressors	Aggressor Likelihood	Moving Vehicle Devices	Stationary Vehicle Devices	Hand Delivered Devices	Indirect Fire Weapons	Direct fire weapons	Forced Entry	Covert Entry	Visual Surveillance	Acoustic Eavesdropping	Electronic Emanations Eavesdropping	Airbome Contamination	Waterborne Contamination	Waterfront Attack
Applicable Tactics			V	V	/	1	/	V						V
Unsophisticated Criminals	.52					301 12		1						
Sophisticated Criminals	.51						Ī	Ī						
Organized Criminal Groups	.54			L		L	L	L						
Vandals				1				-						
Extremist Protesters														
Domestic Terrorists	.57		L	M	L	L	L	L						L
International Terrorists	.64		L	M	L	L	L	L						L
State Sponsored Terrorists	.72		L	M	L	L	M	L						L
Saboteurs	.51			M	L	L	M	L						L
Foreign Intelligence Services														100
Initial Design Basis Threat (highest Threat Severity Level for each tactic)														
Initial Level of Protection for Applicable Tactic (Table 3-28)														

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September 2019

STEP 6: INITIAL DESIGN BASIS THREAT (DBT)





- Initially, the worst case threat severity levels for each applicable tactic.
- The initial threat upon which a protective system of countermeasures will be based
- May be May be revised based on Planning Team decision or due to Combatant Command standards

Documentation of Initial Design Basis Threat Tactic, Threat Severity and LOP Worksheet



Project or Building		Asset		Tac	tical	Vehic	es		Analyst		Plan	ning	Tea	m
Motor Pool		Asset C	ategory	D	As	set Value		76	Date		Toda	_		
Tactics	28		plosives a adiary De			doff pons	En	try		veillance vesdropp		Contan	ination	
Aggressors	Aggressor Likelihood	Moving Vehicle Devices	Stationary Vehicle Devices	Hand Delivered Devices	Indirect Fire Weapons	Direct fire weapons	Forced Entry	Covert Entry	Visual Surveillance	Acoustic Eavesdropping	Electronic Emanations Eavesdropping	Airbome Contamination	Waterborne Contamination	Waterfront Attack
Applicable Tactics			V	1	V	/	V	1						V
Unsophisticated Criminals	.52						1	1						
Sophisticated Criminals	.51						ī	ī	\vdash					
Organized Criminal Groups	.54			L		L	Ĺ	L						
Vandals														
Extremist Protesters									\vdash					
Domestic Terrorists	.57		L	М	L	L	L	L						L
International Terrorists	.64		L	М	L	L	L	L						L
State Sponsored Terrorists	.72		L	М	L	L	М	L						L
Saboteurs	.51			М	L	L	М	L						L
Foreign Intelligence Services														
Initial Design Basis Threat (highest Threat Severity Level for each tactic)			L	М	L	L	М	L						L
Initial Level of Protection for Applicable Tactic (Table 3-28)														

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September 2019

Documentation of Initial Design Basis Threat Design Criteria Summary Worksheet



oject or Building Motor P	ool		An	alyst			Р	la	nn	in	g T	Ге	an	า				1	Date		-	То	da	ıy			
				E	plos	ina a	nd	_		Star	doff					tics		Suc	raill.	ance	and		Co	ntan	inst	ion I	-,1
					diar			s			pons		E	ntry	Tacti	ics				ropp			-		tics	on	
Assets	Asset Category	Asset Value Rating	Mary Carlotter	MOVING VALICIE DEVICES	a tita	Stationary vehicle Devices		Hand Delivered Devices	Indiana Claus Washington	indirect rire weapons	9	Direct life weapons	Dame of Contract	Forced Entry		Covert Entry		Visual Surveillance	4	Acoustic Eavesdropping	Electronic Emanations	Eavesdropping	9	Airbome Contamination		wacrome Conumination	Waterdam Assessed
	Asset	Asset	D B T	LOP	DBT	LOP	D B T	LOP	DBT	LOP	DBT	LOP	D B T	LOP	DBT	LOP	DBT	LOP	DBT	LOP	D B T	LOP	D B T	LOP	D B T	LOP	D B T
Tactical Vehicles	D	.76			L		M		L		L		M		L												L

119

Threat Parameters Table 3-27



Aggressor Tactic	Design Basis Threat	Weapons	Tools Or Delivery Method
Moving and Stationary Vehicle	Special Case 1	19,800 lbs (9000 kg) TNT	Heavy goods vehicle ² (65,000 lbs /29500 kg)
Devices	Very High	4400 lbs (2000 kg) TNT, Fuel	Medium duty truck or Class 7 cabover ² (15000 lbs / 6800 kg) or (15873 lbs / 7200 kg)
	High	1100 lbs (500 kg) TNT, Fuel	Medium duty truck or Class 7 cabover ² (15000 lbs / 6800 kg) or (15873 lbs / 7200 kg)
	Medium	550 lbs (250 kg) TNT, Fuel	Pickup truck ² (5070 lbs. / 2300 kg)
	Low	220 lbs (100 kg) TNT	Full-size sedan ² (4630 lbs / 2100 kg)
	Very Low	55 lbs (25 kg) TNT	Full-size sedan ² (4630 lbs / 2100 kg)
Hand Delivered Devices	High	IID, IED (up to 55 lbs / 25 kg TNT) &hand grenades (Mail bomb limited to 2.2 lbs / 1 kg TNT)	None
	Medium	IID, IED (up to 2.2 lbs / 1 kg TNT) & hand grenades	
	Low	IID	
ndirect Fire	Very High	Improvised mortar (up to 44 lbs 20 kg/ TNT)	None
Weapons Attack	High	122 mm rocket	
	Medium	82 mm mortar	
	Low	Incendiary devices	
Direct Fire Weapons Attack	Very High	Light antitank weapons, and UL 752 Level 10 (0.50 caliber / 12.7 mm, 1 shot)	None
	High	UL 752 Level 9 (7.62mm NATO AP, 1 shot)	li de la companya de
	Medium	UL 752 Level 5 (7.62mm NATO ball)	
	Low	UL 752 Level 3 (.44 magnum)	
Waterfront Attack	High	1100 lbs (500 kg) TNT (surface or submerged) Anti-Tank Weapons	High performance boat ³ (10,000 lbs / 4500 kg)
	Medium	UL 752 Level 10 (0.50 caliber / 12.7 x 99 mm) 550 lbs (250 kg) TNT (surface)	Power boat ³
	Weddill	55 lbs (25 kg) TNT (submerged) UL 752 Level 10 (0.50 caliber / 12.7 x 99 mm)	(5000 lbs / 2300 kg)
	Low	220 lbs (100 kg) TNT (surface)	Rigid Hulled Inflatable Boats ³
	Low	155 Ibs (156 kg) TNT (submerged) UL 752 Level 5 (7.62mm NATO ball)	(2000 lbs / 900 kg)

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September 2019

Threat Parameters Table 3-27



Active Shooter	High	UL 752 Level 5 (7.62mm NATO ball)	None
	Low	UL 752 Level 3 (.44 magnum)	
Airborne Contamination	High	Internal and external release of all agents listed below	Limited hand tools +2.2 lbs (1 kg) TNT explosive (dirty bomb)
	Medium	Agents associated with Low plus external release of toxic military chemical agents	Limited hand tools
	Low	Agents associated with Very Low plus external release of biological and radiological particulates	
	Very Low	External and internal release of Toxic Industrial Chemicals or Toxic Industrial Materials (TIC and TIM)	
Waterborne Contamination	High	Liquid or particulate agent stable in water greater than 30 days and not easily mitigated by chlorine	Limited hand tools
	Medium	Liquid or particulate agent stable in water between 2 hours and 30 days and not easily mitigated by chlorine	
	Low	Liquid or particulate agent stable in water less than 2 hours or easily mitigated by chlorine	
Forced Entry	Very High	Handguns and sub-machine guns (up to UL 752 Level 3 to overpower guards)	Bulk explosives (up to 20 lbs / 9 kg TNT), linear shaped charges (up to 10,500 grains per foot), unlimited hand, power, thermal took
	High		Unlimited hand, power, and thermal tools
	Medium	None	Unlimited hand tools - limited power tools
	Low		Limited hand tools - low observables
Covert Entry	Very High	Handgun	Electronic Neutralization Equipment Drill & Specialized Tools Robotic Dialer Manipulation Enhancer
	High	Handgun	Mechanical & Electronic Lock Decoder Drill, simple tools & camouflage Specialized bypass tools
	Medium	None	Lock Picks Bypass techniques High Quality False Credentials Observation tools
	Low	None	Easily Duplicated False Credentials
Visual Surveillance		None	Ocular devices
Acoustic Eavesdropping	High		Sound amplification or laser "listening" devices
Electronic Emanations Eavesdropping	High		Electronic emanations interception equipmen

1. Note that the process in this UFC does not lead to the Special Case. Applicability is known by those to whom it applies.

2. Vehicle designations are from ASTM F2656.

3. Boat designations are from ASTM F2766.

Level of Protection





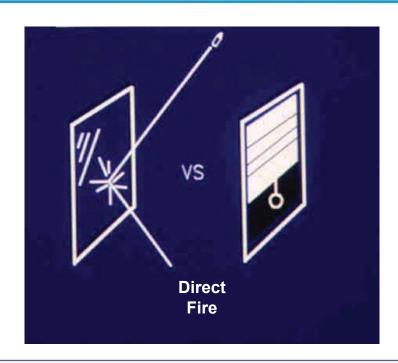
122

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September 2019

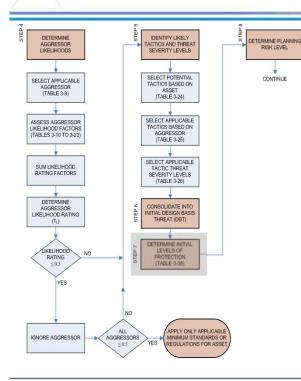
Level of Protection Based on Asset Value





STEP 7: INITIAL LEVEL OF PROTECTION





- The degree to which an asset (e.g., a person, a piece of equipment, or an object, etc.) is protected against injury or damage from an attack.
- Based initially on asset value
- May be modified by planning team (commonly due to cost)

124

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September 2019

Level of Protection Selection Table 3-28



Table 3-28. Applicable Levels of Protection

Tactic	Threat			Asset Value		
	Seve- rity Level	≤ 0.5	0.51 - 0.74	0.75 - 0.85	0.86 - 0.95	0.96 - 1
Moving Vehicle Bomb		Very Low1	Low ²	Medium	I	ligh
Stationary Vehicle Bomb	A 11	Very Low1	Low ²	Medium	I	ligh
Hand Delivered Devices	All	Very Low1	Low ²	Medium	I	High
Indirect Fire Weapons		Very Low1	Low	Medium	I	ligh
Direct Fire Weapons	VH	Very Low1	Low	Medium ³	1	High
	L, M, H	Very Low ¹	L	ow	I	ligh
Forced Entry		Very Low1	Low	Medium	High	Very High
Covert Entry			Low	Medium	High	Very High
Visual Surveillance				Hi	gh	100000000000000000000000000000000000000
Acoustic Eavesdropping			Low	Medium	High	Very High
Electronic Emanations Eavesdropping	All			Hi	igh	
Airborne Contaminants	1	Very Low1	Low	Medium	I	High
Waterborne Contaminants	1	Very Low1	Low	Medium	I	High
Waterfront Attack	1	Very Low1	Low	Medium 3	High	Very High

- The very low level of protection includes only measures required by UFC 4-010-01 minimum standards or other applicable standards, operations orders, or regulations.
- 2. The low level of protection is the minimum for those tactics that are addressed in UFC 4-010-01 for primary gathering buildings. Note also that while the moving vehicle bomb tactic is not expressly addressed in UFC 4-010-01, if it applies it should also be given the same minimum level of protection as the stationary vehicle bomb tactic for primary gathering buildings.
- of protection as the stationary vehicle bomb tactic for primary gathering buildings.

 3. The medium level of protection commonly does not apply to ballistics below 12.7 mm (.50 caliber), which are the weapons in the low through high threat severity levels. For those threat severity levels, apply the low level of protection for this range of asset value ratings.

Documentation of Initial Level of Protection Tactic, Threat Severity and LOP Worksheet



Project or Building		Asset		Tac	tical '	Vehic	es		Analyst		Plan	ning	Tea	m
Motor Pool		Asset C	ategory	D	Ass	set Value		76	Date		Toda	_		
Tactics	В		plosives andiary De			doff pons	En	try		veillance vesdropp		Contan	ination	
Aggressors	Aggressor Likelihood	Moving Vehicle Devices	Stationary Vehicle Devices	Hand Delivered Devices	Indirect Fire Weapons	Direct fire weapons	Forced Entry	Covert Entry	Visual Surveillance	Acoustic Eavesdropping	Electronic Emanations Eavesdropping	Airbome Contamination	Waterborne Contamination	Waterfront Attack
Applicable Tactics			1	1	1	V	/	V	1					1
Unsophisticated Criminals	.52						1	1						
Sophisticated Criminals	.51						ī	L					2 3	
Organized Criminal Groups	.54			L		L	L	L				7		
Vandals								-567						
Extremist Protesters													7 5	
Domestic Terrorists	.57		L	М	L	L	L	L						L
International Terrorists	.64		L	М	L	L	L	L						L
State Sponsored Terrorists	.72		L	М	L	L	М	L						L
Saboteurs	.51			М	L	L	M	L						L
Foreign Intelligence Services														
Initial Design Basis Threat (highest Threat Severity Level for each tactic)			L	М	L	L	М	L						L
Initial Level of Protection for Applicable Tactic (Table 3-28)			М	М	М	L	М	М						M

126

UNCLASSIFED: The DoD Facilities Planning Manual

September 2019

Documentation of Initial Level of Protection Design Criteria Summary Worksheet



ect or Building Motor P	ool		An	alyst			Р	la	nn	in	g -	Ге	an	n					Date		•	То	da	ıy				
					plos		and evice	s		Star	doff		E	ntry	Tact	etics ics				ance			Co	ntan	ninat	ion		_
Assets	Asset Category	Asset Value Rating	A CONTRACTOR OF THE PARTY OF TH	MOVING VITIER DEVICES	4 1 1 1 1 1	Stationary Vehicle Devices		Hand Delivered Devices	-	Indirect Fire Weapons		Direct fire weapons		Forced Entry		Covert Entry	:	Visual Surveillance		Acoustic Eavesdropping	Electronic Emanations	Eavesdropping		Airbome Contamination		Waterborne Contamination		Waterfront Attack
	Asset	Asset	D B T	LOP	D B T	LOP	D B T	L O P	D B T	LOP	D B T	LOP	D B T	LOP	D B T	LOP	D B T	L O P	D B T	LOP	D B T	LOP	D B T	LOP	D B T	LOP	D B T	I
Tactical Vehicles	D	.76			L	M	М	M	L	M	L	L	М	M	L	M											L	
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	-								L			L	L				L			L				L	L			1

STEP 8: DETERMINE PLANNING RISK LEVELS



- Risk levels are based on:
 - Asset Values
 - Aggressor Likelihoods
 - Protection Factors
 - Protection Factors reflect levels of protection provided to the assets.
- Note: risk in this UFC is a relative risk level that is intended to be used as an aid in decision making.
 - A more detailed treatment of risk that considers the contribution of specific countermeasures is in UFC 4-020-02, Security Engineering Facilities Design Manual (Currently in Draft)

128

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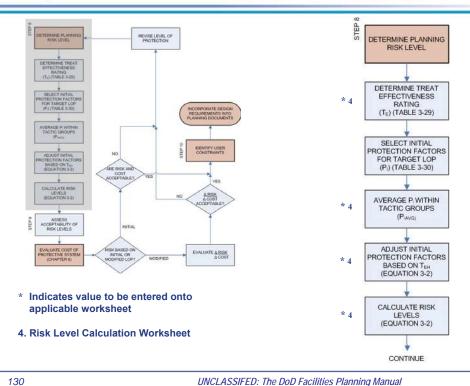
Acceptable Risk Levels



- There are no specific criteria for determining whether or not a given risk level is acceptable.
- Risk levels in this process are relative.
 - Risk level means relatively little by itself, but when the reduction in risk can be evaluated with respect to the cost of a protective system, that provides a means of evaluating benefit versus cost.
- The benefit is the reduction in risk
 - ➤ **Example:** If a large expenditure for countermeasures results in a very small reduction in risk, that would not be a good investment. On the other hand, when a small expenditure for countermeasures results in a large reduction in risk, that may be a good investment.

STEP 8: PLANNING RISK LEVEL





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Threat Effectiveness Rating (T_{EH}) **Table 3-29**



Determine Threat Effectiveness Rating (T_{EH})

Table 3-29. Threat E	Effectiveness Ratings
Aggressor Type	Effectiveness Rating (T _E)
Unsophisticated criminals	1.0
Sophisticated criminals	0.98
Organized criminal groups	0.95
Vandals	1.0
Extremist protest groups	0.96
Domestic terrorists	0.95
International terrorists	0.93
State sponsored terrorists	0.90
Saboteurs	0.90
Foreign intelligence services	0.91

Risk Level Calculation Worksheet Asset Value, Threat Likelihood, Threat Effectiveness, LOP



Pro	oject or Building:					Asset: Tactic	al vehicles							Pla	nning	Team	1	
A	Motor Pool					Asset V 0.76	alue (Ay):								TOD	AY		
	Aggressor	T_L^1	T _E (Table 3-29)	Highest ² T _L (T ₁₁)	T _{EH} ³		Tactic	LOP1	P _I ⁴ (Table 3-30)	Avg.5 P _I (P _{i,vo})	A;		e ⁶ r Categ ∣ S	ory F	C		Level ⁷ or Catego	ory F
	Unsophisticated Criminals	.52	1.0	(110)		77	Moving Vehicle Bomb		3-30)	(strip		1		1	Č		5	1
ds (C)	Sophisticated Criminals	.51	.98			Explosives and Incendiaries	Stationary Vehicle Bomb											
Criminals (C)	Organized Criminal Groups	.54	.95	.54	.95	Explosives a Incendiaries	Hand Delivered Devices											
	Vandals	< .5				ons	Indirect Fire Weapons											
	Extremist Protesters	< .5				Standoff Weapons	Direct Fire Weapons			5								
Terrorists (T)	Domestic Terrorists	.57	.95	.72	.90	. 8	Forced Entry											
Terron	International Terrorists	.64	.93	.12	.90	Entry Tactics	Covert Entry											
	State Sponsored Terrorists	.72	.90			pun	Visual Surveillance											
	Saboteurs (S)	.51	.90	.51	.90	lance s roppin	Acoustic Eavesdropping											
	Foreign Intelligence Services (F)					Surveillance and Eavesdropping	Electronic Emanations Eavesdropping											
2.	From Tactic, Threat S Highest likelihood rat Effectiveness rating fo	ing for e	ach aggre	ssor group.	nod	Contamination Tactics	Airborne Contamination											
4. : 5 6. :	From Table 3-30. Average for P _I for all: P _E = T _{EH} x P _{IAVG} for e	tactics v	vithin tacti	.c group.		Contami Tactics	Waterborne Contamination											
COI	nbination. R = A _V x T _{LH} x (1-P _E)	-			up.	Waterfr	ront Attack											

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Initial Protection Factors (P_I) Table 3-30



Table 3-30. Initial	Protection Factors
Level of Protection	Protection Factor (P _I)
Very Low	0.1
Low	0.3
Medium	0.7
High	0.9
Very High	0.95

- At planning level, provides numeric measure of effectiveness of level of protection
- At design stage, may be calculated considering effects of individual countermeasures

133

Effective Protection Factor (P_E)

(Equation 3-1)



- Determine effective protection factors for each applicable tactic.
 - ➤ Enter the applicable threat effectiveness ratings (TEH) for each of the applicable aggressor categories associated with the applicable average initial protection factors (P_{IAVG}) into Equation 3-1.

$$P_E = T_{EH} \times P_{IAVG}$$

 Accounts for relative effectiveness of countermeasures against aggressors with different levels of sophistication

134

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Risk Level Calculation Worksheet Asset Value, Threat Likelihood, Threat Effectiveness, LOP



Pr	oject or Building:					Asset: Tactic	al vehicles							Pla	nning	Team		
A	Motor Pool					Asset V 0.76	'alue (Ay):								TODA	ΑY		
	Aggressor	T_L^1	T _E (Table	Highest ² T _L	TEH 3		Tactic	LOP1	P _I ⁴ (Table	Avg.5 P _I (P _{tavo})		P gresso				Aggress	Level 7 or Catego	
	Unsophisticated Criminals	.52	3-29)	(111)			Moving Vehicle Bomb		3-30)	(Piavo)	С	T	S	F	C	T	S	F
(0)	Sophisticated Criminals	.51	.98			ves and aries	Stationary Vehicle Bomb	М	.7	.7								
Criminals (C)	Organized Criminal Groups	.54	.95	.54	.95	Explosives and Incendiaries	Hand Delivered Devices	M	.7									
	Vandals	< .5				off	Indirect Fire Weapons	М	.7	_								
	Extremist Protesters	< .5				Standoff	Direct Fire Weapons	L	.3	.5								
Terrorists (T)	Domestic Terrorists	.57	.95	.72	.90	. 8	Forced Entry	М	.7	.7								
Terron	International Terrorists	.64	.93	./2	.90	Entry Tactics	Covert Entry	М	.7									
	State Sponsored Terrorists	.72	.90			pu bu	Visual Surveillance											
	Saboteurs (S)	.51	.90	.51	.90	lance a	Acoustic Eavesdropping											
	Foreign Intelligence Services (F)					Surveillance and Eavesdropping	Electronic Emanations Eavesdropping											
2. :	From Tactic, Threat S Highest likelihood rat Effectiveness rating fo	ing for e	ach aggre	ssor group.	hod	imatio cs	Airborne Contamination											
4. : 5. :	From Table 3-30. Average for P _I for all P _E = T _{EH} x P _{IAVO} for e	tactics v	vithin tacti	c group.		Contaminatio n Tactics	Waterborne Contamination											
cos	mbination. R = A _V x T _{LH} x (1-P _E)	-			up.	Waterfr	ont Attack											

Risk Level Calculation Equation 3-2



- Determine Risk Level. Calculate risk levels for each asset and for each applicable tactic group and aggressor group as indicated on the Risk Level Calculation Worksheet.
- Risk levels are established by entering the likelihood and asset value ratings and the protection effectiveness factors into Equation 3-2.
 - By subtracting P_E from 1, the risk equation reflects the fact that increases in protection effectiveness reduce risk. The 1- P_E term reflects "vulnerability"

$$R = A_V \times T_{LH} \times (1-P_E)$$
Vulnerability

136 UNCLASSIFED: The DoD Facilities Planning Manual

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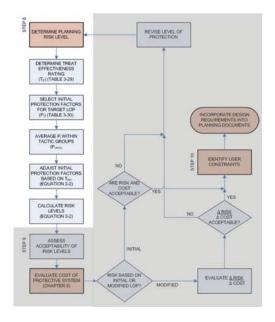
Risk Level Calculation Worksheet Asset Value, Threat Likelihood, Threat Effectiveness, LOP



Г					R	ISK LE	VEL CALCUL	ATION.	1 WOR	KSHE	ET								
Pr	oject or Building:				Asset: Tactic	al vehicles	Planning Team												
А	Motor Pool					Asset Value (A _V): 0.76							TODAY						
Г	Aggressor	T_L^1	TE	Highest ² T _L	T _{EH} ³		Tactic	LOP1			Α,		E ⁶ r Category			Risk Level ⁷ Aggressor Category			
	Aggressor	1L-	(Table 3-29)	(T _{1.11})			<i>(</i>		(Table 3-30)	P _I (P _{IAVG})	C	T	S	F	C	T	S S	F	
	Unsophisticated Criminals	.52	1.0			,	Moving Vehicle Bomb					72							
1s (C)	Sophisticated Criminals	.51	.98		H	Explosives and Incendiaries	Stationary Vehicle Bomb	М	.7	.5		.63	.63			.20	.14		
Criminals (C)	Organized Criminal Groups	.54	.95	.54			Hand Delivered Devices	м	.7										
	Vandals	< .5				off	Indirect Fire Weapons	М	.7			.45	45			.30	.21		
	Extremist Protesters	< .5			.90	Standoff Weapons	Direct Fire Weapons	L	.3			.43	.43			.30	.21		
sts (T)	Domestic Terrorists	.57	.95	.72		Entry Tactics	Forced Entry	М	.7			.63			.14	.20			
Terrorists (T)	International Terrorists	.64	.93	./2			Covert Entry	М	.7		.67	.63	.63		.14	.20	.14		
	State Sponsored Terrorists	.72	.90			pu s	Visual Surveillance												
	Saboteurs (S)	.51	.90	.51	.90	ance a	Acoustic Eavesdropping												
	Foreign Intelligence Services (F)					Surveillance and Eavesdropping	Electronic Emanations Eavesdropping	Wehicle Bomb M .7 .7 Hand Delivered M .7 Delivered M .7 Delivered M .7 Derives Influence Fire M .7 Weapons L .3 Weapons L .3 Weapons L .3 Wordel Entry M .7 Covert Entry M .7 Usual Usual Surveillance Acoustic Cavesdropping Electronic Emanations Eavesdropping Cavesdropping Cavesdropp											
Services (F) 1. From Tactic, Threat Sevenity, and LOP Worksheet. 2. Highest likelihood rating for each aggressor group. 3. Effectiveness rating for aggressor with highest likelihood.			umatio cs	Airborne Contamination															
2. Highest likelihood rating for each aggressor group. 3. Effectiveness rating for aggressor with highest likelihood. 4. From Table 3-30. 5. Average for P ₁ for all tactics within tactic group. 6. P _P = T _{BP} x P _{LNY} for each aggressor & tactic group.				Contaminatio n Tactics	Waterborne Contamination														
	mbination. R = AvxT _{LH} x(1-P _E)	for ead	h aggresso	or & tactic gro	up.	Waterfr	ront Attack												

STEP 9: ACCEPTABILITY OF RISK LEVELS





- Risks using this process are relative
- Used to evaluate differences between risk impact of various alternatives
- Can be used as basis for benefit / cost ratios
 - > Benefit is reduction in risk
 - Cost is....cost of protective system

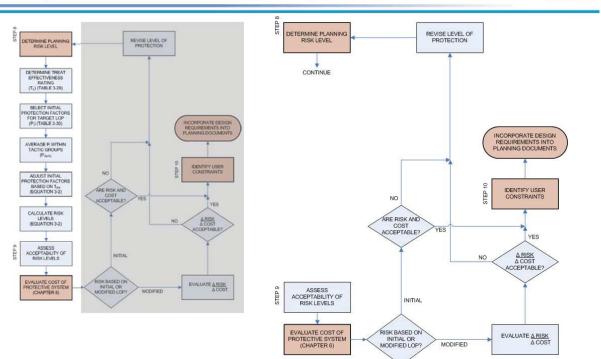
138

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Evaluation of Risk





Building Cost and Risk Evaluation Worksheet



	t or Building				Ta	set actical V seline Buil			1- 2 7)				Plan	ning Tea	am	
	1011001					pecial St			16 2-1)				7	TODAY		
			7-1-7-1-31-73- ·	Ini	tial				10.02011	Rev	rised		V-00		Analysis	
	Tactic	Design Basis Threat 2	LOP ^{3,4} or Pr	Risk ⁴⁻⁷ Level	Standoff, Rm. Size, # Stories	Cost ⁸ Increase (%)	Cost Incr. Sum	Threat Severity Level	LOP ^{3,4} or Pr	Risk ⁴⁻⁷ Level	Standoff, Rm. Size, #Stories	Cost ⁸ Increase (%)	Cost Incr. Sum	Change in Cost	Change ¹⁰ in Risk (%)	Ratio
	Moving Vehicle Bomb ¹		- 1			(1)			-,			\.\.\.\.\.\				
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end end	Exterior Mail Room	Н	M	.20	10 m	21.9		-								
핑텔	Loading Dock															
1	Entry Area															
Standoff	Indirect Fire Weapons	М	M	(T)		19										
Wea	Direct Fire Weapons	М	L	.20		0.37	19.37	30								
53	Forced Entry			-				28								
Entry Tactics	Exterior		774	(T)	4	1,000	1.8			i						
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	Covert Entry	M	M			0.9										
	Visual Surveillance															
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ave.	Electronic Emana	tions Eaves	dropping]				111				,				
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g 8	Airborne Contamination							l								
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Wa	terfront Attack					10										
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Building Cost and Risk Evaluation Worksheet Initial and Revised



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A Mo	otor Pool				Ba	seline Bui pecial St	ding Cat		le 3-1)				Т	ODAY		
				In	itial					Rev	rised		0		Analysis	
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	Moving Vehicle Bomb ¹											` '				
Explosives and ncendiaries	Stationary Vehicle Bomb ¹ Hand Delivered D	М	М	(T)	25 m	21.1		M	L	(T)	25 m	10.6	0.00000			
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I II	Loading Dock Entry Area							- 22		,						
tott	Indirect Fire Weapons	М	М	(7) 1	19		M	L	(T)		18.3	49675				
Standoff Weapons	Direct Fire Weapons	М	L	.20		0.37	19.37	M	L	.28		0.37	18.67			
	Forced Entry			(T)						(7)						
Entry Tactics	Exterior			(1)			1.8	72.5	17/11	(1)		2/2/2017	1.1			
H E	Interior ¹⁰ Covert Entry	H M	M	.20	large	0.9		H	L	.28	large	0.4				
	Visual	IVI	IVI			0.9	-	IVI	L		-	0.7				
75 bo	Surveillance															
Surveillance and Eavesdropping	A coustic Eavesdro	pping		ļ												
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E 5	Airbome Contamination															
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						Sum ¹² (%)		L				Sum ¹³ (%)	30.37			
	e highest cost amo om Tactic, Threat				. Use risk l	evel for ag rols design	gressor w	hose threa	t sevenity		. Revised of 0. Revised					

Building Cost and Risk Evaluation Worksheet Initial and Revised w/Analysis – Cost Effectiveness



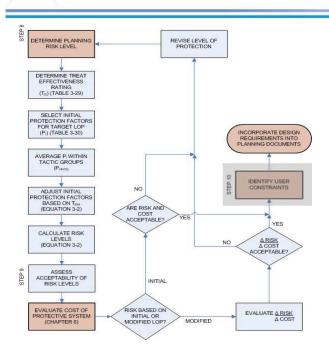
	t or Building					set actical V	ehicles	*					Plani	ning Tea	am	
A Mo	otor Pool					seline Buil pecial St			ole 3-1)				1	ODAY		
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	Tactic	Design Basis Threat ²	LOP ^{3,4} or P _I	Risk ⁴⁻⁷ Level	Standoff, Rm. Size, # Stories	Cost ⁸ Increase (%)	Cost Incr. Sum	Threat Severity Level	LOP ^{3,4} or P _I	Risk ⁴⁻⁷ Level	Standoff, Rm. Size, # Stories	Cost ⁸ Increase (%)	Cost Incr. Sum	Change ⁹ in Cost (%)	Change ¹⁰ in Risk (%)	Ratio ¹¹
77	Moving Vehicle Bomb ¹ Stationary) 2								
Explosives and incendiaries	Vehicle Bomb 1	М	М	(T)	25 m	21.1		М	L	(T)	25 m	m 10.6				
	Hand Delivered I						21.9						10.6	-52	+.40	.01
old:	• Exterior 1	Н	М	.20	10 m	21.9		Н	L	.28 1	10 m	n 6.5		100000		50.00
Eg	Mail Room Loading Dock							21								
	Loading Dock Entry Area			1	7		1									
# 8	Indirect Fire Weapons	М	м	(T)		19		м	L	(T)		18.3		10.200	+.40	
Standoff Weapons	Direct Fire	М	L			0.37	19.37	1.0	,	.,		0.37	18.67	-3.6		.11
	Weapons					0.57						0.57				4
5.8	Forced Entry • Exterior									(T)					07543700	
Entry Tactics	• Interior ¹⁰	Н	М	2.0	large	0.0	1.8	ш	,	10.1	largo	0.4	1.1	-64	+.40	.01
щд	Covert Entry	М	M	.20	large					.28	large					
	Visual								-							
78 to	Surveillance															
Surveillance and Eavesdropping	Acoustic Eavesdro	pping		ļ						Į.						
ğ ğ	Exterior Interior ¹⁰			ļ												
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STEP 10: IDENTIFY USER CONSTRAINTS





- Political Considerations
 - Adjacent landowners or tenant organizations
 - > Appearance
 - > Public access
- Political climate
- Financial considerations
- Regulations

More Potential User Constraints



- Procedural or operational considerations
 - Deliveries
 - > Restricted areas
 - > Access controls
 - > Functional requirements

144

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More Potential User Constraints



- Facility and site constraints
 - > Occupancy requirements
 - > Barrier-free accessibility
 - > Parking lots and roads
 - > Fences and lighting
 - > Electronic security systems
 - > Architectural theme
 - > Existing facilities

More Potential User Constraints



- Response force
 - > Armed force
 - Explosive ordnance disposal (EOD)
 - > Fire department
- Response time
- Manpower allocation
- Information sensitivity

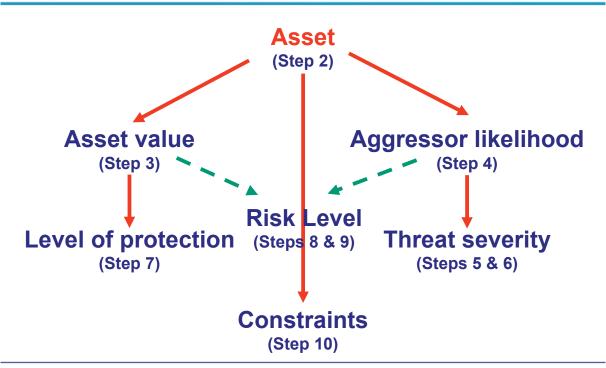
146

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Summary





Chapter 4: Design Strategy



- Design Strategies: The approaches to mitigating the effects on assets from any tactics are referred to as design strategies.
 - It is not intended for planners to apply these design strategies in a detailed manner
 - Planners should understand how the design strategies affect the scope of facility projects
 - With this understanding, planners can justify the basis for the costs associated with protecting against a given tactic

148

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Effective Design Strategies



- Developing effective protective systems is dependent on:
 - > Teamwork!
 - Partnership between design engineers and security/AT personnel.
 - > Security/AT personnel must understand how Engineers/Architects develop protective systems.
 - > Engineers/Architects must understand security operations and the operations of the end user.

Protective Measures



- Protective measures are developed as a result of the general- and specific-design strategies. These protective measures commonly take the form of sitework, building, detection, and procedural elements.
- There are separate design strategies for protecting assets from each tactic.
 - General Design Strategy: basic approach to protecting assets against tactics.
 - > Specific Design Strategy: general-design strategy refined to focus the performance of the protective measure to a <u>level of</u> protection.
- Site-work elements include the area surrounding a facility or an asset.

150

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Project Scope Implications



- Planners must have a basic understanding of the implications on project scopes of application of the design strategies for various levels of protection and tactics.
- Brief summaries of the types of protective measures are provided for each tactic.
- Summaries are intended to aid in understanding the basis for the scope and cost of the protective measures.
- More detailed discussions of protective measures are included in the DoD Security Engineering Facilities Design Manual (UFC-4-020-02) currently in DRAFT.

Protective Measures Categories



- <u>Sitework Elements</u>. Includes protective measures that are associated with areas surrounding buildings beyond 1.5 m (5 ft) from the building. Commonly these will include such measures as fences, barriers, and landscaping.
- <u>Building Elements</u>. Include all protective measures directly associated with buildings such as walls, doors, windows, roofs, superstructure, and building layout.
- <u>Building Support Systems</u>: Building support systems will include those systems that are necessary to make the building operate on a day-to-day basis. The primary system addressed is the heating, ventilating, and air conditioning (HVAC) system.
- **Equipment**: Includes protective measures such as intrusion detection systems, access control systems, closed circuit television systems, and other electronic systems that support functions such as access control and detection of aggressors.
- <u>Manpower and Procedures</u>: These are not engineering or architectural issues, however, they may have impact on the overall engineering and architecture of projects.

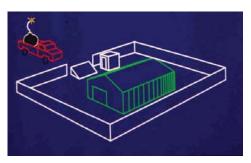
152

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Design Strategies: Vehicle Bomb Tactic





General Design Strategy



vs



HIGH Level of Protection

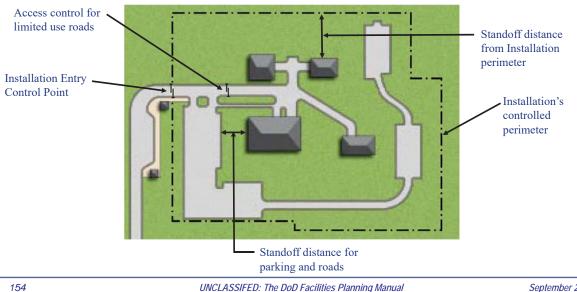
LOW Level of Protection

Specific Design Strategy



Sitework Elements. The impacts on project planning for sitework elements include standoff distance and/or barriers to establish and maintain that standoff distance.

Stationary Vehicle Bomb



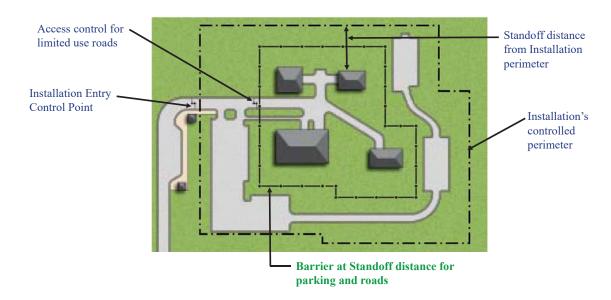
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Design Strategies: Vehicle Bomb Tactic

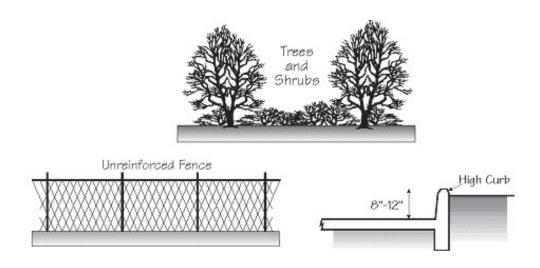


Moving Vehicle Bomb





Passive Perimeter Barriers for Stationary Vehicle Bombs



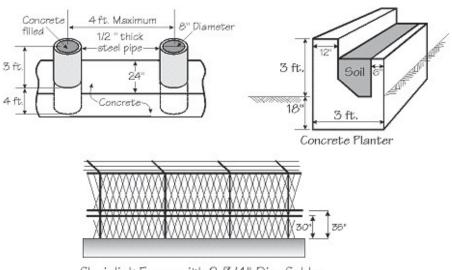
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Design Strategies: Vehicle Bomb Tactic



Passive Perimeter Barriers for Moving Vehicle Bombs

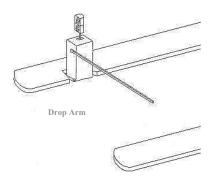


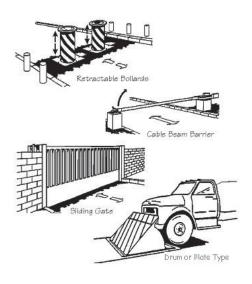
Chainlink Fence with 2-3/4" Dia. Cables



Active Vehicle Barriers for Moving Vehicle Bombs

Active Vehicle Barriers for Stationary Vehicle Bombs





158

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Design Strategies: Vehicle Bomb Tactic



<u>Building Elements</u>. Include all protective measures directly associated with buildings such as walls, doors, windows, roofs, superstructure, and building layout.

 Minimum engineering standards that incorporate AT based mitigating measures can be found in UFC 4-010-01, DoD Minimum Antiterrorism Standards for Buildings

Standard 6: Progressive Collapse Avoidance	Standard 12: Exterior Doors
Standard 7: Structural Isolation	Standard 14: Roof Access
Standard 8: Building Overhangs	Standard 15: Overhead Mounted Architectural Features
Standard 9: Exterior Masonry Walls	Standard 19: Equipment Bracing
Standard 10: Glazing	Standard 20: Mass Notification
Standard 11: Building Entrance Layout	

NOTE: UFC 4-010-01 DOES NOT establish a DBT or LOP for DoD buildings. Use UFC 4-020-01 to establish the DBT and LOP for individual projects.



Equipment. Equipment such as automated access control systems may be installed to support access control at entry control points at the perimeter. These systems may also be augmented with closed circuit television and intercoms to reduce manpower requirements.

Manpower and Procedures. Manpower and procedures impact project scope by possibly increasing equipment requirements when adequate manpower resources are unavailable. Procedures may also increase requirements because they may increase the time required to allow vehicles through entry control points, which may lead to either more lanes at the entry control points or additional entry points. Manpower considerations may also drive the need for shelters for guards and other such appurtenances that may add to sitework costs.

160

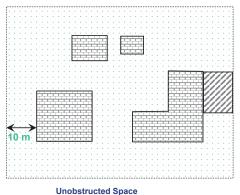
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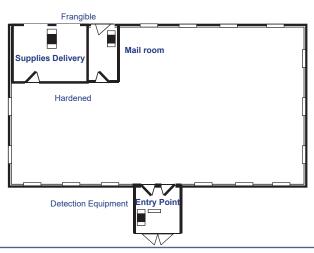
Design Strategies: Hand Delivered Devices



General Design Strategies

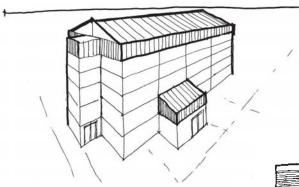


Specific Design Strategies Similar to vehicle bombs



Design Strategies: Indirect Fire Weapons





Specific Design Strategy:

- Breach and spall
- Fragment penetration
- Flexural response

General Design Strategies

 Building hardening, which will vary with threat severity and level of protection



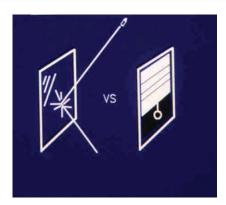
162

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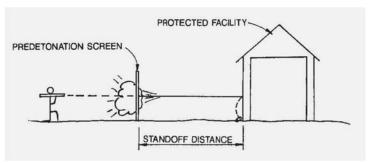
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Design Strategies: Direct Fire Weapons





General and Specific Design Strategies



Design Strategies: Airborne Contamination Tactic







General Design Strategy

Specific Design Strategies

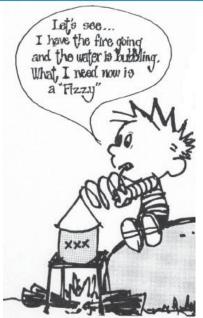
164

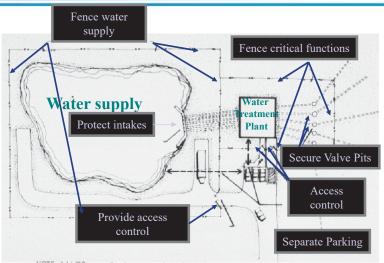
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Design Strategies: Waterborne Contamination Tactic







Specific Design Strategies

General Design Strategy

Design Strategy: Waterfront Attack





- Specific Design Strategies
 - Access Control
 - > Security zones
 - > Restricted Area
 - **>** Barriers
 - > Patrols

General Design Strategy

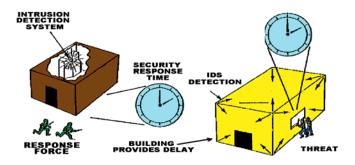
166

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Design Strategies: Forced Entry





Specific Design Strategies

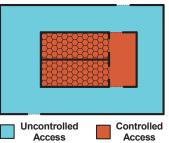
- Provide increasingly sophisticated and comprehensive detection
- Provide delay
- Provide response

General Design Strategy

Design Strategies: Covert Entry















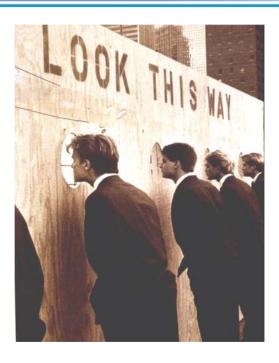
168

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Design Strategies: Visual Surveillance





General and Specific Design Strategies

Design Strategies: Acoustic Eavesdropping





General Design Strategy

Specific Design Strategies

Level of Protection	STC
	Rating
Low	30
Medium	40
High	45
Very high	50

170

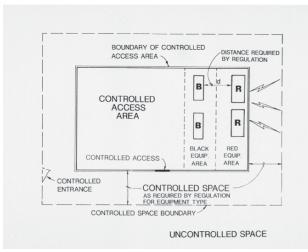
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Design Strategies: Electronic Emanations Eavesdropping



General and Specific Design Strategies (TEMPEST)





Master Planning Considerations



- Land Use Planning
- Site Planning and Space Management
- Vehicle Access and Circulation

172

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Land Use Planning



- Locate high risk land uses in installation interior
- Consolidate high risk land uses
- Assess off-base adjacent land uses and zoning for potential impacts on installation
- Maximize distance between installation perimeter and developed areas (Clear Zones)
- Consider elevation in site selection
- Recognize impacts of vegetation
- Avoid low lying areas (CBR)

Site Planning and Space Management



- Consider grouping facilities with common functional uses or similar threat levels
- Avoid collocating high risk and low risk operations
- Avoid locating high risk facilities near uncontrolled public areas
- Site facilities to maximize natural surveillance from nearby facilities
- Provide 10 meter separation between buildings where possible
- Consider locating safe havens or collective protection to serve large numbers of people
- Isolate loading docks and mail rooms where possible

174

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Consolidated vs. Separated Facilities







Consolidated

Separated

Opportunities for Observation

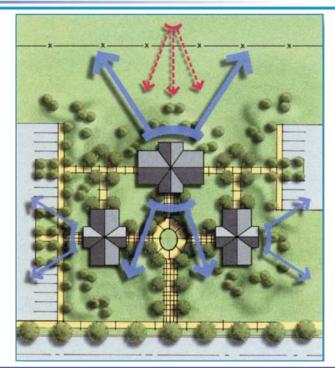


Building orientation can mitigate opportunities for surveillance by aggressors.

Main entrances should not face installation perimeter.

Site layout should:

- Enhance natural surveillance by building occupants
- Enhance territorial reinforcement



176

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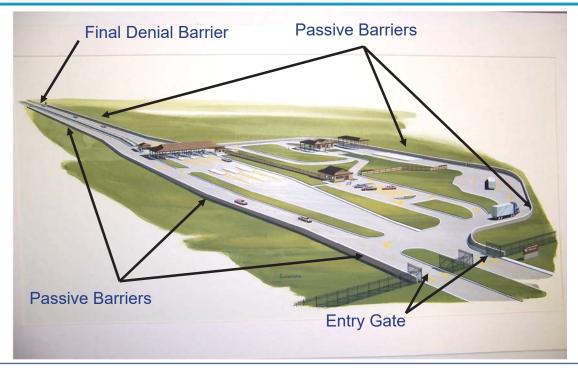
Entry Control



- Establish the appropriate number of entry control points
- Consider establishing separate entry control points for trucks
- Ensure adequate space is reserved for entry control points

ECF / ACP Components





178

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ECF/ACP Components





Vehicle Circulation



- Designate central delivery points and limit routes to them
- Route roads away from buildings to which vehicle bomb threats may apply
- Limit road access near buildings to which vehicle bomb threats may apply
- Control vehicle speeds through road geometry
- Provide centralized parking for multiple buildings
- Eliminate straight-line approaches to buildings
- Design parking lots to limit speed

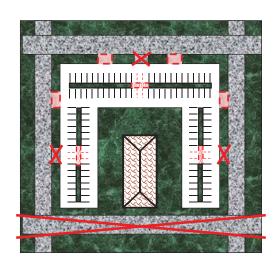
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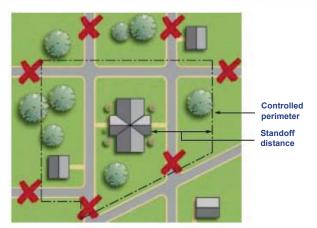
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Roadway and Parking Modifications







NAVFAC AT POC



NAVFAC Marianas AT and SE Criteria questions:

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182

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Thanks!



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