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A) Need for a Facility

Caribou is the second largest city in Aroostook County, a community of 8,189 located at the heart of rural Northern Maine approximately twenty minutes from the Canadian border. The city has a total area of 80.10 square miles (207.5 km2), of which 79.26 square miles (205.3 km2) is land and 0.84 square miles (2.2 km2) is water. Caribou is located in the geographical center of Aroostook County; the county is readily accessible by two major highways; Interstate 95 from the south and the Trans-Canada Highway from the north and east. In sparsely populated Aroostook County, Caribou is at the hub of spokes serving the area.

The Police Department currently has eighteen (18) full-time employees and +/- seven (7) part-time (reserve) employees. There are potentials for growth in both types and numbers of employees, especially in School Resource Officers, but in other areas as well.

The call numbers and arrests are relatively stable with annual fluctuations of under ten percent with no significant growth.

Caribou Police currently operate from a small space in the basement of the current City Hall, which was initially the City Fire Station. This building, constructed circa 1937, is an example of a facility that has undergone extensive adaptive re-use through a series of reactionary renovations. "Reactionary renovations" are defined as a series of limited renovations that occur within a space to fulfill an immediate need at a minimal cost. Usually, such limited renovations achieve initial success, but due to lack of long term planning, they ultimately present significant maintenance, energy efficiency, and operational functionality issues.

In the case of the current facility, the building clearly demonstrates signs of having had an overly-extended life-span. Conditions of construction and quality of maintenance indicate that the facility has reached the end of its useful life. While the building is an excellent candidate for comprehensive renovation, it is ill-suited to function as a police station and the space now utilized by the Police is not even one half of the necessary square footage for a contemporary station. In addition, the current building was constructed before the development of conventional building codes. As such, appropriate structural features necessary for a police station are lacking.

The International Building Code (IBC), and Maine Uniform Building and Energy Code, classify a Police Station as an Essential Risk Category IV Structure. Such a designation requires increased seismic, snow, and wind performance under the premise that the continued operation of such buildings during a natural disaster is essential to the community. The original building was not designed or constructed to this standard and retrofit and modernization will prove to be costly.

B) Existing Facilities

The Caribou City Hall is a two-story masonry structure with a flat roof. A masonry hose tower with a flat roof and pre-engineered garage with a gable metal roof have been added to the facility since its original construction. The roofing is a membrane roof which has reached its expected life. There are mechanical units sitting on the roof providing for heating the zones of the building. The police station in the basement has no mechanical ventilation.

The building sits on a sloping site with a flat graded pad at the level of High Street providing access to the First (Main) Floor entrance to City Hall. A green space at the corner of High and Main absorbs the difference in levels as the parking entry from Main Street occurs at the Basement Floor level that provides entry to the Police Department. There is public parking provided in front of the City Hall entry and to the side of the building at the entry to the Police Department.

The area occupied by the Caribou Police Department represents approximately three thousand square feet. Although this area was never designed as a police station, it has been modified to accommodate the department over time. These modifications, while once sufficient for immediate need, do not make for a safe, secure, or efficient workspace. The deficiencies in operation, which have become pronounced over time as the department evolves, are so extensive that the agency personnel have low expectations for the facility.

The biggest difficulty in evaluating the majority of the building for a possible use as the police station is the extent of spaces and interior finishes hiding the structural conditions. It is impossible to see the structural make-up or condition of the structural members for the second floor or the roof structure without destructive investigation (removing sections of multiple walls and finished ceilings). There appears to be no existing construction plans for the building and so structural walls or bearing points were extrapolated based on general standards for building construction.

Parking & Access

The overall organization of the site is unrestricted. Civilians are permitted to gain physical access to parking areas where officers store their vehicles creating potential risks for ambush situations. In the future, the site for personal vehicles for officers as well as department vehicles should be separately secured from public lots.



Ballistics

No ballistic protection was observed along the exterior perimeter of the building. Further, staff is immediately exposed to visitors with no physical or ballistic separation. Civilian staff is particurarly at risk. For example, the Police Chief's office is located at the front of the building and his window overlooks the public parking lot, it would be highly recommended that such windows be ballistically rated.

Standoff Distances

Currently the building has no established standoff distance to the public parking lot. To mitigate the risk of explosive attacks it is recommended that public parking and drive aisles be located a minimum the following distances from the building. Vegetation should be kept away from the face of the building in order to mitigate the risk of ambush.

Construction Type	Minimal Standoff Recommendation	
Load Bearing Wood Stud	105'-0"	
Non-Load Bearing Wood Stud	80'-0"	
Load Bearing Reinforced Masonry	86'-0"	
Non-Load Bearing ReinforcedMasonry	30'-0"	
Load Bearing Reinforced Concrete	66'-0"	
Non-Load Bearing Reinforced Concrete	26'-0"	

Mechanical Systems

Mechanical units were observed to be accessible to the public; mechanical units and intakes should be located in a manner that mitigates the risk of criminals making airborne substance attacks (I.E. Anthrax) against the department.

Lobby, Entry, and Chief's Offices Security

The lobby space was observed to be partially physically secure with limited ballistic protection for staff working the front desk. Lines of sight to the entrance are clear and therefore increase the amount of time for the staff to be able to react to potential threats. In addition, while the transaction window appeared to offer some form of ballistic protection, the walls separating the lobby from the front desk area offered no protection; the lobby should contain a secure vestibule that allows department personnel to "buzz-in". The front desk should have clear line of sight over the access routes, and the walls and windows separating the lobby from departmental staff should offer full ballistic protection.

The office of the Chief and Assistant have no clear view into the Lobby and no ballistic protection from the inside Lobby or from the exterior of the building. The Assistant has a door which opens directly into the Lobby with no view into the area and no mitigation if an event should occur in that space.

STUDIOS PUBLIC SAFETY ARCHITECTURE

General Circulation

The building basement was never originally designed to serve as a police station. In many instances the department has adapted to the spaces that were made available to them in an effort to conduct operations as best as possible. The overall organization and flow of the basement is based upon the existing structure and offers little ability for improvement. In general, police stations should be zoned in a manner to protect officers, detainees, civilian employees, and the public from unnecessary contact and risk. Currently, the building offers little-to-no access control once beyond the lobby.

Civilian employees are forced to unnecessarily interact with detainees simply due to the way the current facility is organized. Individuals who have been detained and are being released often share the same access point as a person or family coming to the station for a separate function. In the future, the organization of the station should be developed to allow for clear and separate circulation paths amongst the various "user groups" of the building.

Sallyport Security

Numerous conditions were observed within the Sallyport that create risk to the community and department. In this case, the sally port was not much more than a garage, with no direct connection to the police operations. The sally port offered no physical security to prevent detainees from escaping should they incapacitate the arresting officer. In the event of an altercation between an officer and a prisoner there were no means for the officer to signal for assistance. The Sallyport and other areas of the building intended to hold prisoners should be designed with appropriate security features and access control elements to prevent unauthorized exiting from the building.

Sight & Sound Separation

Acoustical and visual separation from processing areas lacked elements that clearly created sight and sound separation amongst males, females, and juveniles. While the officers within the building are conducting operations in compliance with this standard by managing the logistics of how prisoners are housed, the physical facilities leave much to be desired. Individual booking room with durable materials that offer rated acoustical separations between each room are needed. Visual connectivity between rooms should be avoided in order to satisfy visual separation requirements.

Interview & Interrogation

Additional poor acoustical conditions were observed within the corridors of the building that allow sensitive conversations and testimony to be heard beyond the walls of the intended recipients. In numerous instances the walls do not extended to the underside of deck above, allowing for conversations to "jump" over the wall into the adjacent room. In addition, there are no corridors, so rooms are connected directly to one another with doorways allowing direct transfer of noise. This is particularly problematic when officers are interviewing multiple suspects and attempting to corroborate stories. The influence of outside noises into these rooms creates additional challenges in recording interviews. Interview and interrogation areas, acoustically isolated from the surrounding environment to prevent sound from transferring to multiple spaces, are necessary.



Storage

Numerous rooms located throughout the basement originally used for operations have been consigned for storage purposes. In some instances, small arms munitions were located in un-rated storage rooms; eating areas were converted to evidence processing.

Evidence Storage & Processing

The department should be commended on managing evidence to date given their circumstances. Currently, evidence is processed in a space never intended for that purpose (the employee lunchroom) and most evidence is stored within multiple areas throughout the station. Improvements to the evidence security and processing, allowing for separate storage of narcotics, firearms, common evidence, bulk evidence, and recovered lost property are necessary. The narcotics storage areas should be separately ventilated from the rest of the building. In addition, given the increased risk across the nation of fentanyl exposure during evidence processing, the department should consider developing a decontamination area within the building. At no point in time should evidence be processed in the same environment that personnel eat, as is currently the case

Other

Other items observed throughout the station that call for significant improvement include, better access control systems, improved CCTV systems, Implementation of additional gun clearing tubes, and better site lighting.

STUDIOS PABLIC SAFETY ARCHITECTURE

CARIBOU CITY HALL

Building System/Function	Description	Status
Overall Performance (Relative to function)	nrovides notential security from lower narking lot	
Site Security	3 parking areas - no controls - direct access	Poor
Accessibility (ADA)	Accessibility (ADA) Must use different entrance for basement and first floor. No Elevator available	
Foundation System Unable to view - appears in basement to function with few issues		Fair
Structure Unable to view - no apparent sagging or issues. Rear wall reported to have been stabilized in the past. Likely not Risk Category IV compliant.		Fair/Poor
Openings (Doors/Windows)	Multiple air leaks and issues with windows and doors	Poor
Thermal /Moisture (Walls/Roof)	Leaks at former hose tower. Minimal insulation in walls and roof.	Fair
Interior Finishes Interior finishes look well maintained - need new carpeting		Good
Plumbing	Per existing code. Building is not sprinklered. Sprinkler system will be required per IBC/NFPA 1.	Good
Electrical	Lighting configuration older -some compact fluorescents per commercial building regulations.	Fair
HVAC Standard residential grade hot water heating system. No cooling or mechanical ventilation. System may struggle to be zoned appropriately when building is fully occupied.		Fair/Poor



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C) Proposed Facility

A Police Facility which meets contemporary standards for facilities of its type and size, based on best practices and current policing requirements and recommendations (IACP and CALEA) is the basis for design of the proposed new Caribou Police Station. The proposed station meet the functional needs and budgetary requirements of the Department and will conform to the Maine Uniform Building and Energy Code (MUBEC), the Architectural BHarriers Act (ABA), and the Americans with Disabilities Act (ADA 2010) requirements.

Based on staffing, current standards, and procedures of the Caribou Police Department, a program for building spaces and adjacencies was produced and a generic "bubble diagram" of relationships was created by a consultant experienced and specializing in public safety facilities. This bubble diagram was utilized to design the proposed floor plan.

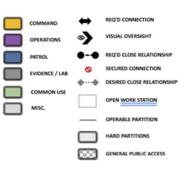
Program

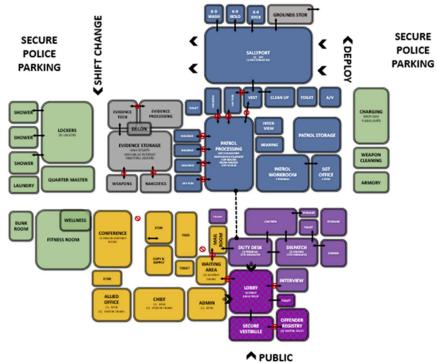
	GROUP	AREA	
Α	COMMON USE	2,452	GSF
В	OPERATIONS	2,341	GSF
С	ADMINISTRATION	1,602	GSF
D	PATROL	2,349	GSF
Е	EVIDENCE	1,177	GSF
F	OUTBUILDING / SUPPORT	1,968	GSF
	TOTAL BUILDING AREA	11,890	GSF
	CONDITIONED SPACE	9,922	GSF
	UNCONDITIONED SPACE	1,968	GSF
	TOTAL	11,890	GSF



Bubble Diagram of Program relationships















D) Building Sites

Amount of Land Required

Based on the square footage of the building and the need for access to and from a sally port as well as required separation of public and secure parking and access, the minimum site was determined to be one to one and one-half $(1 - 1 \frac{1}{2})$ acres. A smaller site could be utilized if the building were constructed in more than one story.

Location - Alternate Locations

Four potential sites were available to the city based on a minimum size to meet contemporary standards for facilities of its type and size, based on best practices and current policing requirements. Criteria for site selection were determined by the consultants and residents of the city were asked to rate the sites based on their perceptions. One site ranked highest (Birds Eye) with only one other site (Sweden) seen as possible.

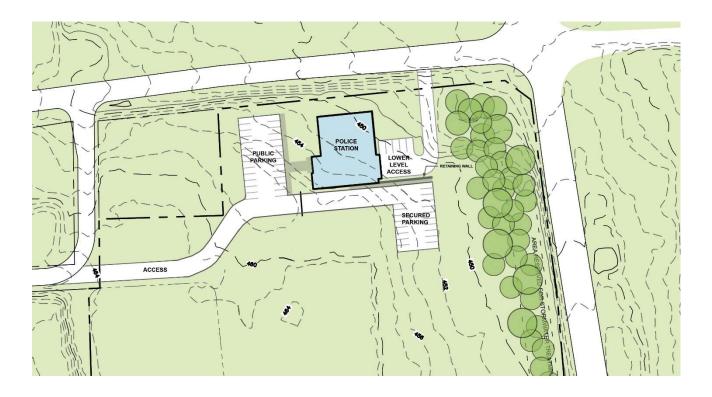
		Community Evaluation Survey				
Priority	Weight		Birds Eye	Washburn	Water	Sweden
1	x2	Safety & Security Does the site allow space for proper safety measures to protect office	* * * * 10	******* 6	******* 2	******* 6
2	x2	Response Profile Does the site allow for efficient and timely response to calls?	***** 10	* * * * * 4	* * * * * * 4	** * * * * 6
3	x2	Civic Presence Will the site allow the department to be seen in the community?	******* 10	**********************	★★★★★ 2	*******
4	x2	Topography Suitability Are the sites slopes suitable for development or is significant grading required?	★★★★★ 10	★★★★★ 6	* * * * * 2	******* 8
5	x1	Site Access Does the site possess sufficient space for ingress and egress as well as parking?	* * * * 5	***** 2	*** * * * 1 Topography Severely Units Parking Potential	** * * * * * 4
6	x1	Land Acquisition Is the consideration of land acquisition favorable?	****** 5	***** 2	* * * * * 3	******* 1 Requires Aquisition of Commend & Property
7	x0.5	Future Expansion Will the site allow for further development in the future?	★★★★★ 2.5	* * * * 1	★ ★ ★ ★ ★ .5	****** 1
8	x0.5	Environmental Risks Potential of unforeseen environmental contamination.	******* 2	*** * * * 1	* * * * * 1	* * * * 1
9	x0.5	Tax Revenue Implications Will the site displace or remove tax generating parcels from the city?	**************************************	* * * * * .5	★ ★ ★ ★ ★ 1	****** 1
10	x0.5	Existing Structure Demo Demolition of existing buildings, building foundations, and site features.	******** 2	******** 1	* * * * * 1	******.5
11	x0.5	Utility Availability Site access to electric, gas, water, and other services.	**** * 2.5	*** * * 1.5	***** 1.5	****** 1.5
		TOTAL SCORE	59	29	19	38
		RANK	1	3	4	2

The Birds Eye site is a large, former industrial site which has been leveled and is ready for re-development. The Sweden site is currently the site of a restaurant but provides through access from two streets. The Sweden site is not large enough to hold a possible public safety complex, but the Birds Eye site is.

STUDIOS PABLIC SAFETY ARCHITECTORE

. Site Plan

The Consultants utilized the Birds Eye site to develop a plan for the Police Department facility as well as providing a more general plan for a public safety development on the site.







Site Suitability

The Birds Eye site is an excellent site for the proposed police station. There is access to the two major roads which define the edges of the city, as they split just south of this site. The site is visible and accessible and provides adequate parking space and circulation as well as the required stand-off disatances. It is not in a flood plain, nor is it in a residential neighborhood. Although the site has some slopes to the major frontage road, Route 1, the site itself is relatively flat.

The existence of additional acreage for city development is also a positive factor as the existing fire station and City Hall are both potential candidates for moving to a municipal

STUDIOS PUBLIC SAFETY ARCHITECTURE

E) Cost Estimates

Development and Construction

Completed by a third-party Cost Estimating consultant, the cost of the construction development of a new police station on the Birds Eye site is \$9,443,820. as shown in that able below:

CARIBOU POLICE STATION				CONC	EP.	ESTIMATE
P C PREFERRED CONSTRUCTION MANAGEMENT NEW RENOVATE		sf sf	REV EST	OJ. NO: VISION: DATE: OSS SF:		26-076 1 8/19/2021 11900
DESCRIPTION	QUANTITY	UNIT	_	NIT COST	1	TOTAL COST
DIVISION 2 - INTERIOR DEMOLITION	11,900	SF	\$		\$	
DIVISION 2 - SITE WORK	11,900	SF	\$	122.57	\$	1,458,621.74
DIVISION 3 - BUILDING CONCRETE	11,900	SF	\$	22.42	\$	266,802.83
DIVISION 4 - MASONRY	11,900	SF	\$	48.83	\$	581,041.00
DIVISION 5 - STEEL	11,900	SF	\$	46.83	\$	557,300.00
DIVISION 6 - CARPENTRY	11,900	SF	\$	1.66	\$	19,800.00
DIVISION 7 - THERMAL MOISTURE PROTECTION	11,900	SF	\$	50.12	\$	596,478.75
DIVISION 8 - OPENINGS	11,900	SF	\$	52.30	\$	622,380.00
DIVISION 9 - FINISHES	11,900	SF	\$	54.25	\$	645,577.00
DIVISION 10 - SPECIALTIES	11,900	SF	\$	7.24	\$	86,175.00
DIVISION 11 - EQUIPMENT	11,900	SF	\$	2.41	\$	28,700.00
DIVISION 12 - FURNISHINGS	11,900	SF	\$	0.79	\$	9,350.00
DIVISION 12 - CASEWORK AND MILLWORK	11,900	SF	\$	18.67	\$	222,200.00
DIVISION 13 - SPECIAL CONSTRUCTION	11,900	SF	\$	0.44	\$	5,220.00
DIVISION 14 - CONVEYING	11,900	SF	\$	- 1	\$	
DIVISION 21 - SPRINKLER	11,900	SF	\$	7.47	\$	88,882.50
DIVISION 22 - PLUMBING	11,900	SF	\$	22.35	\$	265,985.00
DIVISION 23 - HVAC	11,900	SF	\$	67.86	\$	807,556.34
DIVISION 26 - ELECTRICAL	11,900	SF	\$	76.41	\$	909,288.12
CONSTRUCTION SUBTOTAL	11,900	SF	\$	602.64	\$	7,171,358
GENERAL CONDITIONS	8.00	%			\$	573,709
CONSTRUCTION SUBTOTAL	11,900	SF	\$	650.85	\$	7,745,067
DESIGN / ESTIMATE CONTINGENCY	10.00	%	Т		\$	774,507
CONSTRUCTION SUBTOTAL	11,900	SF	\$	715.93	\$	8,519,574
OVERHEAD AND PROFIT	3.50	%			\$	298,185
CONSTRUCTION SUBTOTAL	11,900	SF	\$	740.99	\$	8,817,759
BOND AND INSURANCE	2.00	%			\$	176,355
CONSTRUCTION SUBTOTAL	11,900	SF	\$	755.81	\$	8,994,114
ESCALATION - ASSUME FALL 2022 START	5.00	%			\$	449,706
CONSTRUCTION GRAND TOTAL	11,900	SF	\$	793.60	\$	9,443,820



Land and Rights

The property is currently owned by the City of Caribou – there are no acquisition costs associated with this piece of property.

Legal

Although no legal fees are expected, we have provided an allowance of \$5,000 to cover legal fees and builder's risk insurance.

Architect Fees

Architectural Fees, per State of Maine BGS standards, are estimated at 7% of the \$7,745,067 for construction and general conditions

Interest

Equipment

Furniture and fixtures are estimated to cost between \$60,000 and \$100,000, based on availability and inflation

Contingencies

Included in the Estomate of Probable Construction Costs is a continengy for design/estimate at this stage of the project of 10% or \$774,507.

Refinancing

Other

Attached is project Budget Sheet that includes the various additional costs expected in a project such as this.



_			
	bou Police Department		Date of this report: 02/14/2023
	POLICE BUILDING		Const. Start: Spring 2024
Birds	eye Site, Caribou, Maine		Const. Complete: Winter 2024-2025
		One Story	
	A: Administrative & Reserves		
	Acquisitions	\$0	
	Legal/Insurance	\$5,000	Easements, Builders risk insur.
3	Bid Document Printing and Handling	\$1,500	
4.1	Furnishings	\$50,000	Office furniture, lockers, dispatch desks
4.2	Fixtures	\$10,000	
4.3	Equipment		
5	IntermediateRental	\$0	
7	Moving, Temporary Space		
8			
9	Part A Subtotal	\$66,500	
Part	B: Fees & Services		
10	Architect/Engineer Basic Services Fee	\$542,155	7.0 % of estimate
	Legal/Insurance	\$18,000	•
13	A/E Reimbursables Expenses	\$0	construction document printing included in 3.0
14	Hazardous Materials Reporting	\$4,500	additional testing
	Survey/Traffic	\$0	
	Geotechnical	\$0	Subsurface investigation completed expense
18	Special Inspections	\$2,000	Structural steel
	Construction Testing	\$2,000	Soils & concrete
	Hazardous Materials Removal	\$0	
21	Commissioning	\$20,000	
	Clerk of the Works	\$12,000	
	Part B Subtotal	\$600,655	
23	C: Probable Construction Cost		
	C T	\$7,745,067	Probable Construction Cost @\$650/sf
Part	Construction Estimate		
Part 24		\$774.507	10% of PCC
24 25	Design Contingency O/H andProfit	\$774,507 \$298,185	10% of PCC 4%
24 25 26	Design Contingency O/H andProfit	\$298,185	•
Part 24 25	Design Contingency O/H andProfit	-	•



F) Annual Operating Budget

Income

Operation and Maintenance Costs

G) Maps, Drawings, Sketches, and Photographs

Maps
Drawings and Sketches



Proposed Elevation

City of Caribou Caribou Police Department Project No. 2023102





www.artifexae.com

Bangor, ME 0440

Photographs

H) Construction Problems

The Birds Eye site, with access to the two major roads which define the edges of the city, is not in a flood plain, nor is it in a residential neighborhood, but it is a hilly, post-industrial site. The site has some slopes to the major frontage road, Route 1, where police vehicle access is taken. There will need to be a fairly large retaining wall at the building. Once on the site, the land itself is relatively flat.



We expect no hazardous material problems with the immediate site as clearance and testing has been done. But there are some remaining building slabs and areas where final remediation has not been completed. Depending on the final extent of construction, we may encounter some material which will need to be removed and replaced.

Current availability of construction materials is also a potential construction issue. Electric Generators, sizes as may be required at this facility, have a long lead time and may extend the construction schedule.

1) Conclusions and Recommendations

The Caribou Police Department is currently in the basement of a building constructed as a fire station in 1937 where most elements have reached the end of their useful life. Many elements cannot meet current CALEA or IACP Standards, no matter how hard the Police department tries. The proposed site and building design meets all of these standards and provides an opportunity for Caribou to grow and develop. It will provide a safe and healthy environment for the Police officers, those people held in its cells, and the public. It is much needed. Any extension or delay in proceding will only add to the financial cost/burden to the City and will impair the Caribou Police in their abilioty to do their jobs.



2. DEFINITIONS

LAW ENFORCEMENT TERMINOLOGY

CALEA Commission on Accreditation for Law Enforcement Agencies

PSAP Public Safety Answering Point EOC Emergency Operations Center

IACP International Association of Chiefs of Police

SDD Special Deployment Division

SSD Special Services Division

SVU Special Victims Unit

DV Domestic Violence

ATFP Anti-Terrorism Force Protection

EMA Emergency Management Agency

EST Emergency Services Team (SWAT)

CIU Criminal Investigations Unit

CID Criminal Investigations Division

SRO School Resource Officer

EOD Explosive Ordinance Disposal

IAPE International Association for Property & Evidence

CRO Community Resource Officer

CVE Commercial Vehicle Enforcement

POLY Polygraph

PIO Public Information Officer

SPACE NEEDS TERMINOLOGY

NSF Net Square Feet: The amount of usable program each Division requires for operational

procedures. Does not consider overall building circulation, utility spaces, shared common

spaces with other Divisions or public areas.

GSF Gross Square Feet: The total area in the building. Includes all space needed to circulate

personnel, common public areas, utilities, structural systems, and wall thickness.



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CODES & STANDARDS TERMINOLOGY

IBC International Building Code

NFPA National Fire Protection Association

IEBC International Existing Building Code

IECC International Energy Conservation Code

IPC International Plumbing Code

IMC International Mechanical Code

ASHRAE American Society of Heating & Air-Conditioning Engineers

UL 752 Underwriters Laboratory Testing

Method for Ballistic Resistance

ASCE American Society of Civil Engineers

AHJ Authority Having Jurisdiction. The organization, political

subdivision, office, or individual charged with the

responsibility of administering and enforcing the

provisions of said jurisdictions adopted building code(s).

2.1 CRITICAL FACILITIES & RISK CATEGORY

What is a critical facility?

In general usage, the term "critical facilities" is used to describe all manmade structures or other improvements that, because of their function, size, service area, or uniqueness, have the potential to cause serious bodily harm, extensive property damage, or disruption of vital socioeconomic activities if they are destroyed, damaged, or if their functionality is impaired.

Typically the following buildings fall under the broad umbrella of the critical facility label: emergency response facilities (fire stations, police stations, rescue squads, and emergency operation centers [EOC's]), custodial facilities (jails and other detention centers, long-term care facilities, hospitals, and other healthcare facilities), schools, emergency shelters, utilities (water supply, wastewater treatment facilities, and power), communications facilities, and any other assets determined by the community to be of critical importance for the protection of the health and safety of the population. The adverse effects of damaged critical facilities can extend far beyond direct physical damage. Disruption of healthcare, fire, and police services can impair search and rescue, emergency medical care, and even access to damaged areas.

Who or what determines which structurers are a critical facility?

The definitions that outline what type of structure comprises a critical facility, whether it be from FEMA, IBC, NFPA or ASCE are defined broadly and generalized. The intention is that consideration for labeling a structure as a critical facility is developed by the State of Maine, the local authority having jurisdiction (AHJ.)



What is a Risk Category and why does it matter?

Unlike the generalized terminology for what makes a building a critical facility, the IBC provides very specific guidelines to determine a buildings risk category. The Risk Category is derived by determination of the building's occupancy, and how said occupancy correlates to the greater service it provides within society.

The determination of a building's Risk Category helps set the course heading for identifying what structural provisions a building will require in order to maintain operations in the event of a natural disaster. In short, as the Risk Category rating grows, so do the requirements of the buildings structural design. The determination of these provisions and the buildings Risk Category are outlined within the opening pages of IBC, Chapter 16, Structural Design and further expanded upon within the entirety ASCE 7-10. It should be noted that most critical facilities fall into Category III or Category IV, described below:

Category I includes buildings and other structures whose failure would represent a low hazard to human life, such as agricultural buildings and storage facilities.

Category II includes all buildings not specifically included in other categories such as offices.

Category III includes buildings and other structures that represent a substantial hazard to human life in the event of failure. They include buildings with higher concentrations of occupants (i.e., where more than 300 people congregate in one area). These are typically educational facilities with capacities greater than 250 for elementary and secondary facilities, 500 for colleges and adult education facilities, or 150 for daycare facilities.

Category IV includes essential facilities such as hospitals, fire and police stations, rescue and other emergency service facilities, power stations, water supply facilities, aviation facilities, and other buildings critical for the national and civil defense. These facilities are chosen because of their vitally important role in protecting the health and safety of the community.

What does this mean for the project?

The need to update an existing structure during a renovation project, assigning a buildings Risk Category, or the decision to label a facility as critical will reverberate throughout the design and construction process. Project budget, building age, size, location, infrastructure availability and how the structure correlates to the greater operational function it serves should all be considered on a project by project basis.

STUDIOS FUBLIC SAFETY ARCHITECTURE





