

## Fire Station 203



Built in 1948 the facility is located in a residential neighborhood. The site has off street parking. The fire station construction is brick masonry veneer with wood frame. Roof construction is wooden roof framing and asphalt shingles and metal roof at the rear of the facility. The facility is in the middle of a residential neighborhood development and architecturally blends with the surrounding houses.

DRAFT REPORT



Poor metal roofing conditions



Kitchen renovation required



Poor lighting conditions



Poor finish conditions

## Facility Outlook

The following charts depict the life cycle costs and FCI values over a 30 year outlook, including a six year building renovations improvement project cost matrix.



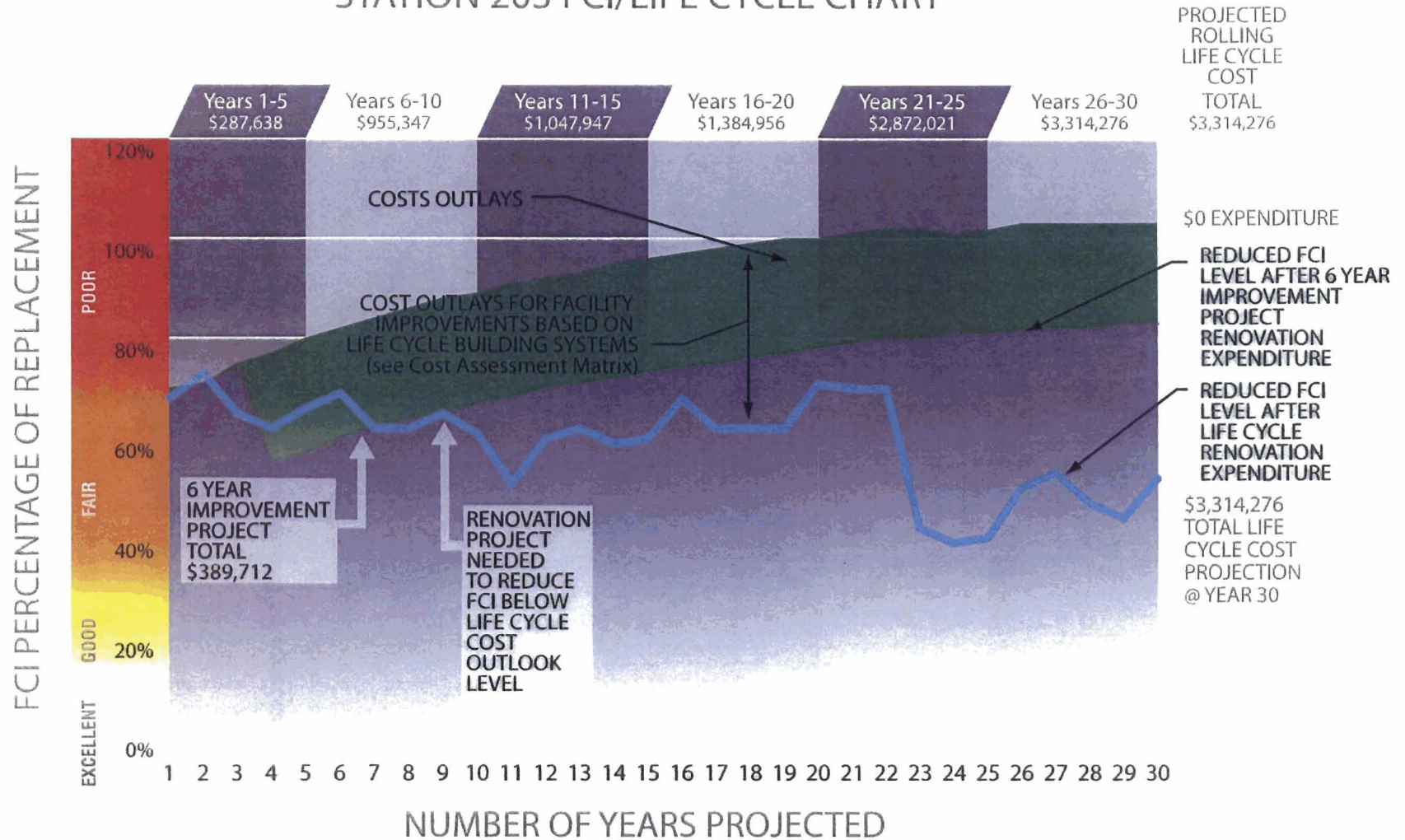
# Station 203

1 inch equals 30 feet





## STATION 203 FCI/LIFE CYCLE CHART



**NOTE:**

1. Facility Condition Index is the ratio of costs to renovate or repair vs. to replace with new as calculated below.

$$(FCI) = \frac{\text{Deferred Maintenance} + \text{Capital Renewal}}{\text{Current Replacement Value}}$$

2. Life cycle costs are based upon the value to replace the system that once the life of that system is over.

Example: 20 year life span of a roof system and the cost to replace it in 20 years.



# FIR STATION #203

## RENOVATION COST MATRIX

Alexandria Fire Department - Alexandria, Virginia

CAPITAL IMPROVEMENTS - SIX YEAR OUTLOOK														
Project Description	BASE YEAR ESTIMATE						SIX YEAR OUTLOOK						Remarks	
	Priority 1 - 5	UM	Qty	Unit \$	Subtotal \$	Total \$ ESCALATED	2009	2010	2011	2012	2013	2014		Defered
						\$	1.00	1.03	1.06	1.09	1.12	1.15		
						\$ 389,712	\$ -	\$ -	\$ -	\$ 389,712	\$ -	\$ -	\$ -	
<b>Replace Metal Roofing</b>	4					\$ 6,712				\$ 7,316				
Demo		SF	1,100	\$ 1.50	\$ 1,650									
New Roofing		SF	1,100	\$ 4.60	\$ 5,062									
<b>Replace Kitchen</b>	3					\$ 16,992				\$ 18,521				
Replace Cabinets														
Demo		SF	250	\$ 4.70	\$ 1,175									
New Cabinets		SF	250	\$ 63.27	\$ 15,817									
Replace Appliances						\$ 7,487				\$ 8,161				
Demo		EA	6	\$ 200.00	\$ 1,200									
New Appliances		EA	6	\$ 1,047.87	\$ 6,287									
<b>Replace Flooring</b>	3					\$ 89,790				\$ 97,871				
Demo		SF	5,910	2.5	\$ 14,775									
New Flooring		SF	5,910	\$ 12.69	\$ 75,015									
<b>Paint - Walls/Ceiling</b>	3					\$ 22,463				\$ 24,485				
Walls		SF	5,910	\$ 1.74	\$ 10,272									
Ceilings		SF	5,910	\$ 2.06	\$ 12,191									
<b>Boiler Replacement - Entire Facility</b>	4													Complete by 2009
<b>Electrical</b>	5					\$ 165,336				\$ 180,217				
Replace old wiring-Remove exposed/abandoned wiring from attic.														
Demo		SF	5,910	\$ 4.70	\$ 27,777									
New Wiring		SF	5,910	\$ 23.28	\$ 137,559									
Included with New Wiring														
Install new panels.														(Included)
additional receptacles should be installed.														(Included)
Replace Light fixtures with energy efficient fixtures.														(Included)
Replace exit lights														(Included)
Install smoke detectors in the 1st floor sleeping rooms.														(Included)
<b>Electrical Systems</b>	5					\$ 46,754				\$ 50,962				
Install a new generator														
Demo		EA	1	\$ 3,401.63	\$ 3,402									
New generator		EA	1	#####	\$ 43,352									
<b>Sitework</b>	2					\$ 2,000				\$ 2,180				
Miscellaneous Site improvements.		SF	2,955	\$ 0.68	\$ 2,000									

**Notes:**

Cost estimate shows the following:

Project Elements.

Base Year Costs.

Distribution of costs

Differences are due to rounding

Priority Rating 1 - 5

5- Life safety & building security.

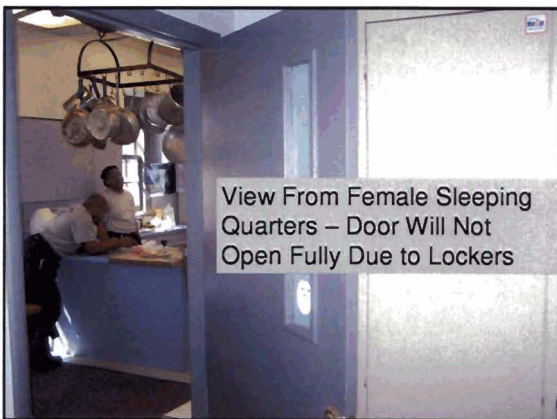
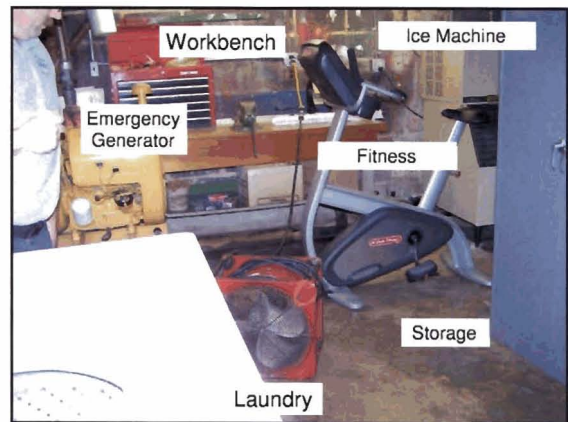
4- Building exterior & primary systems.

3- Buiding interior finishes and secondary systems.

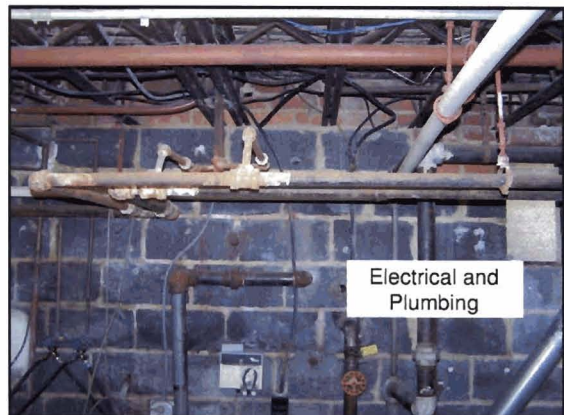
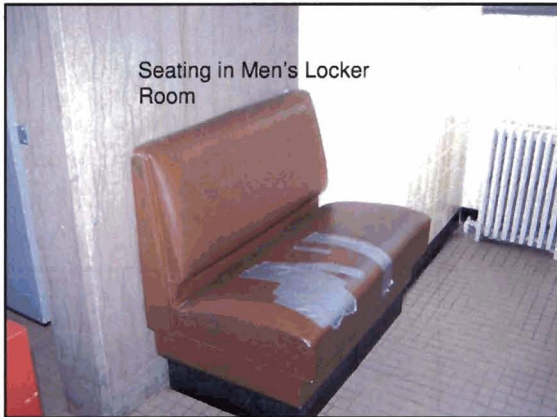
2- Supplemental systems.

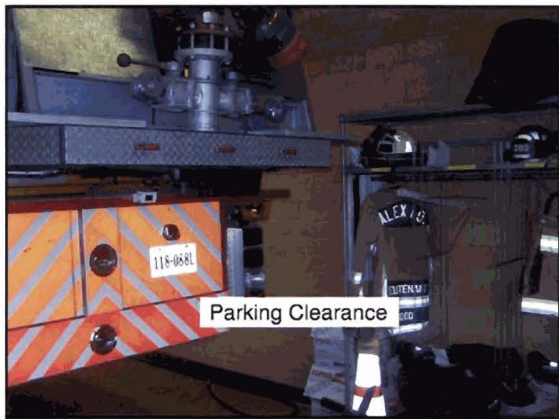
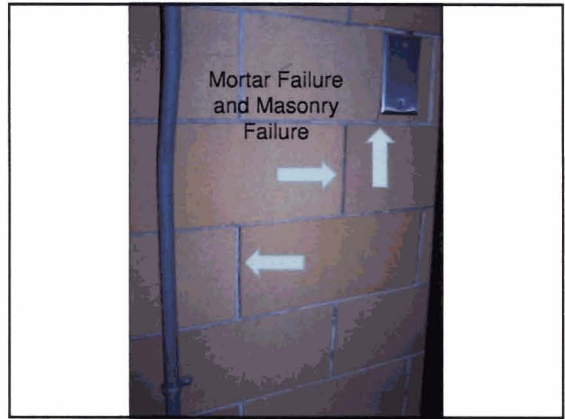
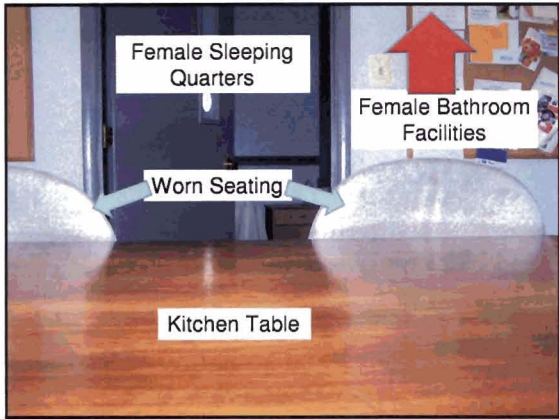
1- Noncritical systems.

# Fire Station 203

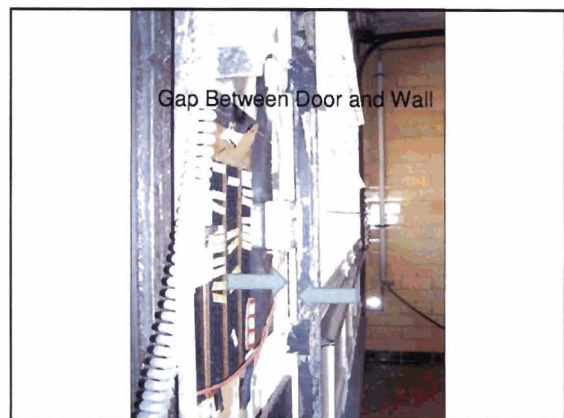
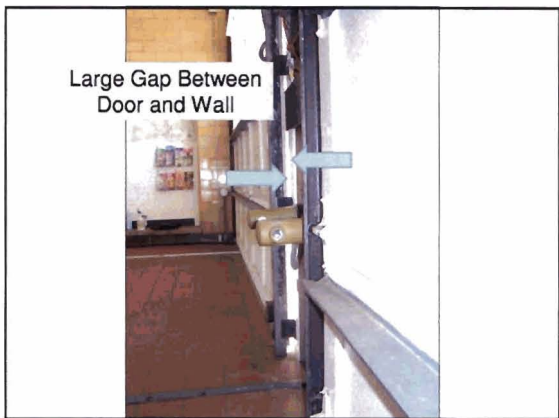
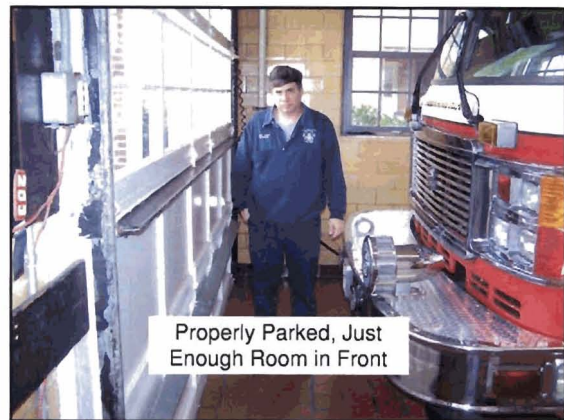
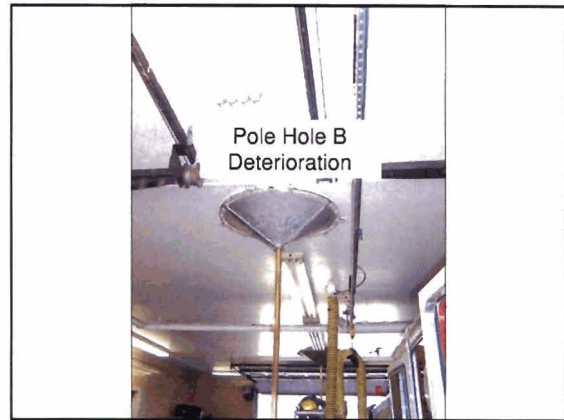
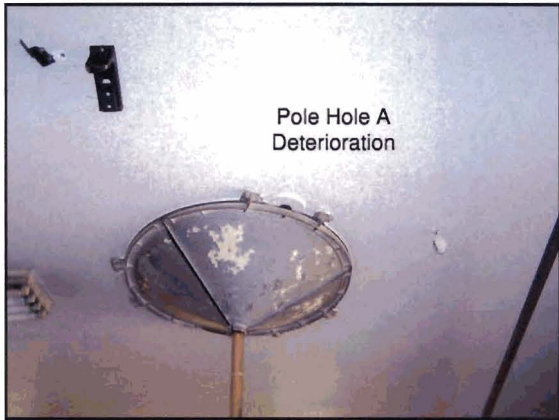


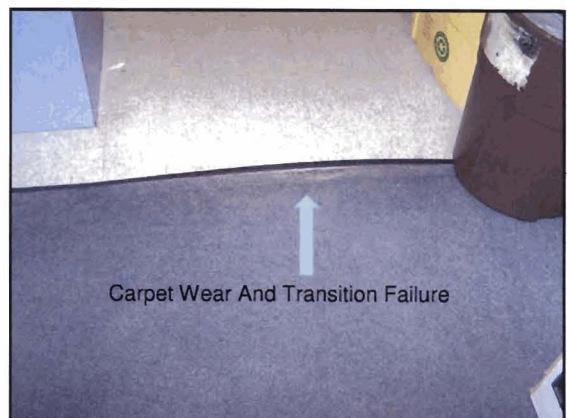
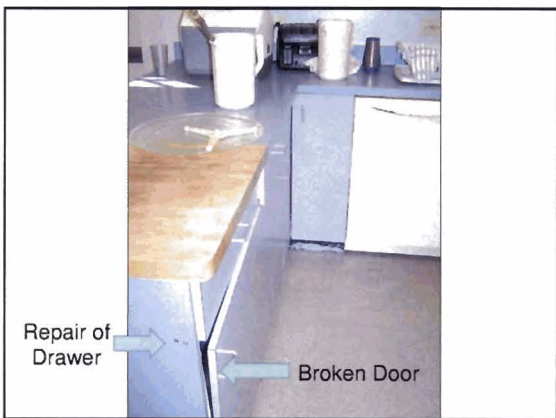
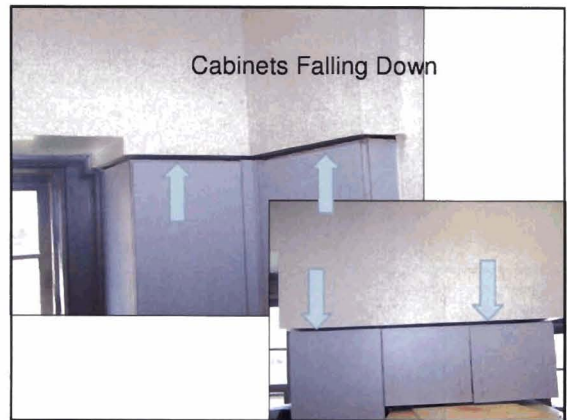
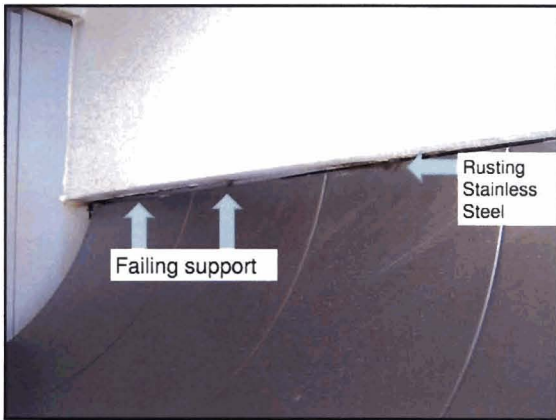
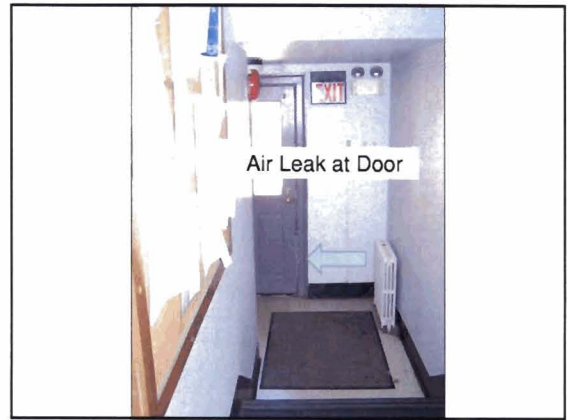
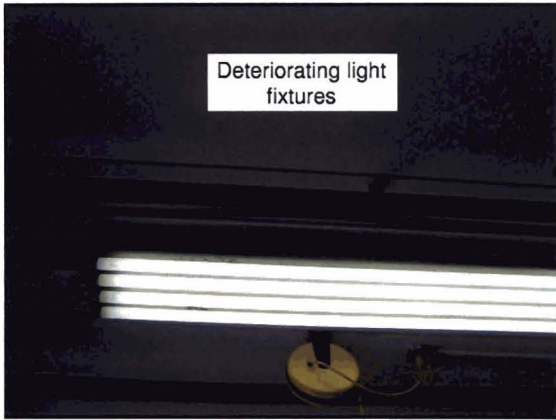




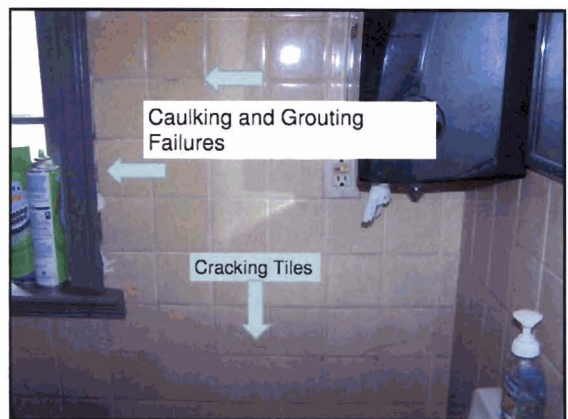


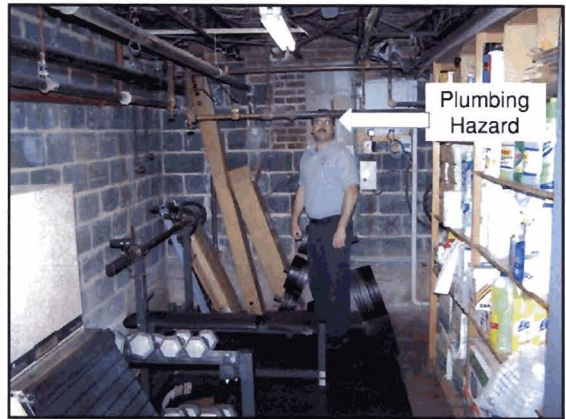
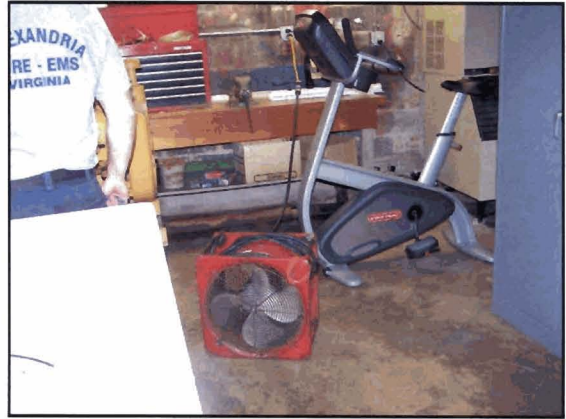




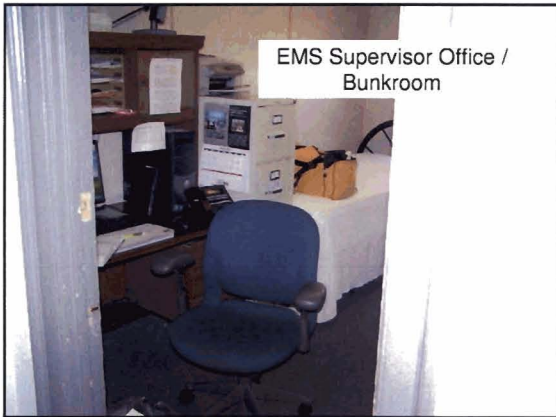


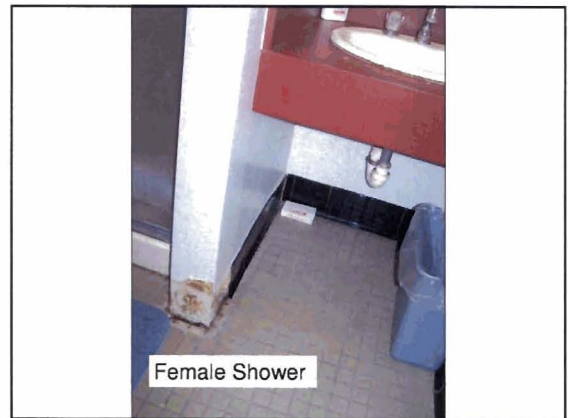
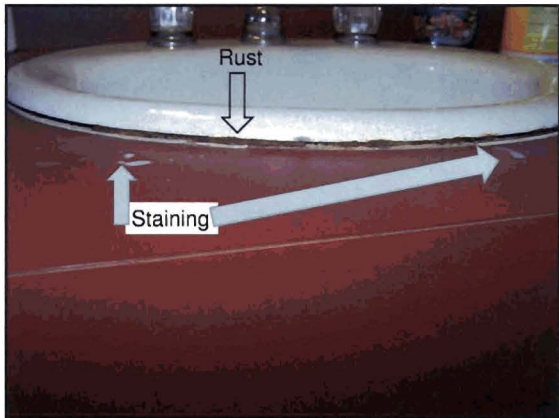




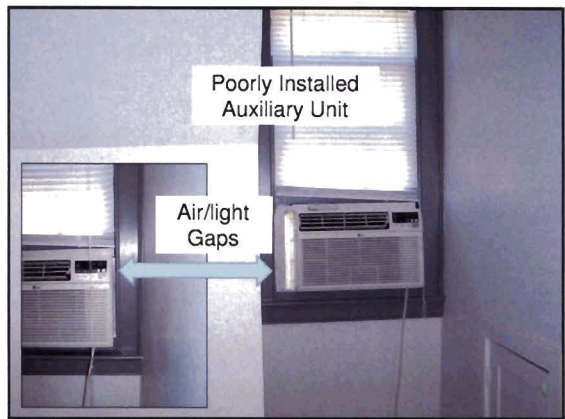
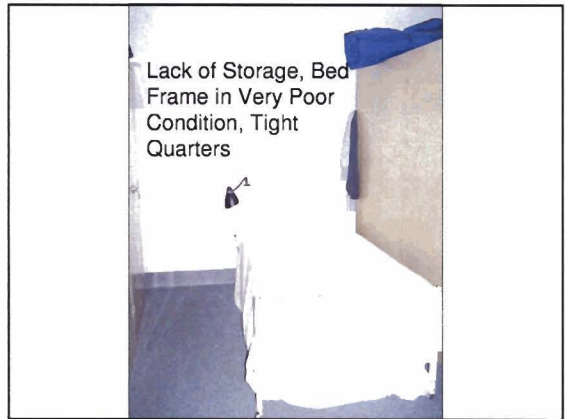


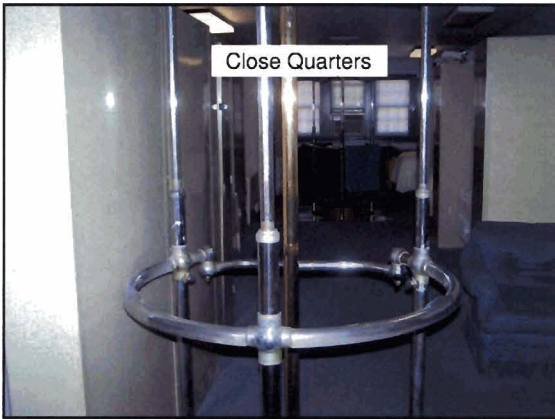
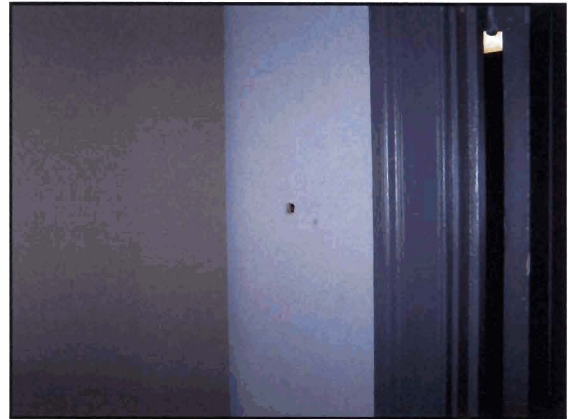
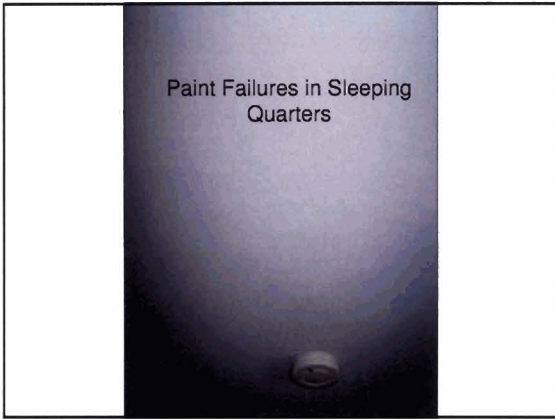




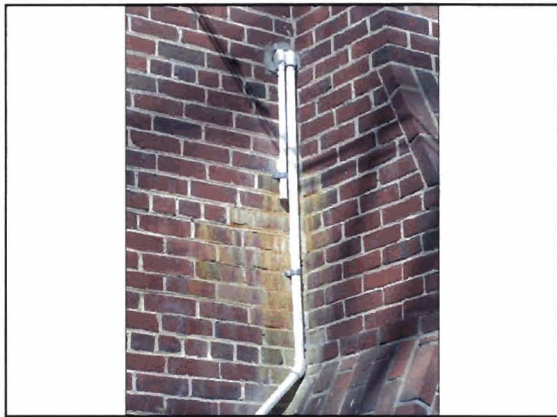


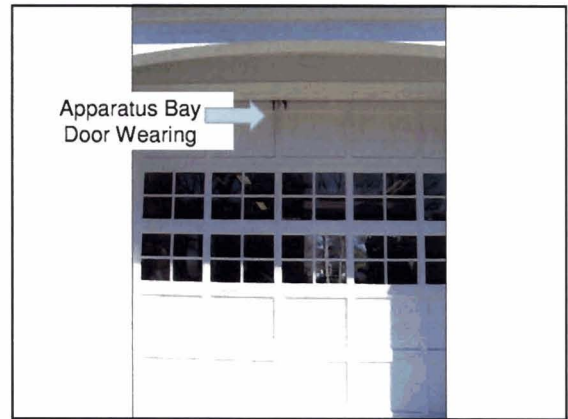
















## Fire Station 204



Built in 1961 the facility went under a major expansion and renovation and is the current headquarters facility for the fire department. The site has shared insufficient off street parking. The fire station construction is brick masonry veneer construction.

Roof construction is a combination of flat membrane roofing and sloped asphalt shingle roofing.



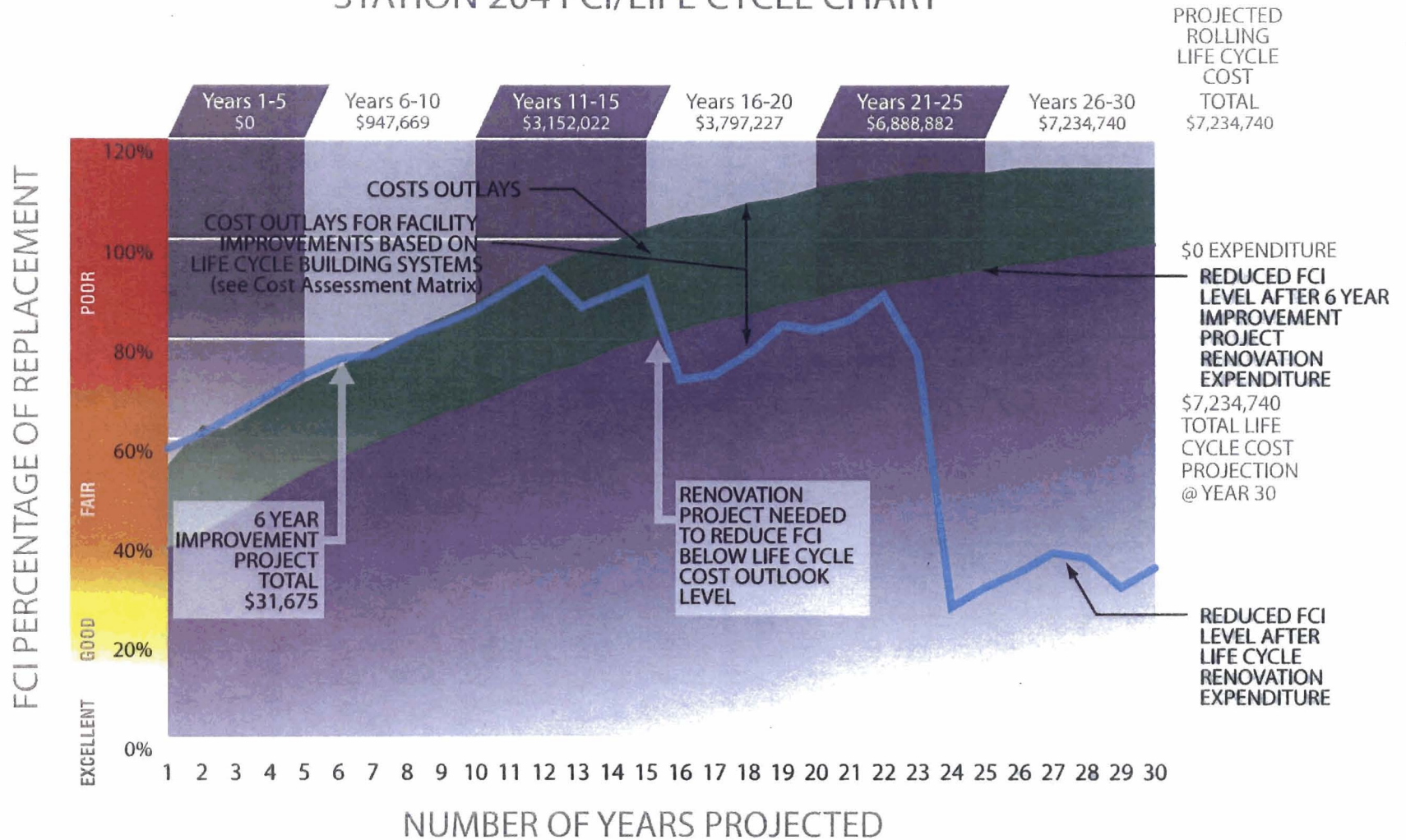
# Station 204

1 inch equals 40 feet





# STATION 204 FCI/LIFE CYCLE CHART



**NOTE:**

1. Facility Condition Index is the ratio of costs to renovate or repair vs. to replace with new as calculated below.

$$(FCI) = \frac{\text{Deferred Maintenance} + \text{Capital Renewal}}{\text{Current Replacement Value}}$$

2. Life cycle costs are based upon the value to replace the system that once the life of that system is over.

Example: 20 year life span of a roof system and the cost to replace it in 20 years.



# FIR STATION #204

## RENOVATION COST MATRIX

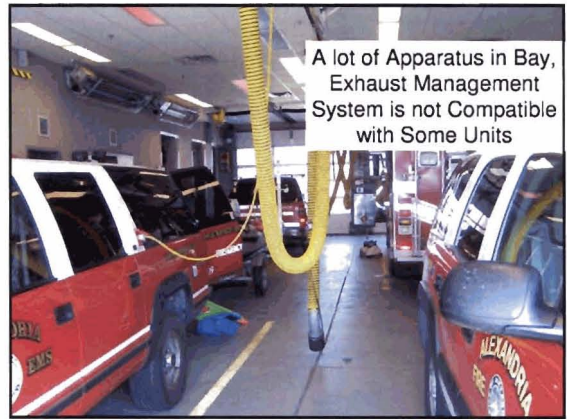
Alexandria Fire Department - Alexandria, Virginia

CAPITAL IMPROVEMENTS - SIX YEAR OUTLOOK														
BASE YEAR ESTIMATE							SIX YEAR OUTLOOK							Remarks
Project Description	Priority	UM	Qty	Unit \$	Subtotal \$	Total \$	2009	2010	2011	2012	2013	2014	Deferred	
	1 - 5					ESCALATED	1.00	1.03	1.06	1.09	1.12	1.15		
						\$ 31,675	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 31,675	\$ -	
<b>Supplement / Modify 2nd Floor Heating &amp; Cooling system</b>	4					\$ 25,543						\$ 29,374		
Demo		SF	9,750	\$ 0.75	\$ 7,313									
Add Heating and Cooling		SF	9,750	\$ 3.74	\$ 18,230									
<b>Sitework</b>	2					\$ 2,000						\$ 2,300		
Miscellaneous Site improvements.		SF	2,955	\$ 0.68	\$ 2,000									

**Notes:**

- Cost estimate shows the following:
  - Project Elements.
  - Base Year Costs.
  - Distribution of costs.
  - Differences are due to rounding.
- Priority Rating 1 - 5
  - 5- Life safety & building security.
  - 4- Building exterior & primary systems.
  - 3- Building interior finishes and secondary systems.
  - 2- Supplemental systems.
  - 1- Noncritical systems.

## Fire Station 204



A lot of Apparatus in Bay,  
Exhaust Management  
System is not Compatible  
with Some Units



Apparatus, Storage  
and Personnel  
Overlap in Quarters



Fitness, Storage, Response Units,  
Hazardous Storage and Protective  
Clothing All in the Same Space







## Fire Station 205



Built in 1949 the facility is located on Cameron St and has very limited street parking at the rear of the facility. The fire station construction is brick masonry construction. Flat built-up roof construction with a small deck area off the kitchen is provided. A new green roof project is planned for to be constructed in the near future



**Station 205**  
1 inch equals 35 feet







Poor finish conditions

Overhead door replacement needed



Water penetration

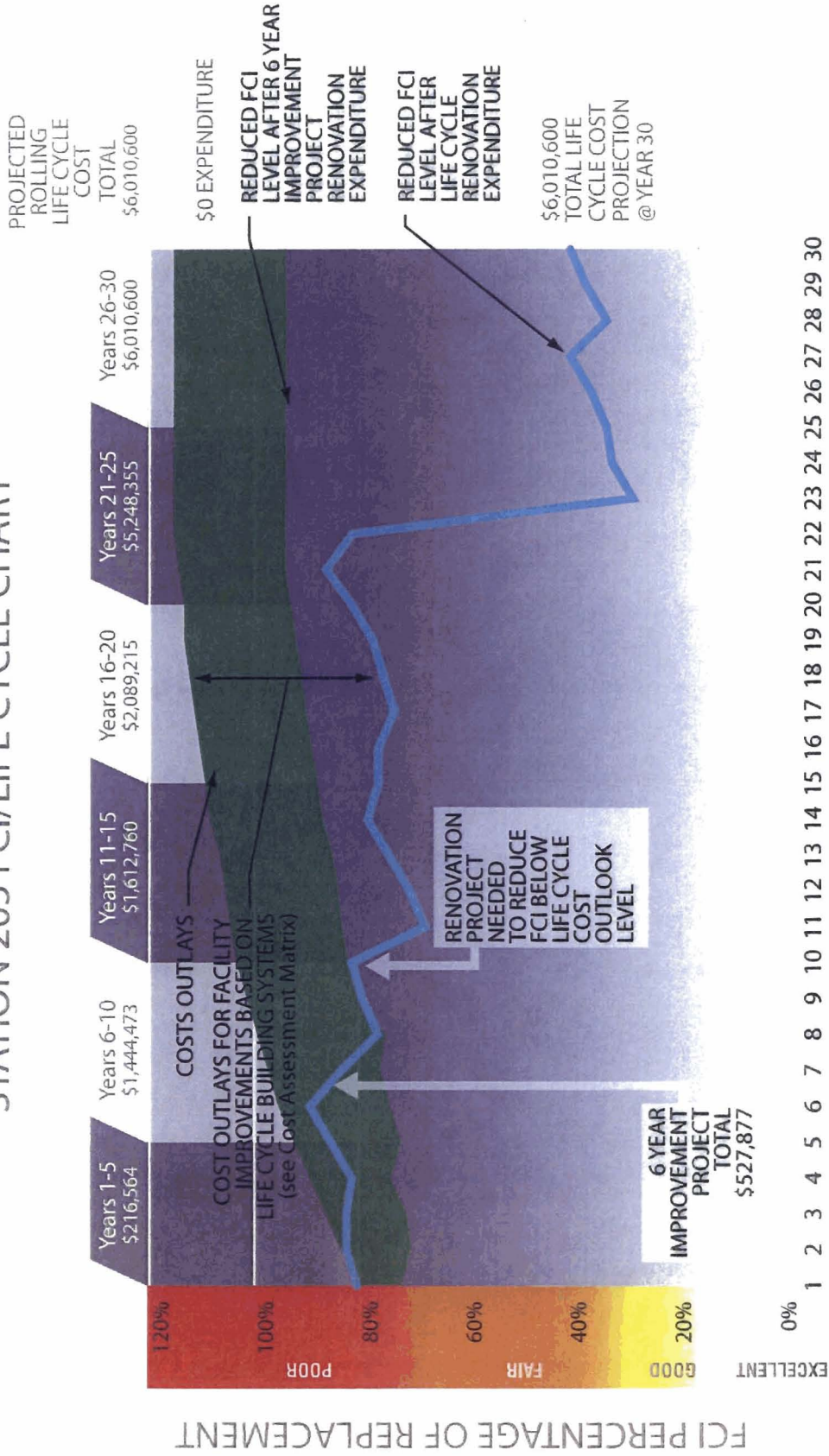
Insufficient emergency power

## Facility Outlook

The following charts depict the life cycle costs and FCI values over a 30 year outlook, including a six year building renovations improvement project cost matrix.



# STATION 205 FCI/LIFE CYCLE CHART



**NOTE:**

1. Facility Condition Index is the ratio of costs to renovate or repair vs. to replace with new as calculated below.

$$(FCI) = \frac{\text{Deferred Maintenance} + \text{Capital Renewal}}{\text{Current Replacement Value}}$$

2. Life cycle costs are based upon the value to replace the system that once the life of that system is over.  
Example: 20 year life span of a roof system and the cost to replace it in 20 years.

# FIR STATION #205

## RENOVATION COST MATRIX

Alexandria Fire Department - Alexandria, Virginia

CAPITAL IMPROVEMENTS - SIX YEAR OUTLOOK														
Project Description	BASE YEAR ESTIMATE						SIX YEAR OUTLOOK						Remarks	
	Priority 1 - 5	UM	Qty	Unit \$	Subtotal \$	ESCALATED	2009	2010	2011	2012	2013	2014		Deferred
							1.00	1.03	1.06	1.09	1.12	1.15		
					\$ 527,877	\$ 527,877	\$ 211,211	\$ 104,074	\$ 62,650	\$ -	\$ 132,641	\$ 17,301	\$ -	
Repair Exterior Envelope - Water Penetration	4					\$ 18,152	\$ 18,152							
Power Wash Exterior Surfaces		SF	8,140	\$ 0.75	\$ 6,105									
Patch and Point Brick		SF	8,140	\$ 0.98	\$ 7,977									
Paint and Seal		SF	8,140	\$ 0.50	\$ 4,070									
Replace Overhead Doors	4					\$ 27,289		\$ 28,926						
Demo		EA	3	\$ 250.00	\$ 750									
New Overhead Doors		EA	3	\$ 8,846.35	\$ 26,539									
Replace Roofing - Water Remediation	4					\$ 56,736	\$ 56,736							
Replace Roofing		SF	3,940	\$ 14.40	\$ 56,736									
Remove Hazardous Materials Asbestos - Hose tower stairs	5					\$ 3,665	\$ 3,665							
Remove Asbestos		SF	3,940	\$ 0.93	\$ 3,665									
Paint interior walls/ceilings	3					\$ 30,939		\$ 33,724						
Walls		SF	8,140	\$ 1.74	\$ 14,148									
Ceilings		SF	8,140	\$ 2.06	\$ 16,791									
Replace Flooring	3					\$ 109,425				\$ 122,556				
Demo		SF	8,140	\$ 0.75	\$ 6,105									
New Flooring		SF	8,140	\$ 12.69	\$ 103,320									
Replace Water Distribution System	4					\$ 44,751		\$ 46,094						
Demo		SF	8,140	\$ 0.75	\$ 6,105									
New Water Distribution System		SF	8,140	\$ 4.75	\$ 38,646									
Replace sanitary sewer - Drain/Waste/Vent	4					\$ 56,291		\$ 57,980						
Demo		SF	8,140	\$ 0.75	\$ 6,105									
New Sanitary Sewer System		SF	8,140	\$ 6.17	\$ 50,186									
Replace HVAC - EMS quarters	4					\$ 24,887	\$ 24,887							
Demo		SF	1,500	\$ 0.75	\$ 1,125									
New HVAC		SF	1,500	\$ 15.84	\$ 23,762									
Replace HVAC - Officers quarters	4					\$ 16,591	\$ 16,591							
Demo		SF	1,000	\$ 0.75	\$ 750									
New HVAC		SF	1,000	\$ 15.84	\$ 15,841									
Replace Controls	4					\$ 21,646	\$ 21,646							
Demo		SF	8,140	\$ 0.75	\$ 6,105									
New Controls		SF	8,140	\$ 1.91	\$ 15,541									
Replace hydronic Piping	4					\$ 13,018	\$ 13,018							
Demo		SF	8,140	\$ 0.75	\$ 6,105									
New Piping		SF	8,140	\$ 0.85	\$ 6,913									
Install Smoke Detectors	5					\$ 687	\$ 687							
New Smoke Detectors		EA	4	\$ 171.80	\$ 687									
Replace Light Fixture Lenses	1					\$ 15,045					\$ 17,301			
New Lenses		SF	8,140	\$ 1.85	\$ 15,045									
Install a new generator	5					\$ 55,828	\$ 55,828							
Demo		EA	1	\$ 3,401.63	\$ 3,402									
New Generator		EA	1	\$ 52,426.86	\$ 52,427									
Replace Concrete - Front ramp	4					\$ 9,005				\$ 10,085				Complete by 2009
Replace Sanitary Line	4													
Demo		SF	8,140	\$ 0.50	\$ 4,070									
New Sanitary Line		SF	8,140	\$ 0.61	\$ 4,935									

**Notes:**

Cost estimate shows the following:

Project Elements.

Base Year Costs

Distribution of costs

Differences are due to rounding.

Priority Rating 1 - 5

5- Life safety & building security.

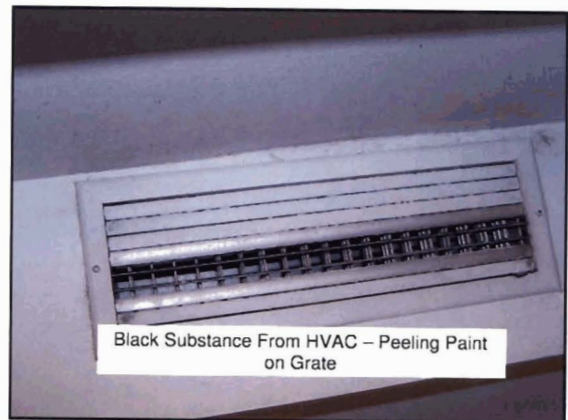
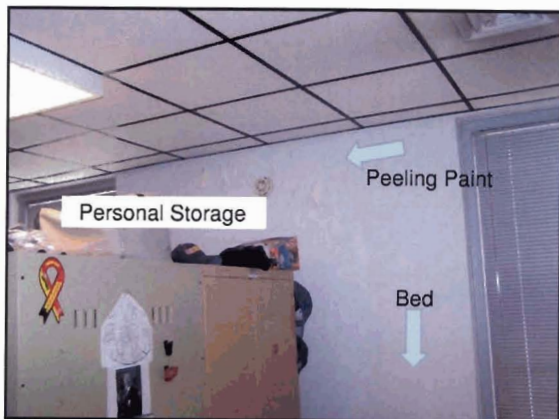
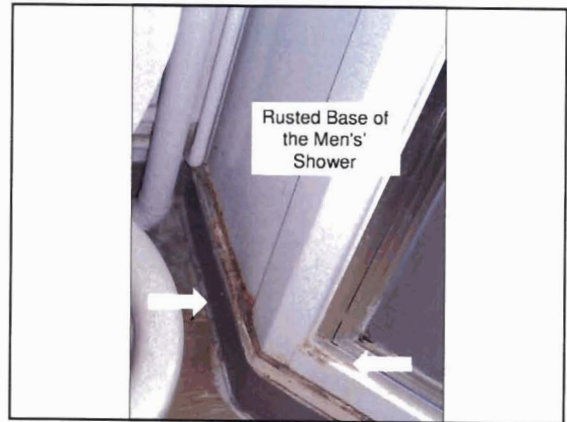
4- Building exterior & primary systems.

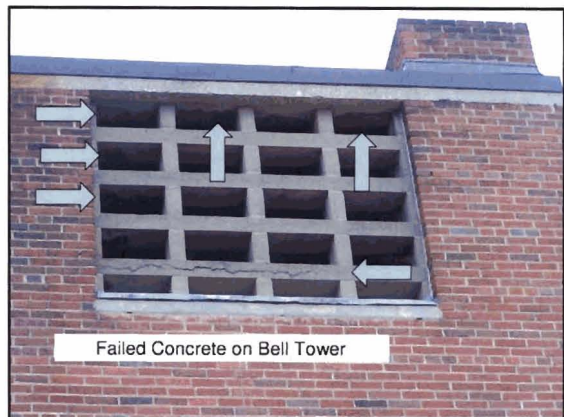
3- Building interior finishes and secondary systems.

2- Supplemental systems.

1- Noncritical systems.











Un-repaired Door Opening



Mortar Block Courtesy of Brick Repointing Contractor



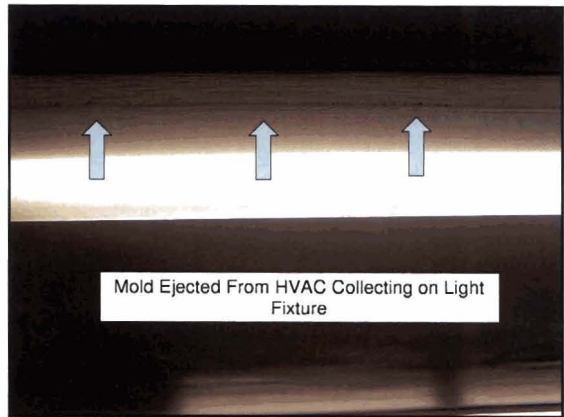
Small Parking Lot With Much Damage



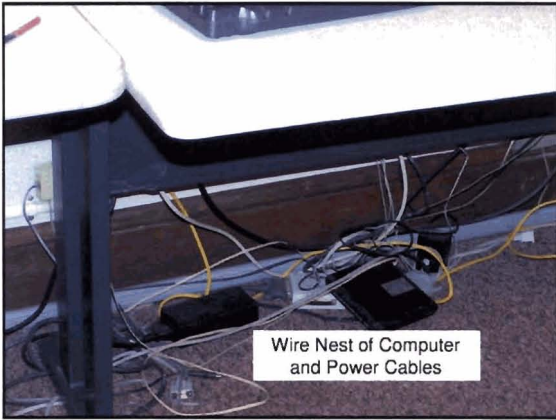
Failing Paint and Plaster



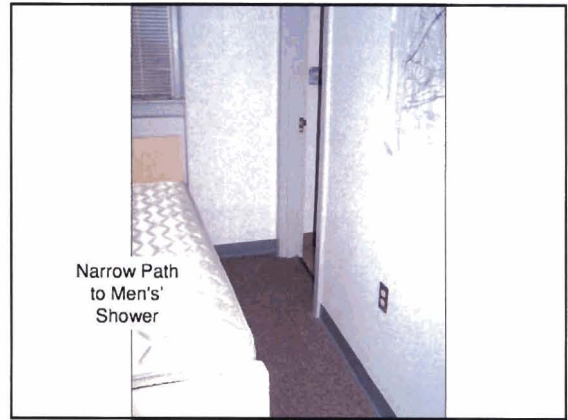
Un-repaired Light Fixture Removal



Mold Ejected From HVAC Collecting on Light Fixture



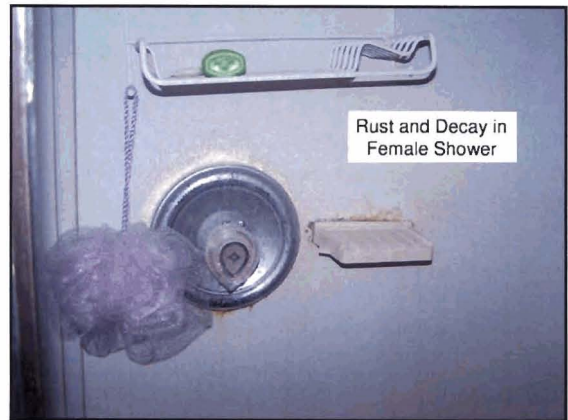
Wire Nest of Computer and Power Cables



Narrow Path to Men's Shower



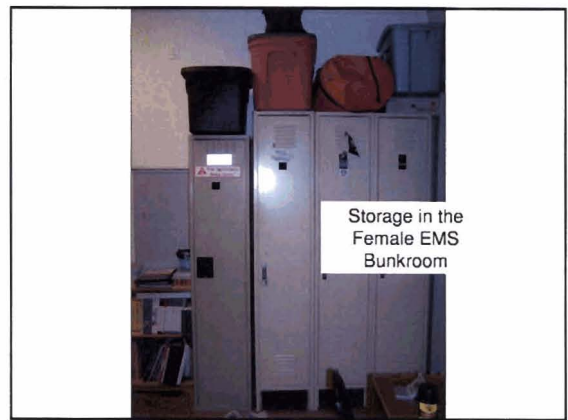
Rusted Base of Men's Shower



Rust and Decay in Female Shower

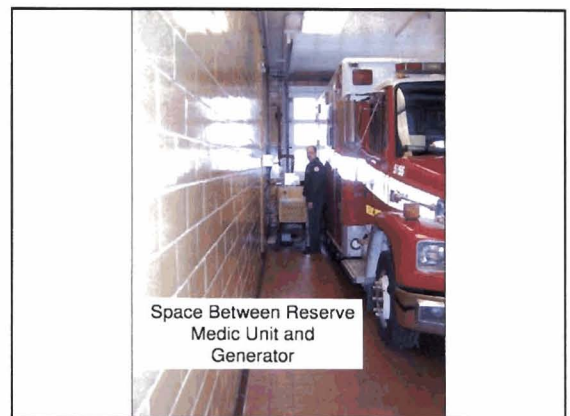
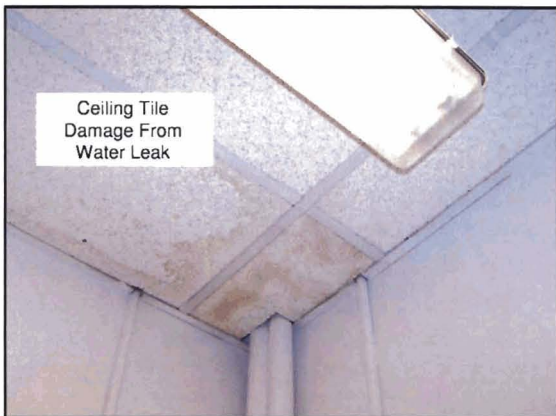
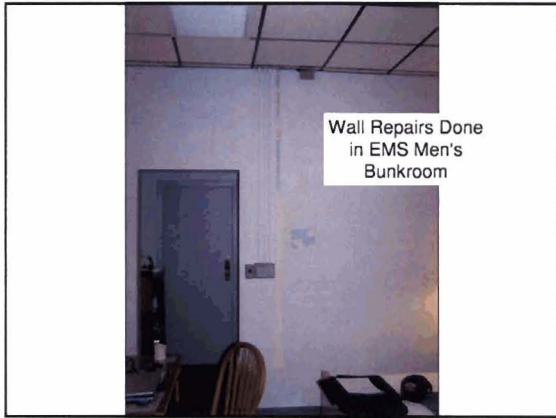


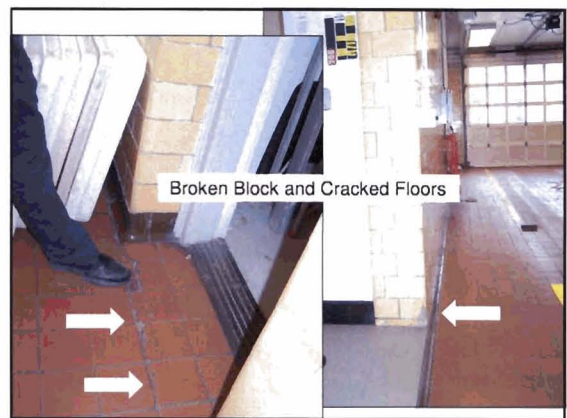
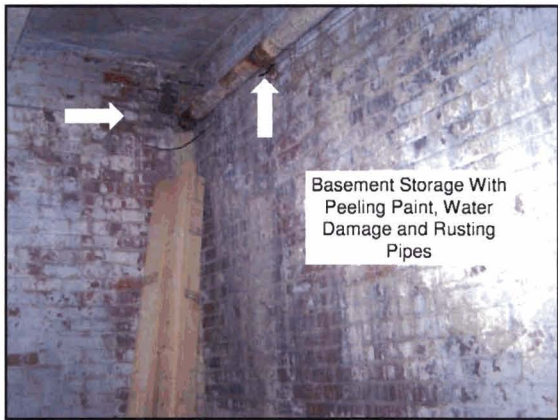
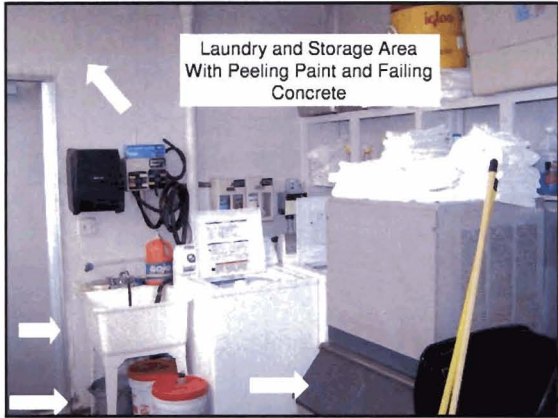
Men's Shower Soap Dish has Rusted Off the Wall



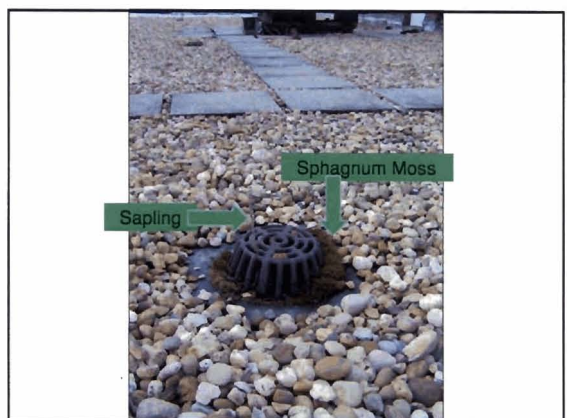
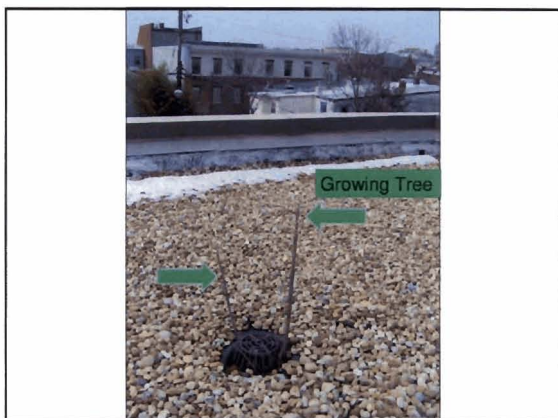
Storage in the Female EMS Bunkroom

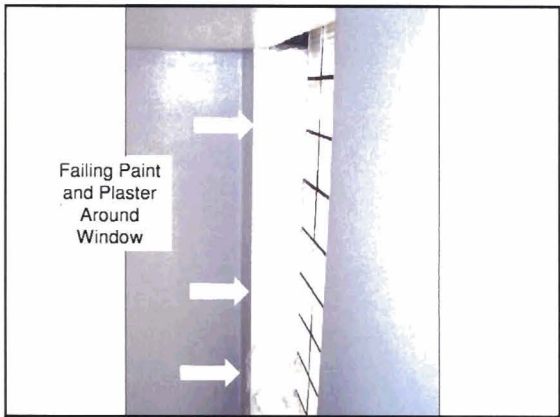
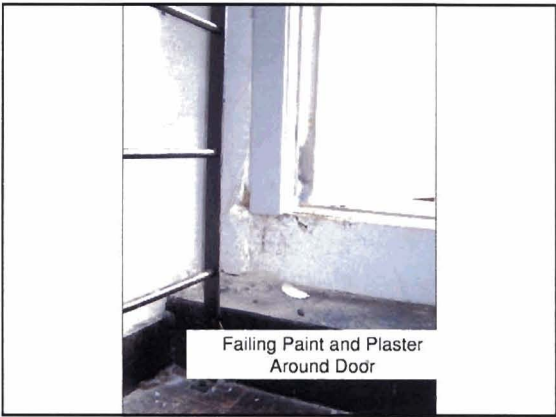




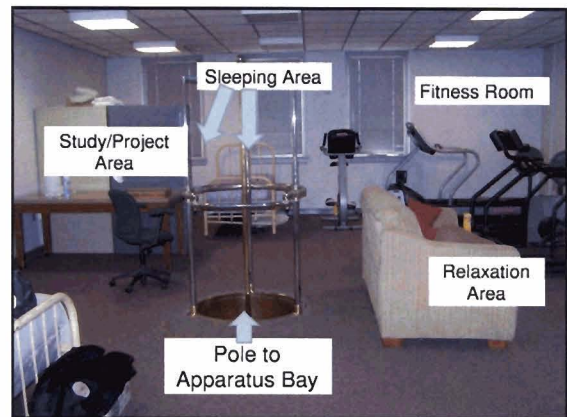
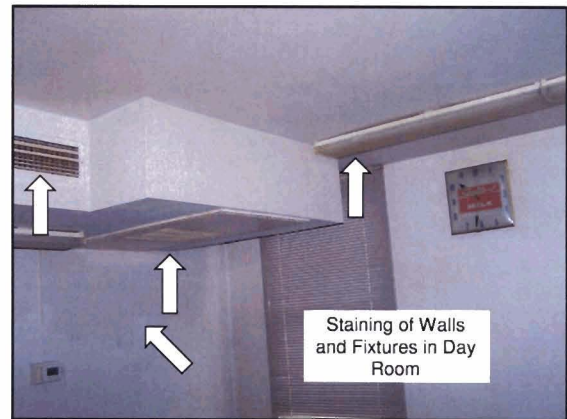
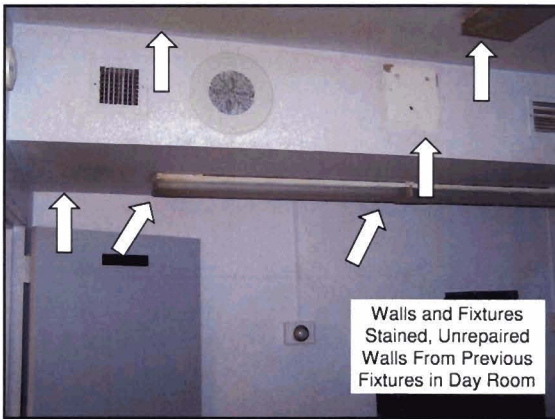
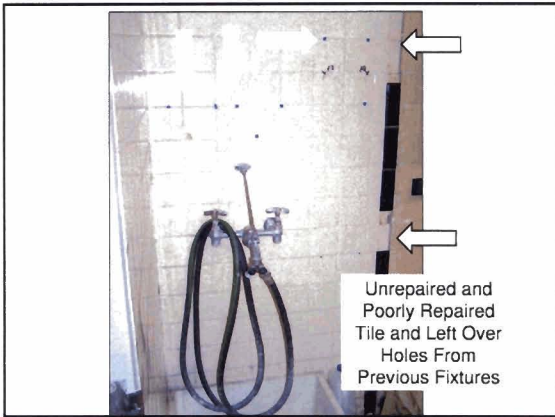


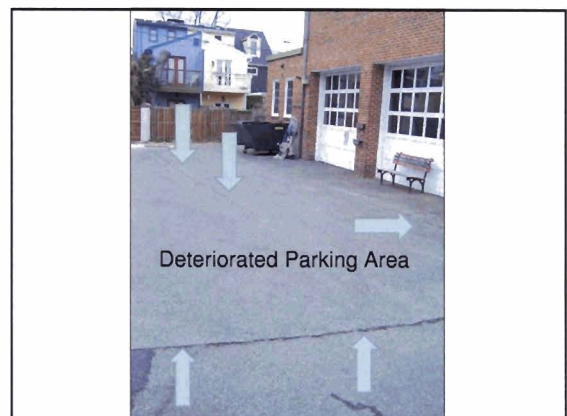
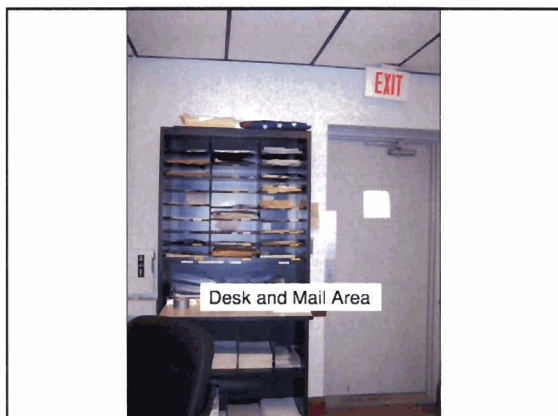
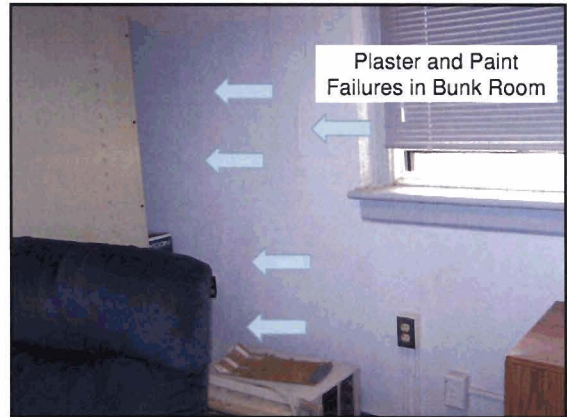
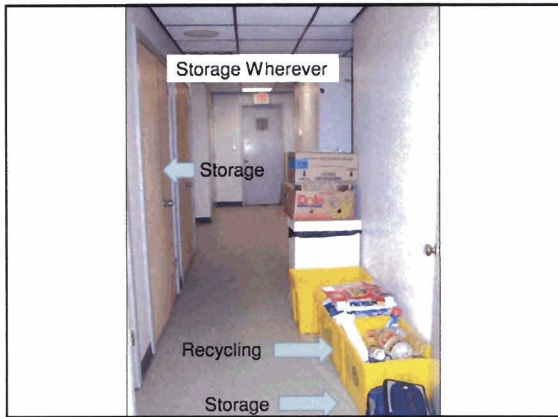




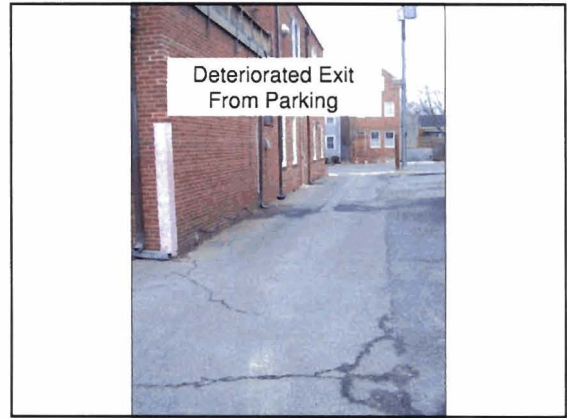


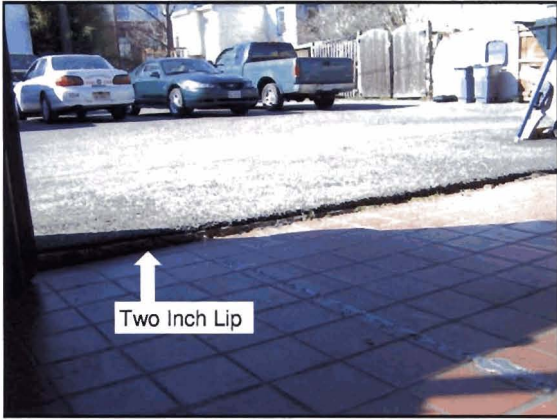














## Fire Station 206



Built in 1958 the facility is located on Seminary Road and has some parking at the rear of the facility. The fire station construction is brick masonry construction.

Low sloped EPDM roof construction with small built up roof areas are provided. Restoration of the brick in some locations is required due to expansion and contraction at the connection to the roof construction.

DRAFT REPORT



Poor restroom conditions



Poor exterior door conditions



Interior conditions



Masonry repair required

### Facility Outlook

The following charts depict the life cycle costs and FCI values over a 30 year outlook, including a six year building renovations improvement project cost matrix.



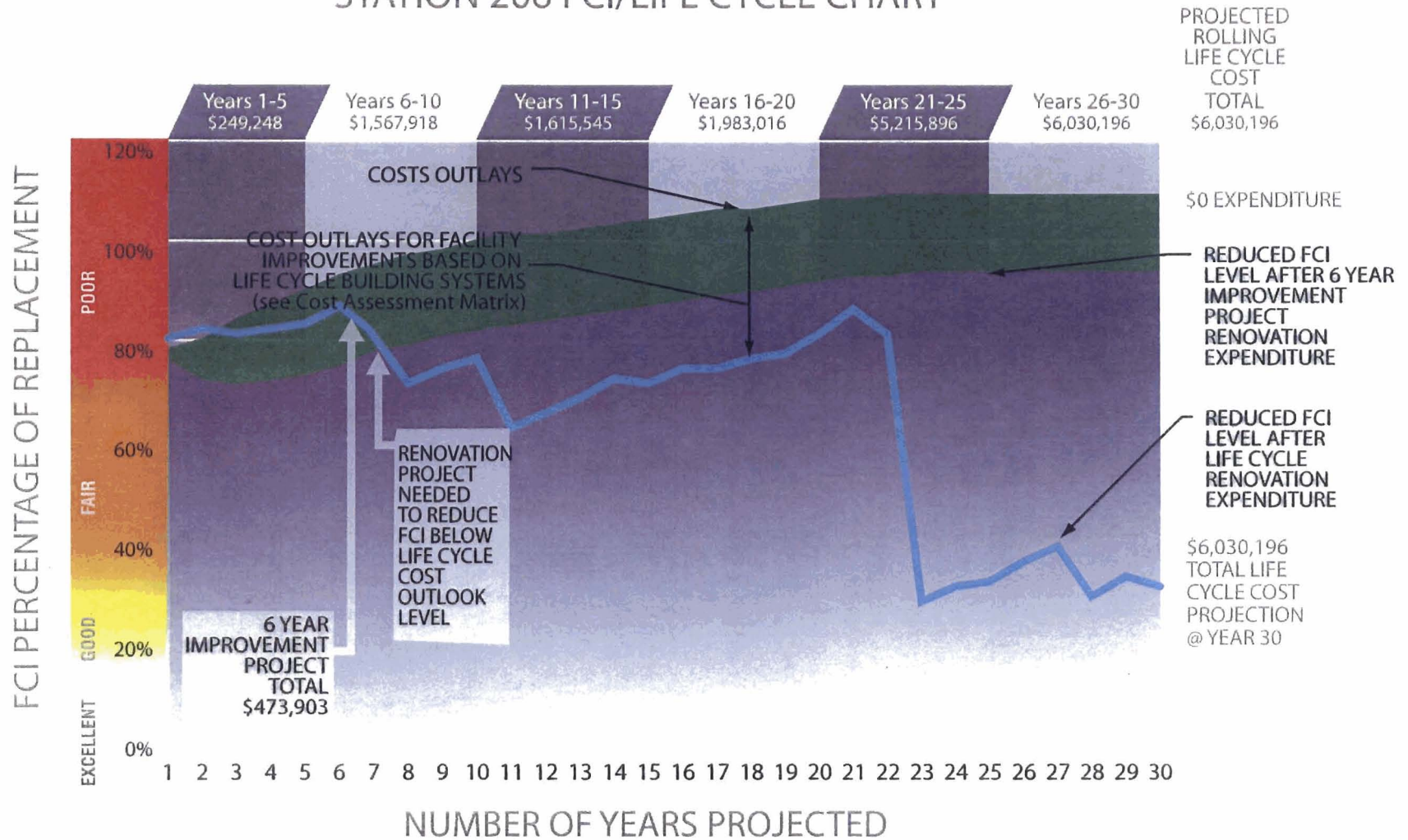
# Station 206

1 inch equals 35 feet





# STATION 206 FCI/LIFE CYCLE CHART



**NOTE:**

1. Facility Condition Index is the ratio of costs to renovate or repair vs. to replace with new as calculated below.

$$(FCI) = \frac{\text{Deferred Maintenance} + \text{Capital Renewal}}{\text{Current Replacement Value}}$$

2. Life cycle costs are based upon the value to replace the system that once the life of that system is over.

Example: 20 year life span of a roof system and the cost to replace it in 20 years.



# FIR STATION #206

## RENOVATION COST MATRIX

Alexandria Fire Department - Alexandria, Virginia

CAPITAL IMPROVEMENTS - SIX YEAR OUTLOOK														
BASE YEAR ESTIMATE							SIX YEAR OUTLOOK						Remarks	
Project Description	Priority 1 - 5	UM	Qty	Unit \$	Subtotal \$	Total \$ ESCALATED	2009	2010	2011	2012	2013	2014		Deferred
							\$	\$	\$	\$	\$	\$		\$
						\$ 473,903	\$ 91,732	\$ 155,937	\$ 108,590	\$ 57,246	\$ 48,670	\$ 11,730	\$ -	
Repair Exterior Envelope - Water Penetration	4					\$ 18,576	\$ 18,576							
Power Wash Exterior Surfaces		SF	8,330	\$ 0.75	\$ 6,248									
Patch and Point Brick		SF	8,330	\$ 0.98	\$ 8,163									
Paint and Seal		SF	8,330	\$ 0.50	\$ 4,165									
Masonry Repair	4					\$ 14,258	\$ 14,258							
Replace Masonry - Partial		SF	2,500	\$ 5.70	\$ 14,258									
Replace Overhead Doors	4					\$ 28,159		\$ 29,848						
Demo		EA	4	\$ 250.00	\$ 1,000									
New Overhead Doors		EA	4	\$ 6,789.63	\$ 27,159									
Restroom Renovation	3					\$ 52,519			\$ 57,246					
Demo		SF	8,330	\$ 0.75	\$ 6,248									
Renovate Restroom		SF	500	\$ 92.54	\$ 46,271									
Paint interior walls/ceilings	3					\$ 31,661					\$ 35,461			
Walls		SF	8,330	\$ 1.74	\$ 14,479									
Ceilings		SF	8,330	\$ 2.06	\$ 17,183									
Replace Water Distribution System	4					\$ 45,796		\$ 47,169						
Demo		SF	8,330	\$ 0.75	\$ 6,248									
New Water Distribution System		SF	8,330	\$ 4.75	\$ 39,548									
Replace sanitary sewer - Drain/Waste/Vent	4					\$ 57,605		\$ 59,333						
Demo		SF	8,330	\$ 0.75	\$ 6,248									
New Sanitary Sewer System		SF	8,330	\$ 6.17	\$ 51,358									
Replace Plumbing Fixtures	4					\$ 47,994		\$ 49,434						
Demo		SF	8,330	\$ 0.75	\$ 6,248									
New Plumbing Fixtures		SF	8,330	\$ 5.01	\$ 41,747									
Replace Boiler	4					\$ 38,812			\$ 41,140					
Demo		SF	8,330	\$ 0.75	\$ 6,248									
New Boiler		SF	8,330	\$ 3.91	\$ 32,564									
Replace Hydronic Piping	4					\$ 13,322			\$ 14,121					
Demo		SF	8,330	\$ 0.75	\$ 6,248									
New Piping		SF	8,330	\$ 0.85	\$ 7,074									
Replace Controls	4					\$ 22,151			\$ 23,480					
Demo		SF	8,330	\$ 0.75	\$ 6,248									
New Controls		SF	8,330	\$ 1.91	\$ 15,904									
Install exits lights as per code	5					\$ 1,846	\$ 1,846							
Demo		EA	6	\$ 75.00	\$ 450									
New Exit Lights		EA	6	\$ 232.64	\$ 1,396									
Install a new generator	5					\$ 57,052	\$ 57,052							
Demo		EA	1	\$ 3,401.63	\$ 3,402									
New Generator		EA	1	\$ 53,650.59	\$ 53,651									
Replace Concrete - Front ramp	1					\$ 10,200						\$ 11,730		
Demo		SF	1,200	\$ 2.50	\$ 3,000									
New Front ramp		SF	1,200	\$ 6.00	\$ 7,200									
Resurface Asphalt Parking Lot	1					\$ 11,794					\$ 13,209			
Resurface		SF	8,330	\$ 1.42	\$ 11,794									

**Notes:**

- Cost estimate shows the following:
  - Project Elements.
  - Base Year Costs.
  - Distribution of costs
  - Differences are due to rounding.
- Priority Rating 1 - 5
  - 5- Life safety & building security.
  - 4- Building exterior & primary systems.
  - 3- Buiding interior finishes and secondary systems.
  - 2- Supplemental systems
  - 1- Noncritical systems.

