DRAFT
Excludes Costs for Accessibility Compliance

Report of Facility Condition Assessment

Bay State Correctional Center
28 Clark Street
Norfolk, Massachusetts 02056

September 29, 2019

Prepared For:

DIVISION OF CAPITAL ASSET MANAGEMENT & MAINTENANCE

FAITHFUL+GOULD
Member of the SNC-Lavalin Group

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Member of the SNC-Lavalin Group

2318 Mill Road Suite 1410 Alexandria VA 22314
Tel. +1 703.684.6550

September 29, 2019

Division of Capital Asset Management & Maintenance
Office of Planning
One Ashburton Place, 15th Floor
Boston, Massachusetts 02108

Attention: Mr. Emmanuel Andrade, MPA, RA, NCARB
Project Manager, Statewide Accessibility Initiative

Reference: Report of Facility Condition Assessment
Bay State Correctional Center
28 Clark Street
Norfolk, Massachusetts 02056
Faithful+Gould Project No. 100066218

Dear Mr. Andrade:

Faithful+Gould, Inc. has completed a report of our Facility Condition Assessment of the Bay State Correctional Center located at 28 Clark Street in Norfolk, Massachusetts ("the Property"). This report provides a summary of the project information known to us at the time of the study, the scope of work performed, an evaluation of the visually apparent condition of eleven of the 18 buildings contained within the DCAMM CAMIS system along with all site elements, an evaluation of the climate resiliency and a forecast of anticipated capital expenditures required in the ten-year period of 2021 through 2030.

This report was completed in general accordance with the ASTM E2018-15 Standard Guide for Property Condition Assessments: Baseline Property Condition Assessment Process, Faithful+Gould's proposal for Facility Condition Assessment services dated May 8, 2019 and the State of Work for Facility Condition Assessments as issued by the Division of Capital Asset Management and Maintenance and dated April 17, 2019.

Please review the attached draft report and advise us of any comments or corrections. We will issue a final report within one week of receipt of comments.

Sincerely,

A. Kyle Thompson, CEM
Lead Facility Assessor

Benjamin J.M. Dutton, BSc (Hons), MCIOB, MRICS
Vice President / Senior Director

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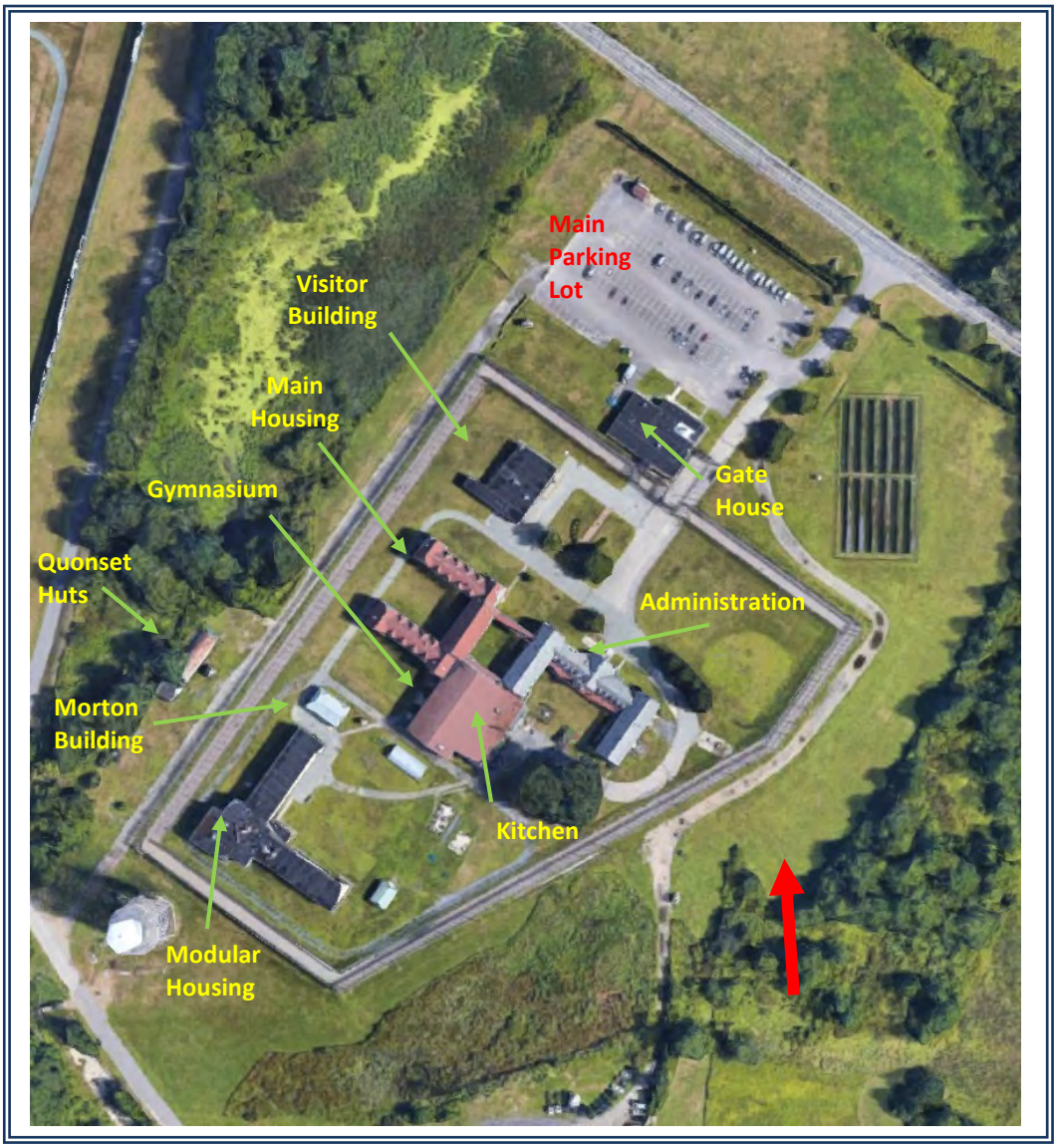
EXECUTIVE SUMMARY

The Bay State Correctional Center (hereafter referred to as "the Property") consists of a multi-building, medium-security correctional facility for male offenders that was officially opened in 1977 and is located at 28 Clark Street in Norfolk, Massachusetts. The Property contains nine primary structures and two smaller structures that are considered by this report and as indicated on Plan EX-1 in addition to seven support buildings that are excluded from this report. The site area based upon the assumed site lines is approximately 937,500 square feet (21.5 acres). The buildings considered by this report contain a combined reported gross floor area of approximately 217,027 square feet. Plan EX-1 provides an overview of the site. Table EX-1 provides a summary of buildings at the Property and those considered by this report.

Plan EX-1 – Site Overview



As noted, this report considers seven primary structures within the secure perimeter, the Gate House building at the North end of the site and two utility sheds located outside of the secure perimeter at the Southwest corner of the site. The various buildings are summarized below:

Constructed in 1988, Main Housing is a three-level structure with approximately 75,762 gross square feet of floor area that is physically connected to the Administration and Gymnasium buildings. The Kitchen and Gymnasium were part of the 1988 Main Housing expansion and renovation of the Administration Building and have respective floor areas of 7,080 and 5,040 square feet. The Kitchen is constructed over a partial basement area and the Gymnasium is consists of a single-story structure over a concrete slab-on-grade. The Kitchen and Gymnasium share a common interior wall, pitched roofing system and serve as a physical connection between Administration and Main Housing.

Constructed in 1992, Modular Housing is a two-level inmate dormitory with an estimated floor area of 74,496 square feet. Constructed in 1962, Administration consists of a two-story building over a full basement level with an estimated floor area of 32,754 square feet. Stand-alone support structures constructed in 1992 include the Gate House and Visitor Building with respective floor areas of 11,312 and 6,972 square feet. Table EX-1 summarizes these buildings and the three buildings not considered by this report.

Table EX-1 – Building Overview

Building Name	Building Code	Gross Square Footage	Year of Construction or Note
Included within Assessment			
Site Systems	None	937,500 (approx.)	1990
Main Housing	625DOCPB13	75,762	1988
Modular Housing	625DOCPB15	74,496	1992
Administration Building	625DOCPB83	32,754	1962
Gate House	625DOCPB02	11,312	1992
Kitchen	625DOCPB12	7,080	1988
Visitor Building	625DOCPB20	6,972	1992
Gymnasium	625DOCPB10	5,040	1988
Morton Building	625DOCPB16	1,426	1992
Quonset Hut	625DOCPB17	1,656	1977
Quonset Hut Extension	625DOCPB18	529	1977
	SubTotal	**217,107**	
Excluded from Assessment			
Greenhouse		1,034	

Maintenance Shed	625DOCPB14	36	
Horticulture Shed	625DOCPB11	85	
Guard Shack 1	625DOCPB04	65	
Guard Shack 2	625DOCPB05	65	
Guard Shack 3	625DOCPB07	65	
Supply	625DOCPB19	660	
Could Not be Location – Assumed to have Been Demolished			
Building 12 *	625DOCPB01	80	1977

*** Building 12 is listed within the CAMIS database. However, the building could not be located during our assessment, is assumed to have been demolished and is therefore not considered by this report.**

Occupancy Status

The Property closed in 2015 and with the exception of the Gate House building which still maintains limited functions, is in a largely mothballed state. This mothballed state has consisted of keeping the buildings weathertight and continuing to operate the systems to maintain a level of conditioning. For the purposes of this report, we have developed recommendations under the assumption that the buildings will be maintained at a commercially acceptable level and that all systems will be required to function and will wear / age at a level to that of a fully occupied building. This approach will largely negate the impact that any re-occupation date will have on the timing of the recommended capital expenditures. Furthermore, opinions of cost contained within this report assumes that work is being completed in an occupied secure facility.

Quonset Hut and Quonset Hut Extension

The Quonset Hut and Quonset Hut Extension consist of two storage buildings with a combined floor area of 2,185 square feet that are contained outside of the secure perimeter at the west of the Property. Each building is in a deteriorated condition, of an advanced age, are not currently utilized and require significant repair to allow their reinstatement. Consideration should be given as to whether it is financially viable to reinstate these two buildings.

Assessment

During the week of August 12, 2019, Mr. Benjamin Dutton and Mr. A. Kyle Thompson of Faithful+Gould visited the Property to observe and document the condition of the building and site components. During our assessment, Faithful+Gould interviewed the personnel listed in Table EX-1.1. Our assessment was completed in general accordance with the ASTM E2018-15 Standard Guide for Property Condition Assessments: Baseline Property Condition Assessment Process.

Table EX-1.1 – Building Personnel Interviewed

Name	Title	Time at Property
Sean Foley	Deputy Director of Resource Management	18 Years

Approach to Recommendations

The purpose of this report is to determine the condition and ten-year capital needs of the subject buildings and the site systems. This report does not include costs for upgrade or improvement of the facilities (beyond those required to address defective conditions) and does not aim to specifically address master planning type issues. Furthermore, the following site and building specific approaches should be noted:

- Our approach when determining security recommendations is to replace existing security elements based upon condition and obsolescence. At the time of these replacements, we have included costs for the replacement elements to meet the Commonwealth of Massachusetts Department of Correction 103 DOC 703 Design Criteria and Planning Guidelines. We have not recommended that elements be replaced purely to meet the 103 DOC 703 Design Criteria and Planning Guidelines

- We have assumed that the majority of interior finishes will be replaced on an as-needed basis as an operational cost or will be replaced as part of programmatic work. Based upon this approach, this report includes limited interior replacement work, although does include for refurbishment, where needed, of showers

- Refer to above subsection entitled “Occupancy Status” for discussion on our approach to re-occupation of the Property.

Opinions of Cost & Project Scheduling

We have considered Calendar 2021 as the first year of our study. When recommendations made are complex in nature and as such require design or other professional services in order to inform the scope / extent / IGE of the work, we have included those professional services as a line item two years preceding the recommended construction work. Exceptions to this are where we judge that the large project cannot be delayed for two years. In these instances, we have included for the professional services in the year proceeding the recommended work.

The opinions of cost included within this report and the attached appendix documents are intended to represent total project costs. Reflective of this, our standard costs include various multipliers. The multipliers consist of conversion of Trade Costs to Construction Costs at a 1.3 multiplier and conversion of Construction Cost to Total Project Cost at a 1.5 multiplier. Therefore, a Trade Cost bid of $1,000,000 would result in a Total Project Cost as included within this report of $1,950,000.

These multipliers assume the following:

- Include DCAMM management / administration costs

- Diminished contractor productivity of 30%. This assumes one hour into security, one hour exiting security and 30 minutes of delays in site circulation
- 10% MBE requirement
- Any work above $50,000 is subject to public bidding
- Security personnel will accompany / escort / monitor each work crew, with a per person rate of $450 per day ($56 per hour)
- Prevailing wage, non-union

Capital Requirements, Analysis and Risk Items

As detailed within Tables EX-2 through EX-10 and Charts EX-1 through EX-7, **capital expenditures over the study period total $11,163,509 in current dollars and $13,465,390 when inflated at 4.5% per year. Of this amount, approximately $5.9MM occurs in 2021 and 2022 and $3.5MM occurs in 2025. Outside of these peaks, capital needs range between $72,000 and $492,000 per year.**

With the exception of the Quonset Hut and Quonset Hut extension which require $200,000 of investment to correct their condition issues, and based upon their "poor" and "replace" respective FCI ratings are strong candidates for replacement, expenditures that form the $5.9MM in 2021 and 2022 focus on the following major items:

1. **Modernization of phone system ($450,000)**
2. **Installation or replacement of gutters and downspouts at the Administration and Main Housing building, and replacement of low-slope roofs at the Modular Housing and Gate House ($1.7MM)**
3. **Various exterior repair, repainting and sealant replacement projects ($500,000)**
4. **Replacement and upsizing of the emergency generator along with replacement of fuel storage tanks ($600,000)**
5. **Replacement of fire alarm systems ($1.36MM)**

The most critical recommendations are listed in Table EX-2 below. Table EX-3 lists expenditures by year.

Table EX-2 – List of Critical / High Risk Capital Expenditures

Project Title	Building Name	Cost (2019 Value)
Vehicle Trap Gate Replacements	Common Asset	$80,000
Structural Repairs to Modular Housing First Floor Office	Modular Housing	$22,500
Main Housing Gutter & Downspout Installation	Main Housing	$89,100
Gymnasium Gutter & Downspout Installation	Main Housing	$11,000
Kitchen Gutter & Downspout Installation	Main Housing	$11,000
Replace Low-Slope EPDM Roof System	Modular Housing	$1,125,000

Project Title	Building Name	Cost (2019 Value)
Replace Low-Slope EPDM Roof System	Gate House	$360,000
Replace Low-Slope EPDM Roof System	Visitor Building	$249,300
Replace Roof & Exterior Wall Panels	Quonset Hut	$65,280
Replace Roof System & Roof Structure	Quonset Hut Extension	$29,624
Replace Original Hastings Rooftop Furnace	Modular Housing	$37,500
Administration Above Ground Fuel Storage	Administration Building	$150,000
Administration Primary and Secondary Heating Water Pump Replacements	Administration Building	$22,500
Administration Air-Cooled Chiller Replacement	Administration Building	$100,000
Replace & Increase Capacity of Emergency Power Generator	Administration Building	$400,000
Administration Generator Fuel Storage (Above Ground)	Administration Building	$100,000
Main Generator Fuel Storage (Above Ground)	Gate House	$100,000
Site Sewage Ejector Pump Replacements	Common Asset	$50,000
Kitchen Grease Trap Replacement	Kitchen	$150,000
Fire Alarm System Replacement	Main Housing	$757,620
Fire Alarm System Replacement	Administration Building	$327,540
Fire Alarm System Replacement	Gate House	$113,120
Fire Alarm System Replacement	Gymnasium	$50,400
Fire Alarm System Replacement	Kitchen	$70,800
Demolish & Reconstruct Interior Finishes & Services	Quonset Hut	$46,920
	TOTAL	**$4,519,204**

The CAMIS input sheet and the Faithful+Gould 10-year capital expenditure forecast included within Appendix C and B of this report along with the narrative included within the following report sections provide details of these expenditures. Table EX-3 provides a summary of these expenditures. All numbers are shown in 2019-dollar values unless otherwise noted.

Table EX-3 - Capital Expenditures (Entire Property)

Year	Expenditures (2019 Value)	Expenditures (Future Value Inflated at 4.5% Per Year)
2021	$3,841,229	$4,194,718
2022	$2,120,000	$2,419,272
2023	$410,300	$489,290
2024	$72,000	$89,725
2025	$3,517,200	$4,580,309
2026	$579,980	$789,273
2027	$492,000	$699,674
2028	$0	$0
2029	$130,800	$203,128
2030	$0	$0
TOTAL	**$11,163,509**	**$13,465,390**

Chart EX-1 - Capital Expenditures (Entire Property)

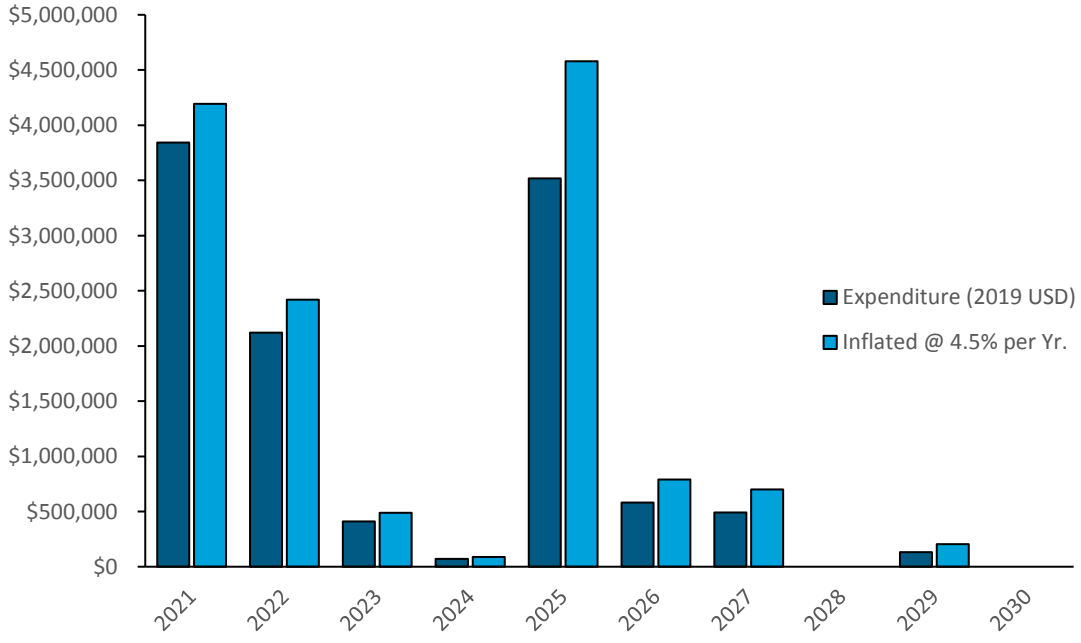


Table EX-4 - Capital Expenditures (By Property)

Building	10 Year Capital Need (2019 Value)
Main Housing	$3,008,483.97
Modular Housing	$3,057,319.77
Administration Building	$3,017,536.37
Gate House	$837,851.82
Kitchen	$409,059.48
Visitor Building	$417,734.34
Gymnasium	$210,906.75
Quonset Hut	$140,392.22
Morton Building	$0.00
Quonset Hut Extension	$64,224.29
TOTAL	**$11,163,509**

Table EX-5 - Capital Expenditures (By System)

System	10 Year Capital Cost (2019 Values)
Site Systems	$203,960
Security Systems	$244,500
Structural Systems	$22,500
Roofing Systems	$2,508,304
Exterior Elements	$566,525
Mechanical	$1,828,040
Electrical	$3,184,160
Plumbing	$405,800
Fire & Life Safety	$1,359,480
Conveyance Systems	$350,000
Interiors	$490,240
Accessibility	**(Pending)**

System	10 Year Capital Cost (2019 Values)
TOTAL	**$11,163,509**

Chart EX-2- Capital Expenditures (By Property)

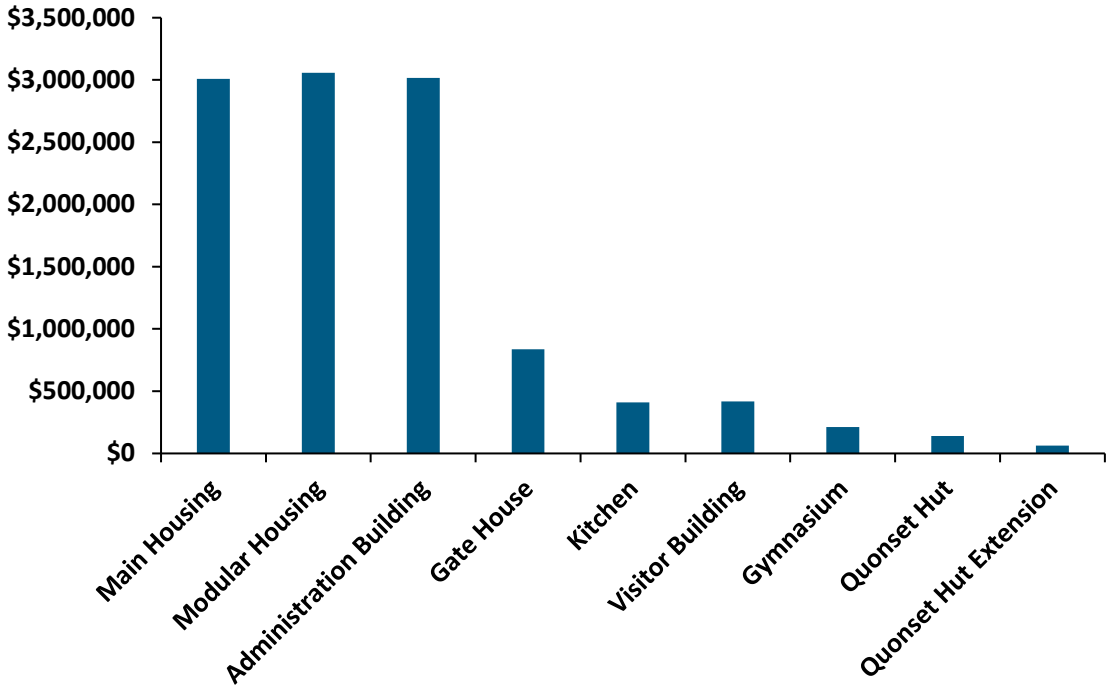


Chart EX-3- Capital Expenditures (By System) – 2019 Cost Values

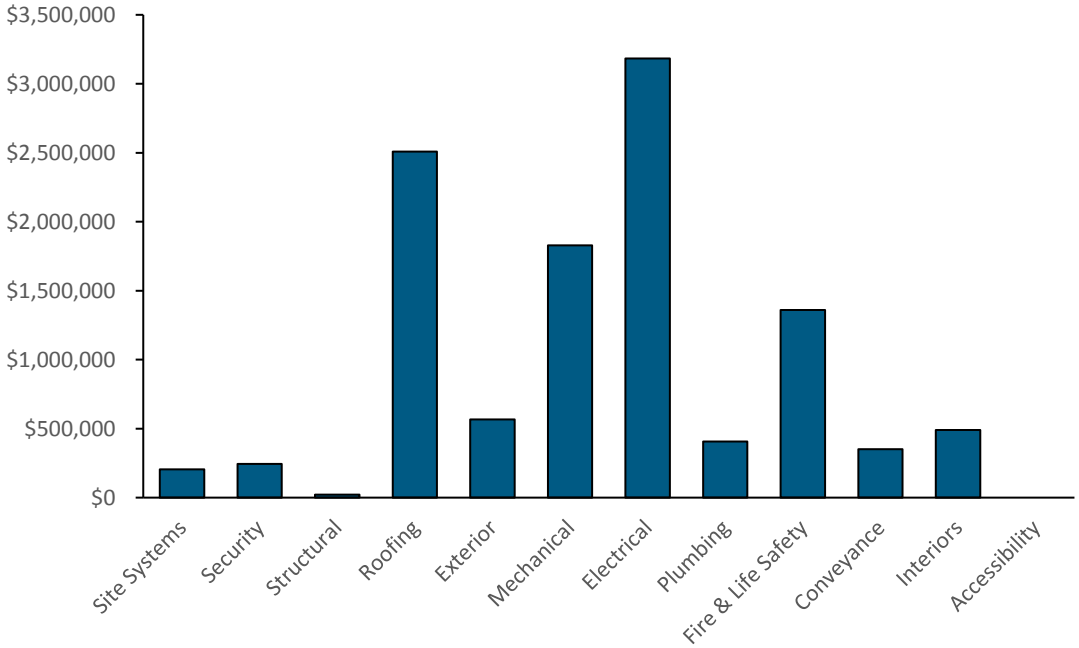


Table EX-6 - Capital Expenditures (By Priority)

Priority	10 Year Capital Cost (2019 Cost Values)
1 - Currently Critical and/or Code Violations	$1,491,980
2 - Potentially Critical	$3,027,224
3 - Necessary, Not Yet Critical	$6,644,305
TOTAL	**$11,163,509**

Table EX-7 - Capital Expenditures (By Category)

Classification	10 Year Capital Cost (2019 Cost Values)
Deferred Maintenance	$4,469,749
Capital Renewal	$3,709,600
Capital Improvement	$2,984,160
TOTAL	**$11,163,509**

Chart EX-4- Capital Expenditures (By Priority) - – 2019 Cost Values

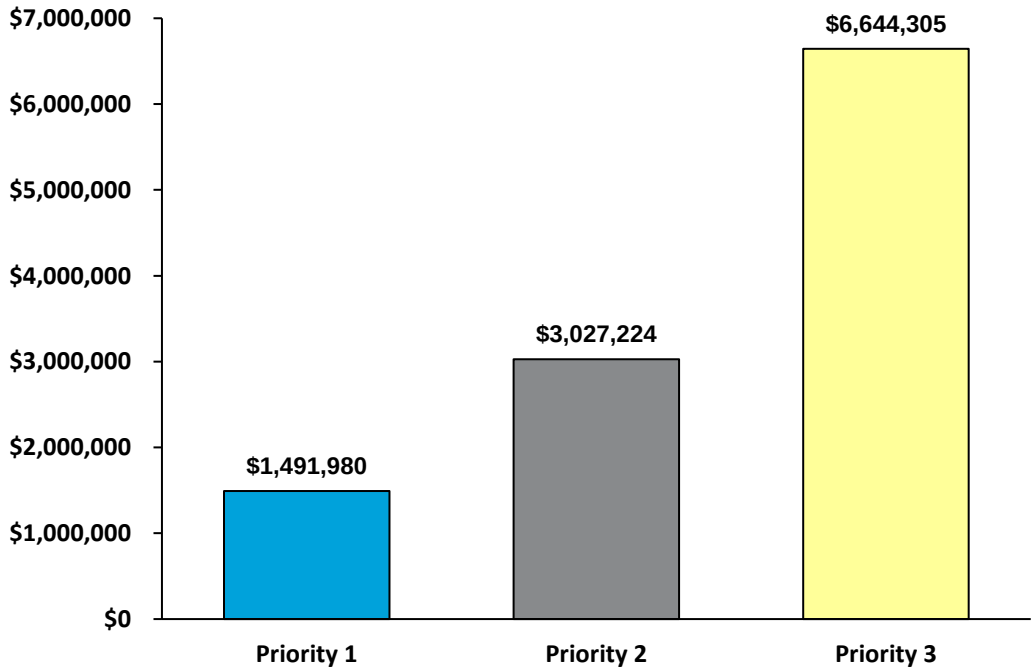


Chart EX-5- Capital Expenditures (By Category) - 2019 Cost Values

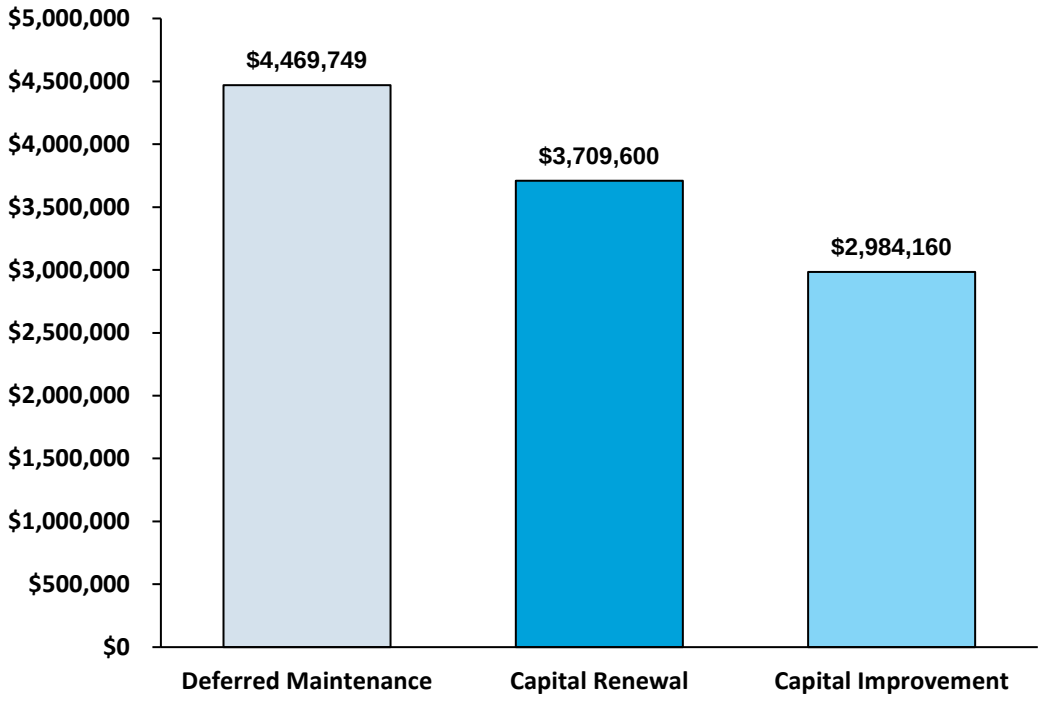
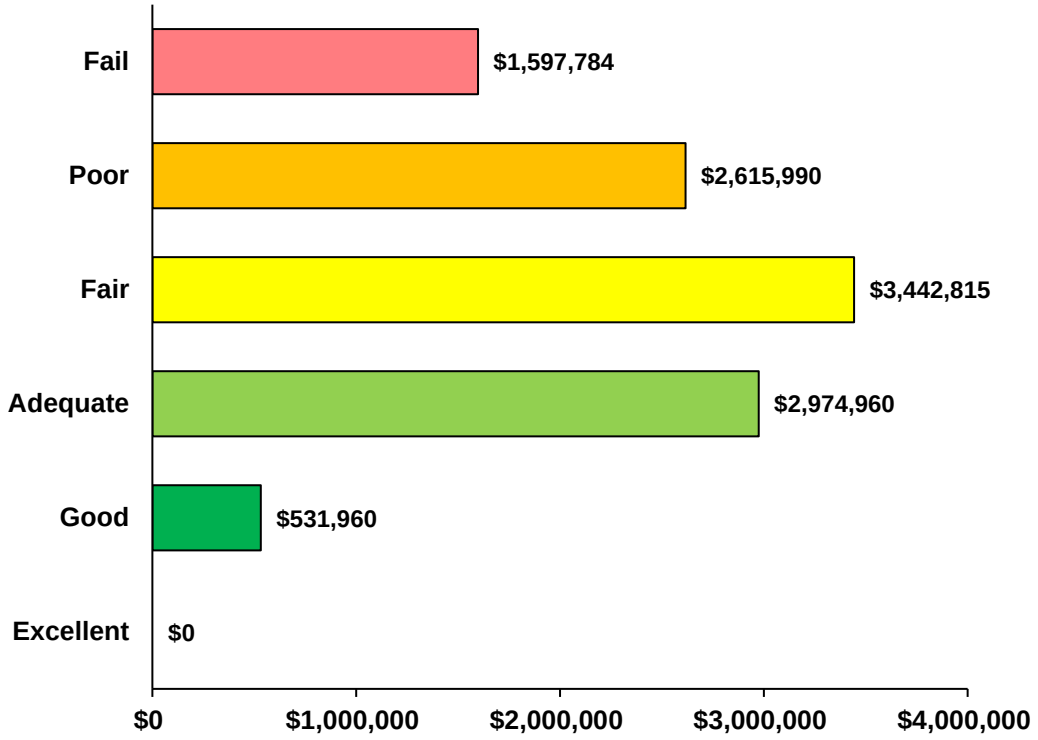


Table EX-8 - Capital Expenditures (By Condition Rating)

Classification	Expenditures (2019 Cost Values)
Excellent	$0
Good	$531,960
Adequate	$2,974,960
Fair	$3,442,815
Poor	$2,615,990
Fail	$1,597,784
TOTAL	**$11,163,509**

Chart EX-6- Capital Expenditures (By Condition Rating) - 2019 Cost Values



Facility Condition Index (FCI)

The Facility Condition Index (FCI or FCNI) provides a relative measure for comparing one building (or group of buildings) to another. For each building, this index is a calculation, derived by dividing the total accumulated capital needs for the ten-year window covered by this report by the total Component Replacement Value (CRV) of the building. When applying the index as an evaluation tool, the lower the number, the better the facility's condition. The CRV represents the cost to replace an existing building with one of similar use type and size on the same site. Table EX-9 below describes the ranges of FCI with respect to condition.

Table EX-9– FCI Range and Descriptions

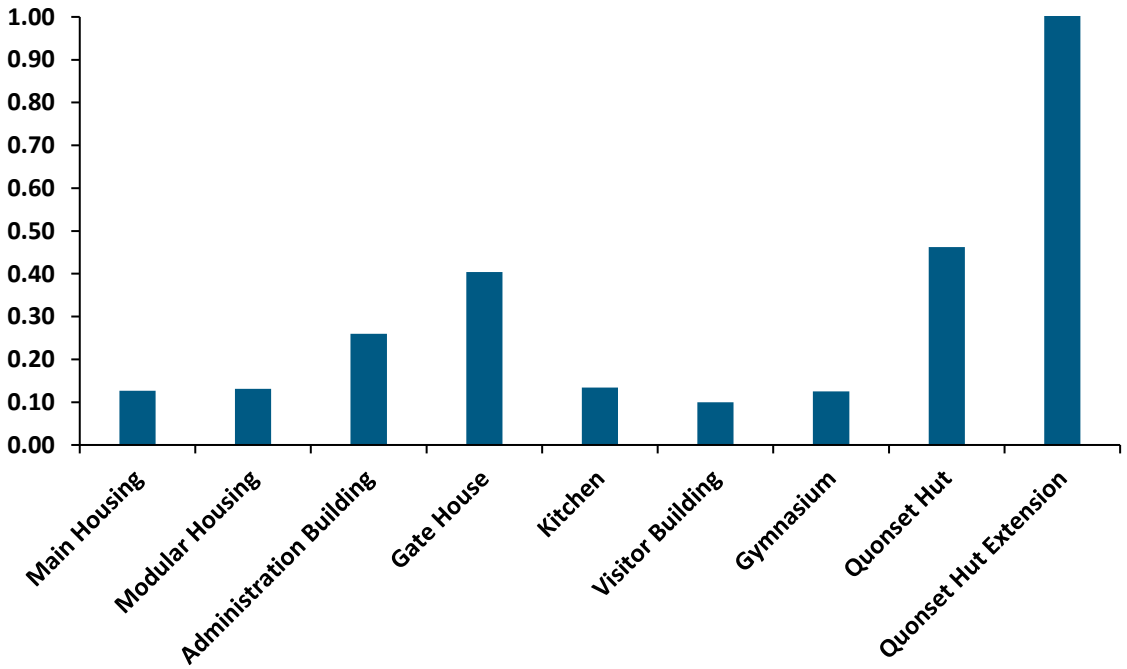
FCI Range	Condition Description
0.00 – 0.02	Excellent condition, typically new construction
0.02 – 0.05	Good Condition, renovations occur on schedule
0.05 – 0.1	Fair Condition, in need of normal renovation
0.1 – 0.2	Below average condition, major renovation required
0.2 – 0.5	Poor condition, total renovation needed
0.5 – Above	Complete facility replacement indicated

The accumulated 10-year capital needs and the resulting FCI for the buildings are shown in Table EX-10.

Table EX-10 – Facility Condition Index

Building	Total Capital Need	CRV ($)	FCI Score	FCI Rating
Main Housing	$3,008,483.97	$23,712,066.62	0.13	Below Average
Modular Housing	$3,057,319.77	$23,315,830.49	0.13	Below Average
Administration Building	$3,017,536.37	$11,630,242.14	0.26	Poor
Gate House	$837,851.82	$2,075,314.39	0.40	Poor
Kitchen	$409,059.48	$3,055,144.49	0.13	Below Average
Visitor Building	$417,734.34	$4,192,015.78	0.10	Fair
Gymnasium	$210,906.75	$1,683,971.46	0.13	Below Average
Quonset Hut	$140,392.22	$303,812.88	0.46	Poor
Morton Building	$0.00	$857,402.47	-	N/A
Quonset Hut Extension	$64,224.29	$55,012.18	1.17	Renew

Chart EX-7- FCI by Building



CAMIS Data

We reviewed the CAMIS deferred maintenance information provided for FY 2018, 2019 and 2020. The deferred maintenance projects and our comments are included within Appendix F of this report.

Terminology & Limitations

This report and the attached expenditure forecast generally identify the Expected Useful Life (EUL) and the Remaining Useful Life (RUL) of observed systems and components. EUL is projected based upon industry-standard guidelines and our experience with similar systems. RUL is projected based upon our assessment of age, condition and maintenance/repair history.

The timing of the projected expenditures and their associated costs represent our opinion considering the aforementioned factors. Alternative methods of managing the existing equipment or systems may be feasible over the study period. However, these alternative methods will depend upon actual management practices, financing requirements and the ability of the engineering staff to perform some of the repairs in-house. Alternative scenarios that have not been presented to Faithful+Gould have not been considered within this report.

This report has been presented based upon our on-site observations, information provided to us, discussion with building management and maintenance staff, our review of available documentation (see scope of services and document review section) and our experience with similar systems. If any information becomes available that is not consistent with the observations or conclusions expressed within this report, we request that this information be immediately forwarded to us.

The evaluation of existing structures requires that certain assumptions be made regarding existing conditions. This evaluation was based upon our visual non-destructive evaluation of accessible conditions of the Property. Furthermore, this evaluation was limited in time on-site, fee and scope, and was not based upon a comprehensive engineering evaluation. As such, our report is not intended to represent a complete review of all systems or system components or a check or validation of design professionals' computations. Therefore, Faithful+Gould's evaluation and this report do not represent, warranty or guarantee any system or system component or the future performance of any site improvement.

SCOPE OF SERVICES

Report Objectives

The objective of this report is to produce an advanced facility condition assessment and capital planning process, utilizing all current data from a complete condition assessment of the Property, to result in a strong and well-developed plan to support strategic capital investment. In short; the objective is to assess the condition of all included buildings, site systems and site infrastructure to develop a prioritized forecast of anticipated capital expenditures over the ten-year period between 2021 and 2030. This will form the long-term investment plan for the buildings by developing an array of projects, architectural, and mechanical/electrical/plumbing systems that can be inputted into a planning model from which sound management decisions can be made to best utilize funding resources. Specific objectives of this study are listed below.

- Identification and documentation of the present condition
- Recommendation of corrections for all deficiencies
- Provision of cost estimates for such corrections
- Forecasting of future facility renewal costs based on documented methodology, of the facilities, and equipment in the building

To meet these objectives, we completed a visual evaluation of installed systems at the building (i.e. site systems, security, structural, roofing, exterior, mechanical, electrical, plumbing, fire protection and life safety, and interiors), and produced this report of Facility Condition Assessment. This report represents a comprehensive evaluation of the building systems and major components including criteria for assessment, expected useful life, remaining useful life, year to be replaced, project priority and plan type, existing condition, estimated replacement date, and estimated replacement cost standards.

Key Issues

Faithful+Gould was requested to complete a Facility Condition Assessment of the site, site infrastructure and site improvements. The key issues to be addressed by the Facility Condition Assessment include the following:

1. Identification of the visually apparent condition, installation date, remaining useful life and deficiencies at the Property to include all systems and elements detailed in the following “Strategy Employed to Meet the Key Issues” section.
2. Recommendations and opinions of cost for capital projects over a ten-year period from 2021 to 2030.
3. The replacement value of the component or system.
4. Proposed projects and timelines for when the system/component should be replaced.
5. Proposed execution strategies for the identified projects that minimizes cost and disruption.

Strategy Employed to Meet Key Issues

The strategy employed to meet the key issues detailed above (i.e. our scope of services) consisted of performing a visual assessment of the interior, exterior, and site components of the subject building. The scope of services was governed by Faithful+Gould’s proposal for Facility Condition Assessment services.

The primary purpose of the Facility Condition Assessment was to identify visually apparent deficiencies in the building and site. The evaluation included site visits to observe the building and site systems, interviewing building management and maintenance personnel, and reviewing available maintenance systems, design and construction documents and plans. This Facility Condition Assessment has been conducted in general accordance with industry standards and the American Society for Testing and Materials (ASTM) Standard E 2018-15 Standard Guide for Property Condition Assessment: Baseline Property Condition Assessment Process.

We performed a visual non-destructive assessment of the interior, exterior, and site components of each building, including the following major components and systems:

- **Site Systems.** We visually observed the site systems for the removal of stormwater and evidence of poor drainage and/or erosion potential. We also reviewed (where applicable) the condition of pavements, site concrete, retaining walls, fencing, landscaping, site grading, and stormwater drainage features.

- **Structural System.** We observed the structures for visible signs of distress and have reported our findings. We also reviewed available structural drawings for information regarding the design load criteria of the existing structures and the building codes to which the structures were designed. We did not complete a seismic probable-maximum-loss (PML) evaluation of the Property.

- **Roof System.** We visually evaluated the condition of accessible roof systems, accessories, and details. In addition, where applicable we discussed existing roof warranties.

- **Building Exterior Elements.** We visually observed the exterior wall system, window, and door systems for visible evidence of deficiencies, continuity of seals, and other types of distress and have reported our findings. We reviewed available flashing and connection details for drainage design and observed the condition and placement of expansion joints.

- **Mechanical/HVAC, Electrical, Plumbing (MEP) Systems**. We observed the age and condition of the MEP and related building systems and have commented on their condition and visible deficiencies.

- **Fire Protection and Life Safety**. We observed the age and condition of the fire protection and life safety elements and have commented on their condition and any visible deficiencies. The elements surveyed included structural fire protection, means of egress, fire suppression systems, and fire detection and alarm systems.

- **Conveyance Systems**. We observed the age and condition of the conveyance and related building systems and have commented on their condition and visible deficiencies.

- **Interior Finishes.** We visually observed the interior areas of the Property and have reported their general condition.

- **Accessibility.** We understand that DCAMM engaged an Accessibility Consultant, Steven Winter Associates, to conduct a separate accessibility audit of this facility. We have not included for any recommendations or costs within our report.

- **Climate Resiliency.** During our assessment, the DCAMM requested that Faithful+Gould determine any potential weather-related environmental impacts that may jeopardize the operations and future of the Property. To do this, we completed DCAMM's Climate Resiliency Checklist contained within Appendix G.

- **Security.** We evaluated the condition of the various security components, systems and elements. Our approach when determining security recommendations is to replace existing security elements based upon condition and obsolescence. At the time of these replacements, we have included costs for the replacement elements to meet the Commonwealth of Massachusetts Department of Correction 103 DOC 703 Design Criteria and Planning Guidelines. We have not recommended that elements be replaced purely to meet the 103 DOC 703 Design Criteria and Planning Guidelines.

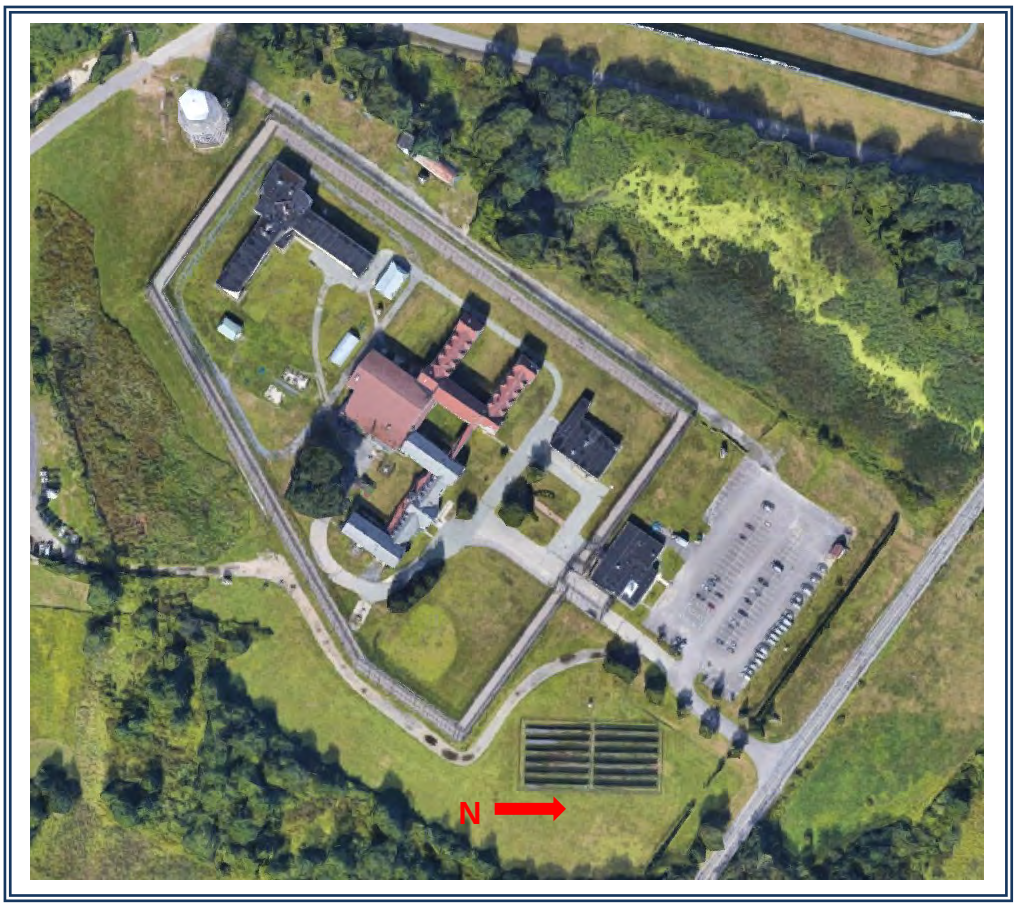
The scope of services under which the Facility Condition Assessment was completed, was visual in nature, and not intended to be destructive to the Property, to gain access to hidden conditions. We did not perform any destructive testing or uncover or expose any system members. We have documented the type and extent of visually apparent defects in the systems in order to perform the condition assessment.

The scope of services under which the Facility Condition Assessment was completed, includes only those items specifically indicated. The evaluation does not include any environmental services such as (without limitation) sampling, testing, or evaluation of asbestos, lead-based paint, lead-in-water, indoor air quality, PCB's, radon, mold, or any other potentially hazardous materials, air-borne toxins, or issues not outlined in the previous scope of services. In addition, the assessment does not include identification of underground soils, identification or quantification of underground contaminants.

1.0 SITE FEATURES

Site features at the Property are limited to the main parking area, the outer perimeter roadway, yard areas inclusive of the softball field, concrete sidewalks, asphalt track around the Modular Housing Building, concrete and asphalt paved vehicular driveways, landscaped areas and stormwater management (reference Photographs S-01 through to S-04 in Appendix A). Security related fencing is discussed within the Security Checklist included as an appendix to this report. Plan 1-1 provides a plan overview of the site areas.

Plan 1-1 – Aerial View of Site Systems



1.1 Description

1.1.1 Site Features

Asphalt Pavements

The Property contains one parking area between the Gate House and Clark Street / Winter Street that runs East-West along the Northern boundary of the site. The main vehicular entrance to the Property leads to

the vehicle trap directly East of the Gate House and a primary entrance/exit to the parking lot North of the Gate House. The rectangular shaped, asphalt paved parking lot measures 290' x 195', has a surface area of 6,283 square yards and contains parking for 133 vehicles. A roadway accessed through the parking lot and the main service drive is located at the East, West and South outer perimeters of the security fence. The unnamed road is approximately 15' wide and asphalt paved.

Cast-In-Place (CIP) Concrete & Sports Courts

Cast-in-place concrete pavements include a section of the main entrance driveway from the parking lot entrance to the roadway surrounding the Administration and Main Housing Buildings. There is an additional section of concrete vehicular paving at the Southeast corner of Administration. Remaining vehicular pavements are generally asphalt paved. There are concrete landings and pedestrian sidewalks adjacent to the buildings and asphalt paved pedestrian sidewalks between buildings in addition to an asphalt paved, walking, jogging track around Modular Housing. The primary exterior recreation area is located South of the Gymnasium and East of Modular Housing and includes two concrete pads for weight lifting equipment. The softball diamond East of Administration features natural turf.

Lighting

Area lighting for the site is typically provided by building-mounted and pole mounted lighting.

Stormwater Management

Surface stormwater generally flows West to East to the adjacent Stop River watershed.

Other Site Features

No other major site features are contained at the site.

1.2 Condition

1.2.1 Site Features

Asphalt Pavements

The asphalt paved parking lot was in good condition having been resurfaced within the last ten years. We noted no major areas of concern. However, as a proactive measure that will extend the life of the paving, we recommend budgeting for near-term and periodic cycles of crack filling, seal coating and re-striping.

Asphalt pedestrian and vehicular pavements within the secure perimeter fence and surrounding the site were in fair to good condition with areas of linear cracking. We have recommended budgeting for near-term crack filling and seal coating, followed by resurfacing within the next five to seven years.

Cast-In-Place (CIP) Concrete & Sports Courts

The cast-in-place concrete vehicular paving and pedestrian sidewalks were in fair condition with isolated areas of displacement and cracking particularly at exterior stairs and ramps where water infiltration at railing assemblies had resulted in freeze-thaw cracking. We recommend as-needed repair and replacement of deteriorated sections of concrete vehicular paving and exterior stairs and ramps if the facility is to be recommissioned.

The softball diamond and associated field were in fair condition and should not require capital level expenditures within the study period.

Concrete flatwork serving the weightlifting equipment was in fair condition and serviceable for the duration of the study period.

The asphalt paved walking / jogging track surrounding Modular Housing and the recreation yard was in poor condition with widespread alligator cracking, edge deterioration and weed growth. If the facility is to be reoccupied, we recommend topcoating the asphalt pavements with a new tack coat and wear course.

Lighting

Area lighting appeared adequate and should not require capital level repair or replacement.

Stormwater Management

Stormwater management appeared to be in good condition and should not require capital level repair or replacement.

1.3 Projected Capital Expenditures

Capital expenditures required over the ten-year study period are provided below:

Project Title	Year	Priority	Deficiency Category	Total Project Cost
Crack Fill, Seal Coat & Re-Stripe Parking Lot (Cycle 1)	2021	3 - Necessary, Not Yet Critical	Capital Renewal	$19,980
Crack Fill, Seal Coat & Re-Stripe Parking Lot (Cycle 2)	2026	3 - Necessary, Not Yet Critical	Capital Renewal	$19,980
Crack Fill & Seal Coat Interior Roadways	2021	3 - Necessary, Not Yet Critical	Capital Renewal	$19,500
Resurface Interior Roadways	2026	3 - Necessary, Not Yet Critical	Capital Renewal	$97,500
Concrete Repairs at Building Entrances and Driveways	2021	3 - Necessary, Not Yet Critical	Deferred Maintenance	$25,000
Resurface Asphalt Track Surrounding Modular Housing	2021	3 - Necessary, Not Yet Critical	Deferred Maintenance	$22,000

2.0 SECURITY SYSTEMS

The primary physical security system consists of two rows of steel framed fencing spaced 20-feet apart that form a 'no man's' land that surrounds the Property (reference Photograph SE-1 in Appendix A).

From within the facility, closed-circuit video surveillance systems, conventionally keyed, corrections grade dead bolt locking mechanisms and electronic door alarms serve as active security measures. The two points of entry and egress are at the North Gatehouse building through a "Person Trap" and a "Vehicle Trap". The traps provide the secure confined space needed to perform all necessary security protocols required to prevent unauthorized movement of persons or contraband in or out of the facility.

2.1 Perimeter Fencing / Detection Systems

Description

The inner fence consists of 2 7/8" outside diameter, galvanized posts set 10' apart on center. The outer fence consists of 4" outside diameter, galvanized posts set 8' apart on center. Posts are set in 24" diameter, 5' 6" deep concrete footings 1' 6" below grade. The inner fence is 12' tall and the outer fence is 16' tall. Both fence assemblies are faced with 2", 9-gauge, vinyl coated chain link fencing from the top of the posts to 24" below grade and topped with galvanized 18", V-arm barbed wire brackets. The inner fence is topped with two continuous rows of 30" and 24" double-coil concertina barbed tape. The outer fence is topped with 4' of continuous 5/8", 11-gauge, non-climbable vinyl coated metal fabric and three continuous rows of 30" and 24" double-coil concertina barbed tape. The 'no man's land' between the perimeter security fences is monitored by a microwave perimeter detection system.

Condition

While the outer fence was generally compliant with current height requirements, fencing fabric gauge, post diameter, quantity of concertina wire rows, the inner fence height and inner/outer fence spacing did not meet current standards for medium security new construction. The standard states that for existing facilities, dormitory style housing, a single sixteen (16) foot fence line which includes razor ribbon and site-specific electronic detection system that integrates the internal perimeter detection and control system is required. As the perimeter fence system is currently in adequate condition, our interpretation of the standard is that the perimeter fence system is currently grandfathered until the condition of the fence warrants its replacement.

While we were not able to observe the operation of the vehicle trap gates at the time of our assessment, they were reported to be unreliable and maintenance intensive. Our review of urgent capital request documentation indicated that a budget level estimate of $80,000 for repairs and replacements is currently on hold pending a change in the occupancy status.

Projected Capital Expenditures

Capital expenditures required over the ten-year study period are provided below:

Project Title	Year	Priority	Deficiency Category	Total Project Cost
Common Asset				
Vehicle Trap Gate Replacements	2021	2 - Potentially Critical	Deferred Maintenance	$80,000

2.2 Communications / Security Systems

Description

Communications systems include public address and telephone systems that are generally analog systems using twisted pair cabling. Security Systems include approximately 50 Bosch, analog CCTV cameras. Low-voltage door alarms controls serving primary circulation routes and exterior doors consists of a Dadco / Securitron system that appears to be original to the late 1980's but has been recently upgraded.

Condition

Telephone communications systems were found to be in fair condition where they could be observed. If the facility is to be recommissioned, phone system upgrades to the latest DOC, IP Standard are recommended.

The CCTV camera system was found to be in fair condition, but should be upgraded to the latest IP standard.

We noted recent repairs and relay replacement efforts to the Dadco / Securitron the door alarm system located in the Administration control room. Considering the recent modernization effort, we believe the door alarm / control system should be serviceable for the duration of the study period.

Projected Capital Expenditures

Capital expenditures required over the ten-year study period are provided below:

Project Title	Year	Priority	Deficiency Category	Total Project Cost
Common Asset				
Upgrade Analog CCTV Cameras to Latest IP Standard	2021	3 - Necessary, Not Yet Critical	Capital Renewal	$164,500
Phone System Modernization	2022	3 - Necessary, Not Yet Critical	Capital Improvement	$450,000

BUILDING ELEMENTS

3.0 STRUCTURAL SYSTEMS

Structural systems at the Property consist of wood or concrete framed structures of varying age and type. Limited structural drawings for the buildings were available for review (reference Photographs S-1 through S-3 in Appendix A).

3.1 Description

Table 3-1 below provides a description summary of the structural systems at each building.

Table 3-1 Structural Systems by Building

Building	Description Structural Systems
Main Housing	The building structure consists of reinforced concrete masonry and precast concrete elevated slabs. The interior and perimeter masonry walls are supported on continuous footings.
Modular Housing	The building structure consists of dimensioned lumber framing founded on continuous, reinforced concrete spread footings and foundation walls.
Administration	The building structure consists of conventionally reinforced concrete framing, formed, reinforced concrete elevated slabs and concrete masonry shear walls. Interior columns are founded on isolated concrete spread footings and exterior walls are founded on continuous concrete spread footings.
Gate House	The Gate House features a combination of dimensioned lumber modular framing throughout the lobby areas and site built, reinforced concrete masonry framing with open-web metal roof trusses throughout the electrical, sallyport, armory and control areas. The modular areas are founded on reinforced concrete piers and structural steel beams spanning the piers. Perimeter walls are founded on continuous spread footings.
Kitchen	The building structure consists of conventionally reinforced concrete framing, formed, reinforced concrete elevated slabs and concrete masonry shear walls. Interior columns are founded on isolated concrete spread footings and exterior walls are founded on continuous concrete spread footings.
Visitor Building	The building structure consists of dimensioned lumber framing founded on continuous, reinforced concrete spread footings and foundation walls.
Gymnasium	The building structure consists of reinforced concrete masonry, slab-on-grade construction with what is presumed to be structural steel roof truss/attic framing.
Morton Building	Steel-framed Butler type building on concrete foundation.
Quonset Hut	The building consists of a curved metal roof and wall joists assembly supported on concrete footings.
Quonset Hut Extension	Wood-framed roof and walls on a concrete foundation.

3.2 Condition

Faithful+Gould observed the exposed structural systems at each building. With two exceptions, the structural systems appeared to be in good condition. The two areas of concern are outlined below:

The first area of concern is at the office area on the first floor of the East elevation of Modular Housing. At this location a persistent roof leak has resulted in the failure of the floor structure and significant damage to the exterior and interior wall systems. We recommend demolition of the floor structure back to sound structural elements and restoration of all structural elements and finish systems after the recommended roof replacement project.

The second area of concern is at the Quonset Hut extension. Prolonged water ingress through the roof system has resulted in failure of the roof deck and supporting joists. Within the Roofing section of this report we have included for replacement of the roof over the building. This project should include for complete replacement of the roof structure.

3.3 Projected Capital Expenditures

Capital expenditures required over the ten-year study period are provided below:

Project Title	Year	Priority	Deficiency Category	Total Project Cost
Main Housing				
No capital expenditures are currently anticipated				
Modular Housing				
First Floor Office Structural Repairs	2021	1 - Currently Critical and/or Code Violations	Deferred Maintenance	$22,500
Administration				
No capital expenditures are currently anticipated				
Gymnasium				
No capital expenditures are currently anticipated				
Kitchen				
No capital expenditures are currently anticipated				
Gate House				
No capital expenditures are currently anticipated				
Visitor Building				
No capital expenditures are currently anticipated				
Morton Building				
No capital expenditures are currently anticipated				
Quonset Hut				
No capital expenditures are currently anticipated				
Quonset Hut Extension				
Refer to Roofing Section of this report.				

4.0 ROOFING COMPONENTS

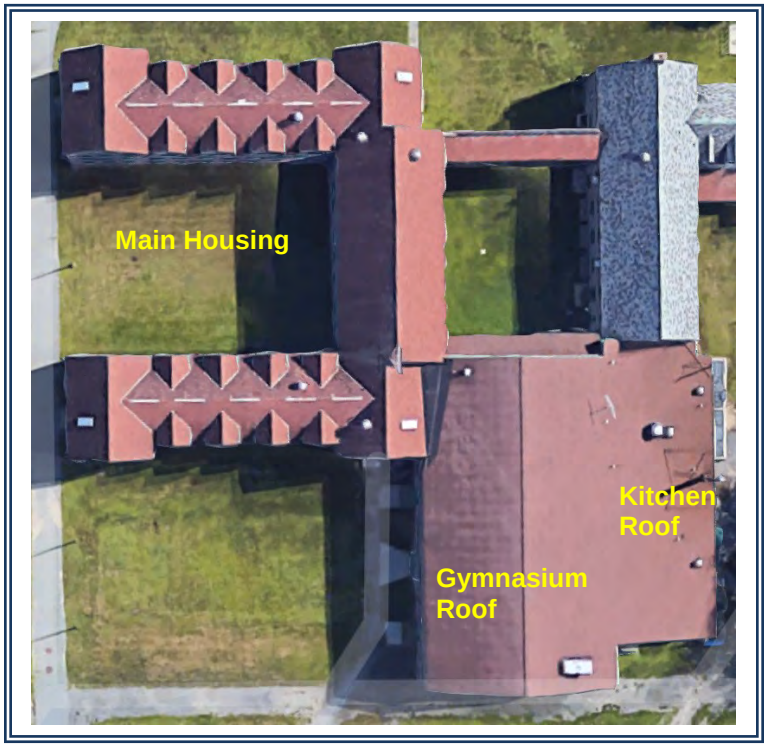
The buildings are covered by low-slope and pitched roofs covered with either a single ply EPDM roof system, asphalt shingles, slate tiles or corrugated metal (reference Photographs R-01 through R-11 in Appendix A).

4.1 Description

Main Housing, Gymnasium, Kitchen

Main Housing, the Gymnasium and Kitchen feature a pitched asphalt roofing system over what is presumed to be engineered wood truss (Main Housing) and structural steel truss (Gymnasium and Kitchen) attic roof structures faced with wood panel sheathing, underlayment and three-tab architectural shingles. There are no perimeter gutters or downspouts. The roofs are original to the late 1988 year of construction.
Plan 4-1 provides an overview of the roofs.

Plan 4-1 – Roof Plan



Modular Housing

Modular Housing features a single-ply EPDM membrane roof. The adhered membrane terminates at the perimeter of the roof on top of edge flashing. The roof fields generally slope South and East where internal rain leaders discharge to the site stormwater management system. The lower roof over the first floor office area slopes to the North, where a leaking roof drain contributed to the previously outlined structural deficiency on the first floor. The roof is applied over dimensioned lumber joists insulated with batt

insulation and wood panel sheathing. The roof is original to construction of the building. Plan 4-2 provides an overview of the roof.

Plan 4-2 – Roof Plan

Administration

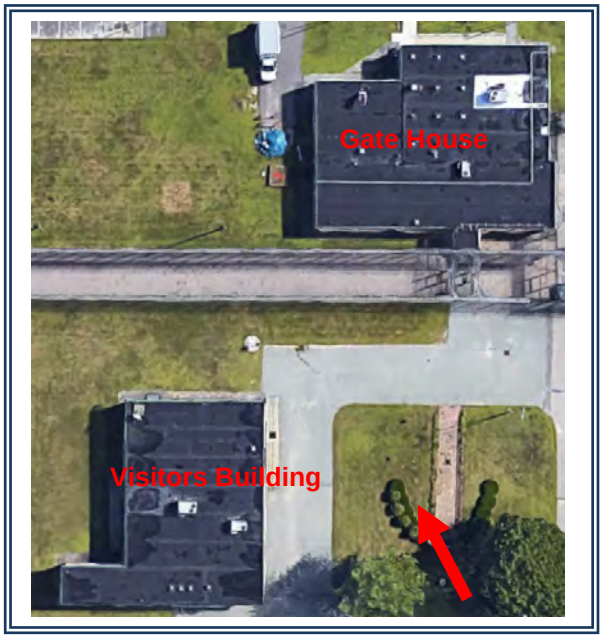
The Administration building features a slate tile roof over what is presumed to be underlayment, wood sheathing and steel framed roof trusses. The roof features copper valley flashing, copper ridges and aluminum perimeter gutters and downspouts. Plan 4-3 provides an overview of the roofs.

Plan 4-3 – Roof Plan

Gate House & Visitor Building

The Gate House and Visitor Building feature single-ply EPDM membrane roofs. The adhered membrane terminates at the perimeter of the roof on top of edge flashing. The roof fields slope to internal rain leaders that discharge to the site stormwater management system. The modular roof areas are applied over dimensioned lumber joists insulated with batt insulation and wood panel sheathing. The roof over the field fabricated areas of the Gate House is applied over galvanized steel roof decking, and 2" rigid insulation board. The roof membranes are is original to construction of the buildings. Plan 4-4 provides an overview of the roof.

Plan 4-4 – Roof Plan



Morton Building

The roof system at the Morton Building consists of prefinished corrugated steel roofing sheets placed in a gable configuration.

Quonset Hut

The roof system at the Quonset Hut consists of field painted corrugated steel panels placed in a curved configuration and extending to create the walls.

Quonset Hut Extension

Only remnants of the roof system over the Quonset Hut Extension are still present. The roof system appears to have consisted of either a rolled asphalt or rolled sheet system placed in a low-slope configuration.

4.2 Condition

Main Housing, Gymnasium, Kitchen

Despite their age, the asphalt shingled roofing systems over Main Housing, the Gymnasium and Kitchen were in good condition with no significant instances of curled, fractured, detached or eroded shingles noted. Despite the current good condition, we recommend budgeting for late term replacement of the asphalt shingles and underlayment. In addition, we recommend that at the time of replacement gutters and downspouts are installed.

Modular Housing

The EPDM roof system was installed in 1992 and as such had exceeded its industry standard useful life of 20 to 25 years. From a condition and performance standpoint, the roof had a number of issues. These consist of open flashings, chemical deterioration of the EPDM membrane, bridged base flashings, and ponding water caused by breakdown of the roof insulation. Furthermore, the on-site engineering staff reported on-going leaks through the roof. Based upon these factors, we recommend that the roof be replaced within the next three to five years.

Administration

The Administration roof system appeared to be in fair condition for its age of 42 years. Considering a typical useful life of 75 years or more for hard slate roofing systems, we believe the slate tile is serviceable with as-needed tile replacements. The gutters and downspouts were in poor condition with multiple sections of gutter that had been displaced by snow and ice loads.

Gate House, Visitor Building

The EPDM roof systems at Visitor Building were in fair condition with many of the same issues as noted on Modular Housing. The roof over the Gate House was in poor condition with a greater concentration and intensity of deficiencies noted. We recommend that both roofs are replaced within the next three to five years.

Morton Building

The roof system at the Morton Building was in good condition. Assuming as-needed maintenance to include replacement of failed fasteners and washers, capital level repair or replacement should not be required within the study period.

Quonset Hut

The roof system at the Quonset Hut was in poor condition. Failure of waterproofing between the corrugated sheets, failure of fasteners and complete failure of the corrugated panels has resulted in long-term water ingress into the building. This has allowed biological growth at the interior wall panels and create extremely

poor interior conditions within the building. We recommend that the roof panels and all interior finishes are removed and replaced.

Quonset Hut Extension

The roof system over the Quonset Hut Extension is in a condition of complete failure. Failure of the roof has allowed significant and prolonged water ingress into the building. This has resulted in structural failure of the roof deck and supporting joists. We have recommended that the roof structure (joists and deck) are removed and replaced, and a membrane roof is installed over the building.

4.3 Projected Capital Expenditures

Capital expenditures required over the ten-year study period are provided below:

Project Title	Year	Priority	Deficiency Category	Total Project Cost
Main Housing				
Install Gutters & Downspouts Where Not Present	2021	2 – Potentially Critical	Deferred Maintenance	$89,100
Main Housing Asphalt Shingle Roof Replacement	2027	3 - Necessary, Not Yet Critical	Capital Renewal	$360,000
Gymnasium				
Gymnasium Asphalt Shingle Roof Replacement	2027	3 - Necessary, Not Yet Critical	Capital Renewal	$72,000
Install Gutters & Downspouts Where Not Present	2021	2 – Potentially Critical	Deferred Maintenance	$11,000
Kitchen				
Kitchen Asphalt Shingle Roof Replacement	2027	3 - Necessary, Not Yet Critical	Capital Renewal	$60,000
Install Gutters & Downspouts Where Not Present	2021	2 – Potentially Critical	Deferred Maintenance	$11,000
Modular Housing				
Replace Low-Slope EPDM Roof System	2022	2 - Potentially Critical	Deferred Maintenance	$1,125,000
Administration				
Replace Gutters and Downspouts	2023	3 - Necessary, Not Yet Critical	Capital Renewal	$76,000
Gate House				
Replace Low-Slope EPDM Roof System	2021	2 - Potentially Critical	Deferred Maintenance	$360,000
Visitor Building				
Replace Low-Slope EPDM Roof System	2023	2 - Potentially Critical	Capital Renewal	$249,300
Morton Building				

Project Title	Year	Priority	Deficiency Category	Total Project Cost
No capital expenditures are currently anticipated				
Quonset Hut				
Replace Roof & Exterior Wall Panels	2021	2 - Potentially Critical	Deferred Maintenance	$65,280
Quonset Hut Extension				
Replace Roof System & Roof Structure	2021	2 - Potentially Critical	Deferred Maintenance	$29,624

5.0 BUILDING EXTERIORS

The exterior wall systems consist of concrete masonry at the Main Housing, Administration, Gymnasium and Kitchen buildings. Modular Housing, the Gate House and Visitor Building feature Fedderlite Dryvit panel systems applied to the exterior wall structure (reference Photographs EXT-01 through EXT-16 in Appendix A).

5.1 Description

Exterior Wall Systems

The exterior wall system at the Administration Building consists of concrete masonry units of various sizes set in an Ashlar pattern with an applied paint finish and brick veneer accents at the exterior corners and chimney details. Main Housing, the Gymnasium and Kitchen buildings feature broken face and red tinted concrete masonry.

The exteriors of Modular Housing, the Gate House and Visitor Building consists of a 2" Fedderlite Dryvit panel system with expanded polystyrene insulation, reinforcing mesh and a finish coat. Panel joints are treated with a urethane sealant and the overall system has an applied paint finish.

The exterior wall system at the Morton Building consists of prefinished corrugated steel wall panels. The wall system at the Quonset Hut consists of a continuation of the corrugated steel roof system with painted T1-11 wood siding at the sides. The exterior of the Quonset Hut extension consists of a combination of painted wood T1-11 siding and vinyl lap siding.

Windows and Doors

Windows generally consist of painted steel-framed window units containing either polycarbonate resin thermoplastic sheets or single pane security glass. Doors primarily consist of painted steel panel units.

Windows and doors at the Morton Building consist of painted steel panel doors and windows consisted of sash units containing insulated glazing units within wood frames. Doors at the Quonset Hut and Quonset Hut extension consist of painted steel. The Quonset Hut contained a wood-framed window at either side. The Quonset Hut contained a vinyl clad window.

5.2 Condition

Exterior Wall Systems

The concrete and brick masonry wall systems at Main Housing, Administration, the Kitchen and Gymnasium were in generally good condition. However, we noted three areas of concern. Firstly, we noted failure of sealants installed at window and door perimeters and installed at vertical control joints in the exterior wall system. We have recommended budgeting for near-term replacement of these sealants. Secondly, at the soffits and roof level trim we noted areas of failed paint and rotted wood. Caused primarily from the lack of gutters (reference Roofing section of this report), we have recommended budgeting for near-term repainting of all exterior painted elements and for replacement of failed soffit and trim. Lastly, at the

Administration Building, we noted ten cracked lintels. We have recommended that these are replaced in the near-term.

The composite insulated wall panel systems at the three modular structures (Modular Housing, Gate House and Visitor Building) were found to be in fair condition with localized impact damage, deteriorating sealants and soiled paint finish. We recommend exterior finish upgrades throughout the facility to include pressure washing, sealant and paint finish renewal (where previously applied) to restore the integrity of the building envelopes.

The exterior wall system at the Morton Building was in good condition and should not require capital level repair or replacement within the study period. The wall system at the Quonset Hut was in poor condition. Steel sections should be replaced as part of the roof replacement detailed within the Roofing section of this report. The wood side walls should be replaced in the near-term. The exterior of the Quonset Hut extension was in poor condition with numerous areas of rot and distortion. The wall system should be replaced.

Windows and Doors

Windows were in fair condition. We noted etching and clouding of some polycarbonate panels, deterioration of exterior gaskets and some surface corrosion at the exterior of the framing members. Despite these conditions, we anticipate that with on-going repair and maintenance funded as an operational expense, full replacement of the window should not be required within the study period.

Furthermore, at both buildings we noted failure of sealants installed at the connection between the window frames and the masonry / Fedderlite veneers. These should be replaced in order to maintain the weathertightness of the exterior.

Windows and doors at the Morton Building were in good condition and should not require replacement within the study period. Windows and doors at the Quonset Hut and Quonset Hut extension were in poor condition with widespread rot noted. Windows and doors should be replaced in the near-term.

5.3 Projected Capital Expenditures

Capital expenditures required over the ten-year study period are provided below:

Project Title	Year	Priority	Deficiency Category	Total Project Cost
Main Housing				
Replace Sealants at Windows and Control Joints	2021	3 - Necessary, Not Yet Critical	Deferred Maintenance	$62,500
Repaint Soffits and Fascia	2021	3 - Necessary, Not Yet Critical	Deferred Maintenance	$33,000
Replace Rotted Soffits and Fascia	2021	3 - Necessary, Not Yet Critical	Deferred Maintenance	$36,000
Gymnasium				

Project Title	Year	Priority	Deficiency Category	Total Project Cost
Replace Sealants at Control Joints	2021	3 - Necessary, Not Yet Critical	Deferred Maintenance	$5,200
Repaint Soffits and Fascia	2021	3 - Necessary, Not Yet Critical	Deferred Maintenance	$9,800
Kitchen				
Minimal Paint and Sealant Upgrades Included in Gymnasium Cost Expenditures				
Modular Housing				
Replace Sealants at Control Joints and Windows	2021	3 - Necessary, Not Yet Critical	Deferred Maintenance	$75,000
Repaint Building Exterior	2021	3 - Necessary, Not Yet Critical	Deferred Maintenance	$60,000
Administration				
Replace Sealants at Control Joints and Windows	2021	3 - Necessary, Not Yet Critical	Deferred Maintenance	$41,250
Repaint Building Exterior	2024	3 - Necessary, Not Yet Critical	Capital Renewal	$72,000
Replace Cracked Lintels	2021	3 - Necessary, Not Yet Critical	Deferred Maintenance	$45,000
Gate House				
Replace Sealants at Control Joints and Windows	2021	3 - Necessary, Not Yet Critical	Deferred Maintenance	$18,750
Repaint Building Exterior	2021	3 - Necessary, Not Yet Critical	Deferred Maintenance	$21,000
Visitor Building				
Replace Sealants at Control Joints and Windows	2021	3 - Necessary, Not Yet Critical	Deferred Maintenance	$16,250
Repaint Building Exterior	2021	3 - Necessary, Not Yet Critical	Deferred Maintenance	$18,000
Morton Building				
No capital expenditures are currently anticipated				
Quonset Hut				
Replace T1-11 Siding	2021	3 - Necessary, Not Yet Critical	Deferred Maintenance	$15,600
Replace Doors & Windows	2021	3 - Necessary, Not Yet Critical	Deferred Maintenance	$5,000
Quonset Hut Extension				
Replace Siding	2021	3 - Necessary, Not Yet Critical	Deferred Maintenance	$24,675
Replace Door	2021	3 - Necessary, Not Yet Critical	Deferred Maintenance	$7,500

BUILDING SYSTEMS

6.0 MECHANICAL SYSTEMS

The following information was obtained through our visual observations of the building systems, review of available documentation, and discussions with facilities staff. The Administration Building and Main Housing Building, including the kitchen and gymnasium, are heated with oil-fired boilers and forced hot water heating. Heated water is circulated to coils in central station air handling units, fan-coil units and perimeter fin-tub radiant heating systems. The Modular Housing Building, Gate House and Visitor Building are heated and cooled with packaged rooftop air handling units with gas-fired furnaces and DX cooling (reference Photographs M-01 through M-12 in Appendix A).

6.1 Heating and Cooling Systems

Description

The original heating water boiler serving the Administration Building was replaced in 2010 with a Weil-McLain, oil-fired boiler with at rated output of 2,274 MBH. The boiler serving the additional heating load of the 1988 Main Housing, Kitchen and Gymnasium expansion effort is a 1988 vintage, Cleaver Brooks Series 100M, oil-fired boiler with a rated output of 2,193 MBH. A pair of 7 ½ horsepower primary heating water circulating pumps (primary and standby) serve the boilers and six inline circulating pumps (primary and standby) mounted overhead in the main mechanical room serve the Administration Building, Main Housing, Gymnasium and Kitchen.

The Administration Building features central air conditioning in the form of a 50-ton, R-22 reciprocating chiller with an air-cooled condenser. The Carrier model 30HL050-530 chiller was installed in 1998. A pair of 5-horsepower, 133 GPM base mounted pumps (primary and standby) circulate chilled water to heating and ventilating unit #2 serving the core office administrative area and perimeter fan-coil units serving the various perimeter office and administrative areas.

The Modular Housing Building is heated with gas-fired rooftop furnaces. The day rooms and central control areas at the intersection of the two housing wings are heated and cooled by 2012 vintage packaged rooftop air-conditioning units with gas-fired furnaces. The Gate House is heated and cooled by two 2008 and 2009 vintage, R-22 and R-410A packaged rooftop air conditioning units with gas furnaces and respective cooling capacities of 7 ½ and 3 ½ tons. The Visitor Building is heated and cooled by two 2007 and 2010 vintage, R-22 and R-410A packaged rooftop air conditioning units with gas furnaces and respective cooling capacities of 3 and 8 tons. The Quonset Hut and Quonset Hut extension did not contain any heating or cooling systems. The Morton Building contained a through window air conditioning unit.

Condition

The overall HVAC system had been in service for 30 years with only as-needed repairs and component replacements completed. The 1988 vintage heating water boiler serving the gymnasium, Main Housing Building and kitchen was nearing the end of its statistical life cycle and should be scheduled for mid-term replacement. While recent heating water pumps replacements have been accomplished, we recommend budgeting for the replacement of any original heating water pumps to prevent any forced outages. The

direct buried, 15,000-gallon fuel oil storage tank serving the heating plant should also be replaced with an above ground, concrete vault with a primary steel tank and secondary containment.

The chiller serving the Administration building was likewise at the end of its useful life and should be scheduled for near term replacement if the facility is to be reactivated. The through window air conditioning unit contained at the Morton Building appeared to be in good condition. We anticipate that any replacement can be funded as an operational expense.

Projected Capital Expenditures

Capital expenditures required over the ten-year study period are provided below:

Project Title	Year	Priority	Deficiency Category	Total Project Cost
Main Housing				
Replace Main Housing Heating Water Boiler (Cleaver Brooks)	2025	3 - Necessary, Not Yet Critical	Capital Renewal	$375,000
Main Housing Heating Water Pump Replacements	2022	3 - Necessary, Not Yet Critical	Capital Renewal	$22,500
Modular Housing				
See Section 6.2: Air Distribution, Ventilation and Exhaust Systems				
Administration / Gymnasium / Kitchen				
Administration Building Above Ground Fuel Storage	2021	1 - Currently Critical and/or Code Violations	Deferred Maintenance	$150,000
Administration Primary and Secondary Heating Water Pump Replacements	2022	2 - Potentially Critical	Capital Renewal	$22,500
Administration Air-Cooled Chiller Replacement	2022	2 - Potentially Critical	Capital Renewal	$100,000
Gate House				
See Section 6.2: Air Distribution, Ventilation and Exhaust Systems				
Visitor Building				
See Section 6.2: Air Distribution, Ventilation and Exhaust Systems				
Administration / Gymnasium / Kitchen				
No capital expenditures are currently anticipated				
Morton Building				
No capital expenditures are currently anticipated				
Quonset Hut				
No capital expenditures are currently anticipated				
Quonset Hut Extension				
No capital expenditures are currently anticipated				

6.2 Air Distribution, Ventilation and Exhaust Systems

Description

Air distribution, ventilation and exhaust in the Main Housing Building is limited to rooftop exhaust fans serving the bathrooms and smoke exhaust fans serving the core area and housing wings.

The Modular Housing building is equipped gas-fired rooftop furnaces and packaged rooftop air conditioning units that deliver heating to the housing wings and cooling / heating to the core day rooms and control areas. Rooftop exhaust fans serve the core bathrooms.

The Administration building (including the Gymnasium and Kitchen) is served by eight Carrier heating and ventilating units that range in capacity from 1,000 to 10,000 CFM. Heating and ventilating unit #2 serving the core Administrative office areas is equipped with a 30 GPM chilled water coil. Perimeter office areas are served by cabinet mounted fan-coil units with chilled/heating water coils. Exhaust fans serving the kitchen, dining areas, machine rooms, and storage areas consist of centrifugal rooftop and inline fans with rated capacities ranging from 500 to 10,000 CFM.

The Gate House and Visitor Building feature forced air heating and cooling from the packaged rooftop air conditioning units with gas-fired furnaces. Rooftop exhaust fans serve the core restrooms. The Quonset Hut and Building 12 did not contain any air distribution, ventilation or exhaust systems. The Morton Building relied on operable windows for ventilation.

Table 6-1 below provides an overview of the air distribution, ventilation and exhaust systems contained within each building.

Table 6-1 - Air Distribution, Ventilation & Exhaust Systems by Building

Building	Air Distribution & Ventilation Systems	Exhaust Systems
Main Housing	Natural Ventilation	Rooftop Exhaust Fans
Modular Housing	Forced Air Heating / Cooling (Rooftop)	Rooftop Exhaust Fans
Administration Building	Forced Air Heating / Cooling (Air Handling Units & Fan Coil Units)	Rooftop Exhaust Fans
Gate House	Forced Air Heating / Cooling (Rooftop)	Rooftop Exhaust Fans
Kitchen	Forced Air Heating (Air Handling Units)	Rooftop Exhaust Fans
Visitor Building	Forced Air Heating / Cooling (Rooftop)	Rooftop Exhaust Fans
Gymnasium	Forced Air Heating (Air Handling Unit)	Centrifugal In-Line Fan

Condition

The Main Housing building's radiant heating and natural ventilation system was adequate for the current occupancy classification.

The Modular Housing building's forced air heating and ventilation systems were in fair condition considering the 2012 replacement of three gas-fired furnaces and two packaged rooftop air conditioning units, but an original Hastings rooftop furnace was in poor condition and should be scheduled for near term replacement. Future budget models should include provisions for the mid-term replacement of the 2012 vintage rooftop furnaces and air conditioning units as they reach the end of their 15-year estimated useful life.

The Administration Building including the Kitchen, and Gymnasium featured late 1980's vintage heating and ventilating units that were in service for thirty-five years before the facility was shuttered in 2015. If the facility is to be returned to long term service, we recommend budgeting for the mid-term replacement of the heating and ventilating units and fan-coil units serving the perimeter office and support spaces.

The packaged rooftop air conditioning units serving the Gate House and Visitor Building were installed between 2007 and 2010. Considering a 15-year estimated useful life for packaged rooftop air conditioning units, we recommend budgeting for their mid-term replacement.

Exhaust fans were generally in fair condition and serviceable with as-needed component replacements as an operational expense.

Projected Capital Expenditures

Capital expenditures required over the ten-year study period are provided below:

Project Title	Year	Priority	Deficiency Category	Total Project Cost
Main Housing				
No capital expenditures are currently anticipated				
Modular Housing				
Replace Packaged Gas-Fired Rooftop Air-Conditioning Units	2025	3 - Necessary, Not Yet Critical	Capital Renewal	$60,000
Replace Original Hastings Rooftop Furnace	2021	2 - Potentially Critical	Capital Renewal	$37,500
Replace Gas-Fired Rooftop Furnaces	2026	3 - Necessary, Not Yet Critical	Capital Renewal	$112,500
Administration / Gymnasium / Kitchen				
Administration Heating / Ventilating Unit Replacements	2025	3 - Necessary, Not Yet Critical	Capital Renewal	$405,000

Project Title	Year	Priority	Deficiency Category	Total Project Cost
Administration Fan-Coil Unit Replacements	2025	3 - Necessary, Not Yet Critical	Capital Renewal	$123,000
Gate House				
Replace Packaged Gas-Fired Rooftop Air-Conditioning Units	2025	3 - Necessary, Not Yet Critical	Capital Renewal	$60,000
Visitor Building				
Replace Packaged Gas-Fired Rooftop Air-Conditioning Units	2025	3 - Necessary, Not Yet Critical	Capital Renewal	$32,500
Morton Building				
No capital expenditures are currently anticipated				
Quonset Hut				
No capital expenditures are currently anticipated				
Quonset Hut Extension				
No capital expenditures are currently anticipated				

6.3 Temperature Control Systems

Description

Temperature control systems in the Main Housing building are limited to pneumatic thermostats centrally located on each floor. The rooftop units at the Modular Housing building, Visitor Building and Gate House are limited to low-voltage thermostats serving the individual units. The Administration Building including the kitchen and gymnasium features a hybrid digital / pneumatic system with automated logic and pneumatic actuators.

Condition

The temperature control systems for the Main Housing building, Gate House and Visitor Building were adequate for the size, occupancy and nature of their respective HVAC systems. The Administration Building's control systems were maintenance intensive, inefficient and obsolete. If the facility is to be reactivated, we recommend budgeting for the modernization of the HVAC controls to a direct digital system with low-voltage sensors, actuators and automated sequences and setpoints.

Projected Capital Expenditures

Capital expenditures required over the ten-year study period are provided below:

Project Title	Year	Priority	Deficiency Category	Total Project Cost
Main Housing				
No capital expenditures are currently anticipated				
Modular Housing				
No capital expenditures are currently anticipated				
Administration / Gymnasium / Kitchen				
Administration HVAC System Controls Upgrade	2025	3 - Necessary, Not Yet Critical	Capital Renewal	$327,540
Gate House				
No capital expenditures are currently anticipated				
Visitor Building				
No capital expenditures are currently anticipated				
Morton Building				
No capital expenditures are currently anticipated				
Quonset Hut				
No capital expenditures are currently anticipated				
Quonset Hut Extension				
No capital expenditures are currently anticipated				

7.0 ELECTRICAL SYSTEMS

The following information was obtained through our visual observations of the building systems, review of available documentation, and discussions with facilities staff. The electrical systems include the incoming electrical service, service switchgear and electrical distribution equipment, emergency power systems, lighting systems, communications systems, CCTV camera systems and low-voltage door control and alarm systems (reference Photographs E-01 through E-10 in Appendix A).

7.1 Electrical Service and Distribution Equipment

Description

Electrical power is supplied through 4,160-volt feeders underground to high voltage switchgear in the Gate House. A pad mounted transformer in the Gate House supplies 120/208-volt electrical power to 1,200-amp Westinghouse switchgear serving the Modular Housing building, Visitor Building, Gate House, and Morton Building. A second 750 KVA, pad mounted transformer located in a fenced enclosure at the Northeast corner of the kitchen supplies 120/208-volt power to a 2,000-amp Siemens primary electrical switchgear serving The Administration Building, Main Housing, the kitchen and gymnasium.

Table 7-1 below provides an overview of the electrical and service distribution equipment contained within each building.

Table 7-1 Electrical and Service Distribution by Building

Building	Incoming Service Feed	Distribution Equipment
Administration Main Housing Kitchen Gymnasium	4,160-Volts	750 KVA, Oil-Filled, Pad-Mount Service Transformer; 2,000-Amp, 120/208-Volt Service
Modular Housing Gate House Visitor Building Morton Building	4,160-Volts	500 KVA, Oil-Filled, Pad-Mount Service Transformer; 1,200-Amp, 120/208-Volt Service
Quonset Hut	120/208-Volts	Breaker Panel

Condition

The primary electrical service was upgraded in two phases beginning with the 1988 Administration renovation and Main Housing, Kitchen and Gymnasium expansion effort and subsequent Modular Housing, Gate House and Visitor Building in the early 1990's. With routine thermal scanning and as-needed repairs and component replacements, the primary electrical service(s) should be serviceable for the duration of the 10-year study period.

Secondary electrical distribution equipment including breaker panels, branch wiring and devices were generally late 1980's and early 1990's vintage equipment. Secondary electrical distribution systems have a generally accepted useful life of 50-years with routine thermal scanning and as-needed connection torqueing and component replacements. Table 7-2 summarizes the condition of the electrical and service distribution at each building.

Table 7-2 Condition of Electrical and Service Distribution by Building

Building	Defects/ Capital Requirements of Incoming Electrical Service	Defects/ Capital Requirements of Distribution Equipment
Administration Main Housing Kitchen Gymnasium	None	None
Modular Housing Gate House Visitor Building Morton Building	None	None

Projected Capital Expenditures

Capital expenditures required over the ten-year study period are provided below:

Project Title	Year	Priority	Deficiency Category	Total Project Cost
Main Housing, Administration / Gymnasium / Kitchen				
No capital expenditures are currently anticipated				
Modular Housing / Morton Building / Gate House / Visitor Building				
No capital expenditures are currently anticipated				
Gate House				
No capital expenditures are currently anticipated				
Visitor Building				
No capital expenditures are currently anticipated				
Morton Building				
No capital expenditures are currently anticipated				
Quonset Hut				
No capital expenditures are currently anticipated				
Quonset Hut Extension				
No capital expenditures are currently anticipated				

7.2 Emergency Power Systems

Description

Emergency power is supplied to the Administration Building, Main Housing, Kitchen, and Gymnasium by a 125-kilowatt, Kohler diesel generator in a purpose-built mechanical room in the basement of the kitchen. Installed in 1988, the generator is served by a 500-gallon, underground storage tank. The generator serves a 400-amp automatic transfer switch and 400-amp distribution panelboard serving life safety systems and other critical building loads. A 350-kilowatt Caterpillar, V-8 diesel generator in the Gate House serves Modular Housing, the Gate House, Morton Building and Visitor Building.

Condition

The 350-kilowatt generator serving Modular Housing, the Gate House, Visitor Building and Morton Building was installed in 1990 and had 516 hours of engine run-time on the day of our assessment. Considering the relatively low operating hours of the generator, we believe it is serviceable for the duration of the 10-year study period. The 125-kilowatt generator was original to 1988 and not sized to carry the full load of the building areas it serves. We recommend budgeting for the replacement of the generator, emergency power transfer switch, and load centers with a system capable of carrying the full peak load of Administration, Main Housing, the kitchen and gymnasium (approximately 400-kilowatts).

Additionally, current code requirements regarding underground fuel storage tanks warrant the installation of above ground fuel storage serving both emergency power systems. The single-wall, direct-buried, diesel fuel storage tanks should be removed and replaced with above ground systems consisting of a concrete vault with a primary steel tank and secondary containment.

Projected Capital Expenditures

Capital expenditures required over the ten-year study period are provided below:

Project Title	Year	Priority	Deficiency Category	Total Project Cost
Main Housing, Administration / Gymnasium / Kitchen				
Replace & Increase Capacity of Emergency Power Generator	2022	2 - Potentially Critical	Capital Improvement	$400,000
Administration Generator Fuel Storage (Above Ground)	2021	2 - Potentially Critical	Deferred Maintenance	$100,000
Modular Housing / Morton Building / Gate House / Visitor Building				
Main Generator Fuel Storage (Above Ground)	2021	2 - Potentially Critical	Deferred Maintenance	$100,000

7.3 Lighting Systems

Description

Interior lighting consists of correctional grade fixtures mounted flush with the ceiling. Fixtures are generally lamped with T-12, T-8 and compact fluorescent elements.

Condition

Lighting systems throughout appeared to be in fair condition and generally consist of T-12 and T-8 fluorescent fixtures. Advances in LED lighting technology and associated lower cost of fixtures and lamps make universal LED lighting upgrades an attractive energy and maintenance costs savings opportunity. Considering the age of the facility, we recommend budgeting for LED lighting upgrades throughout.

Projected Capital Expenditures

Capital expenditures required over the ten-year study period are provided below:

Project Title	Year	Priority	Deficiency Category	Total Project Cost
Main Housing				
LED Lighting Upgrades	2025	3 - Necessary, Not Yet Critical	Capital Improvement	$757,620
Modular Housing				
LED Lighting Upgrades	2025	3 - Necessary, Not Yet Critical	Capital Improvement	$744,960
Administration				
LED Lighting Upgrades	2025	3 - Necessary, Not Yet Critical	Capital Improvement	$327,540
Gymnasium				
LED Lighting Upgrades	2025	3 - Necessary, Not Yet Critical	Capital Improvement	$50,400
Kitchen				
LED Lighting Upgrades	2025	3 - Necessary, Not Yet Critical	Capital Improvement	$70,800
Gate House				
LED Lighting Upgrades	2025	3 - Necessary, Not Yet Critical	Capital Improvement	$113,120
Visitor Building				
LED Lighting Upgrades	2025	3 - Necessary, Not Yet Critical	Capital Improvement	$69,720

8.0 PLUMBING SYSTEMS

The following information was obtained through our visual observations of the building systems, review of available documentation, and discussions with facilities staff. The plumbing systems include the domestic cold and hot water systems, sanitary waste and vent systems, and storm water drainage (reference Photographs P-01 through P-06 in Appendix A).

8.1 Domestic Water Systems

Description

Domestic cold water is supplied by the local utility below grade and routed to core mechanical rooms in each major building. Domestic water supply piping was found to consist of soldered copper piping insulated with FSK faced, fiberglass insulation where it could be observed.

Domestic Hot Water

Domestic hot water for the Main Housing and Administration Buildings is building is produced by a 2009 vintage, Weil McLain oil-fired boiler with a rated capacity of 872 MBH. A 1988 vintage, 757-gallon domestic hot water storage tank provides additional peak demand capacity. The kitchen is served by an 83-gallon, 623 MBH, oil-fired water heater installed in 2015.

The Modular Housing building is served by four gas-fired, 89-gallon, tank-type water heaters installed between 2002 and 2006.

The Gate House and Visitor Building are served by approximately 40-gallon, gas-fired, tank-type water heaters installed respectively in 2012 and 2014. Table 8-1 summarizes equipment used to generate domestic hot water (DWH) at the Property.

Table 8-1 Domestic Hot Water Heating Equipment Schedule

Type	Capacity	Manufacturer	Buildings Served	Installation Date
Oil-Fired Boiler	872 MBH / 757-gallon	Weil McLain	Main Housing / Administration	2009
Gas-Fired, Tank-Type	(4) 80-gallon	Ruud	Modular Housing	2002-2006
Oil-Fired, Tank-Type	83-gallon	Bock	Kitchen	2015
Gas-Fired, Tank-Type	40-gallon	Ruud	Gate House	2012
Gas-Fired, Tank-Type	40-gallon	Ruud	Visitor Building	2014

Plumbing Fixtures

Plumbing fixtures are generally vitreous china commercial grade and stainless-steel correctional grade systems.

Condition

Considering the mission criticality of plumbing systems in correctional facilities, significant ongoing maintenance, repair and renovation efforts have resulted in domestic water supply systems, domestic hot water heating equipment and plumbing fixtures that are currently adequate.

While the domestic water heaters were operational, hard water, elevated duty cycles and system criticality generally warrant scheduled replacement of the Modular Housing water heaters in the near term. Late term replacement of the domestic hot water boiler serving the Main Housing and Administration Buildings is recommended to prevent any forced outages. The water heaters serving the kitchen, Gate House and Visitor Building were installed before the site was decommissioned and should be serviceable for at least ten future years.

Projected Capital Expenditures

Capital expenditures required over the ten-year study period are provided below:

Project Title	Year	Priority	Deficiency Category	Total Project Cost
Main Housing / Administration				
Main Housing Domestic Hot Water Boiler Replacement	2029	3 - Necessary, Not Yet Critical	Capital Renewal	$130,800
Modular Housing				
Modular Housing Domestic Water Heater Replacements	2023	3 - Necessary, Not Yet Critical	Capital Renewal	$60,000
Kitchen				
No capital expenditures are currently anticipated				
Gate House				
No capital expenditures are currently anticipated				
Visitor Building				
No capital expenditures are currently anticipated				

8.2 Sanitary Waste and Storm Drainage Systems

Description

Sanitary Waste Systems

Sanitary waste piping generally consists of hub-less, cast-iron construction where it could be observed. Sanitary wastes are routed to a duplex sewage ejector pump system where they are lifted to the nearest

gravity main. A duplex sump pump system below in the basement mechanical room below the kitchen lifts greywater and groundwater to the nearest gravity main.

Stormwater Systems

Civil engineering drawings were not available for review by the date of report issuance; however, stormwater drainage was generally observed to be through surface flow to the adjacent Stop River watershed.

Condition

Wastewater systems were reported to be in fair condition with no reported leaks or systemic piping failures. Stormwater systems appeared to be in good condition with no obvious or reported areas of ponding or erosion. The duplex sewage ejector pump and duplex sump pump systems are original to the late 1980's, early 1990's expansion effort and are at the end of their statistical life cycle. We recommend budgeting for their near-term replacement if the facility is to be recommissioned. Additionally, the grease trap serving the kitchen is original and should be replaced in the near-term.

Projected Capital Expenditures

Capital expenditures required over the ten-year study period are provided below:

Project Title	Year	Priority	Deficiency Category	Total Project Cost
Common Asset				
Site Sewage Ejector Pump Replacements	2021	2 - Potentially Critical	Capital Renewal	$50,000
Administration				
Administration Sump Pump Replacements	2021	3 - Necessary, Not Yet Critical	Capital Renewal	$15,000
Kitchen				
Kitchen Grease Trap Replacement	2021	2 - Potentially Critical	Capital Renewal	$150,000
Gate House				
No capital expenditures are currently anticipated				
Visitor Building				
No capital expenditures are currently anticipated				

8.3 Natural Gas Systems

Description

Natural gas service is supplied to the Visitor Building, Gate House and Modular Housing.

Condition

Natural gas service was found to be in good condition where it could be observed.

Projected Capital Expenditures

No capital expenditures are anticipated at this time.

9.0 FIRE AND LIFE SAFETY SYSTEMS

The following information was obtained through our visual observations of the building systems, review of available documentation, and discussions with the facilities staff. Fire and life safety elements assessed included rated assemblies, fire suppression systems, fire detection and alarm systems, and means of egress (reference Photographs FLS-01 through FLS-06 in Appendix A).

9.1 Overview of Fire & Life Safety Systems

Fire/life safety systems consist of automatic, wet-pipe fire sprinklers in the Administration Building, Kitchen, Modular Housing and first floor of the Main Housing building. The second and third floors of the Main Housing Building are equipped with standpipe risers with 2 ½ valves and hose connections on each floor of the four stairwells. Wet pipe automatic fire sprinklers in the Administration and Main Housing Building are fed from a 6" fire main and 30-horsepower, 750 GPM electric fire pump in the basement of the Administration Building below the kitchen. The Modular Housing building and Visitor Building feature fire mains on utility water pressure. The Visitor Building features a dry-pipe system.

Fire alarm systems consists of modern Notifier NFS 320 systems in the Modular Housing building and Visitor Building. The Administration Building, Main Housing, Gymnasium and Kitchen feature a discontinued Simplex model 4100 ES fire alarm system that is not currently functional. The Gate House is served by a 1990's vintage Simplex model 4001 system that is obsolete. Table 9-1 below provides a summary of the fire life safety systems.

Table 9-1 Summary of Fire & Life Safety Systems

Building	Administration	Main Housing Kitchen Gymnasium	Modular Housing	Gate House	Visitor Building
Construction / Renovation Date	1988	1988	1990	1990	1990
Construction Type	Concrete	Concrete / Masonry	Wood	Wood	Wood
Occupancy	Administration	Detention	Detention	Administration	Administration
Structural Fire Protection	Yes	Yes	No	No	No
Fire Suppression System	Yes	Yes	Yes	No	Yes
Fire Detection	Yes	Yes	Yes	Yes	Yes

9.2 Condition

The fire alarm systems serving Modular Housing and the Visitor Building were relatively new and serviceable for ten future years. The fire alarm systems serving the Gate House, Main Housing, Administration and the attached kitchen and gymnasium were in a state of disrepair and no longer supported by the manufacturer.

If the facility is to be recommissioned, near term replacement of the fire alarm systems including new devices, as-needed wiring and conduit, and control panels installed in compliance with modern code requirements will be required before the facility can be reoccupied. We have recommended completing a fire system and code analysis study to determine the requirements and options for fire alarm system replacement. Following this study, we have included allowances for replacement of the fire systems in Main Housing, Administration, the Gymnasium, Kitchen and the Gate House.

9.3 Projected Capital Expenditures

Capital expenditures required over the ten-year study period are provided below:

Project Title	Year	Priority	Deficiency Category	Total Project Cost
Common Asset				
Study / Design for Fire Alarm System Replacements	2021	3 - Necessary, Not Yet Critical	Capital Renewal	$40,000
Main Housing				
Fire Alarm System Replacement	2021	1 - Currently Critical and/or Code Violations	Deferred Maintenance	$757,620
Modular Housing				
No capital expenditures are currently anticipated				
Administration				
Fire Alarm System Replacement	2021	1 - Currently Critical and/or Code Violations	Deferred Maintenance	$327,540
Gymnasium				
Fire Alarm System Replacement	2021	1 - Currently Critical and/or Code Violations	Deferred Maintenance	$50,400
Kitchen				
Fire Alarm System Replacement	2021	1 - Currently Critical and/or Code Violations	Deferred Maintenance	$70,800
Gate House				
Fire Alarm System Replacement	2021	1 - Currently Critical and/or Code Violations	Deferred Maintenance	$113,120
Visitor Building				
No capital expenditures are currently anticipated				

10.0 CONVEYANCE SYSTEM

The following information was obtained through our visual observations of the conveyance systems, review of available documentation, and discussions with the building staff. The Property contains one passenger elevator in the Administration Building (reference Photograph C-01 in Appendix A).

10.1 Description

The passenger elevator was manufactured by Dover and was installed as part of the expansion and renovation effort in 1988. The elevator consists of a relay logic controller, hydraulic oil tank, in-ground jack assembly, door operator, and the steel cab along with related car and hoistway indicators and buttons. The elevator is rated with a capacity of 2,500 lbs and a speed of 120 feet per minute. Details of the elevator system are provided within table 10-1 below.

Table 10-1 Summary of Elevators

Building	Type	Elevator Number	Location	Floor Levels Served	Capacity (LBS)	Speed (FPM)	Installation or Upgrade Date
Administration	Hydraulic	1	South Addition to Core Wing	B, 1, 2	2,500	120	1988

10.2 Condition

The elevator appeared to be in fair condition and reportedly provided reliable service. However, the elevator controllers represented older and obsolete technology with limited replacement parts, and many of the mechanical elements which had been in-service for nearly 30 years were starting to deteriorate, and were of a generation where replacement parts would be expensive to obtain and often take an extended period to source. Based upon these factors, we recommend that the elevators are modernized within the next six to eight years. Modernization should include replacement of the controllers, in-ground jack assemblies, oil tank, car top equipment, hoistway and in-car buttons and car finishes.

10.3 Projected Capital Expenditures

Capital expenditures required over the ten-year study period are provided below:

Project Title	Year	Priority	Deficiency Category	Total Project Cost
Administration				
Modernize Passenger Elevator	2026	3 - Necessary, Not Yet Critical	Capital Renewal	$350,000

11.0 INTERIOR FINISHES

11.1 Description

Interior areas at the various buildings consist of the inmate housing units, administrative and teaching areas, food service and preparation areas, and general spaces. Finishes consisted of a combination of resilient vinyl floor tiles, exposed concrete flooring and at the kitchen epoxy, walls comprised of painted concrete masonry units (CMU), and ceilings of the exposed underside of the floor or roof structure. Showers contained at each housing unit consisted of individual showers with either epoxy coated CMU or a stainless steel insert. The Kitchen building was primarily occupied by a commercial kitchen and related support areas. Equipment contained within the kitchen is listed in Table 11-1. Reference Photographs I1 through I7 in Appendix A.

Table 11-1 Kitchen Equipment

Item Description	Manufacturer	Model #	Serial #	Manufacturer Date
Warming Cabinet	Victory	HIS-2D-7	G0516758	2005
Serving Line	Unknown	Unknown	Unknown	Circa 2000
Double Deck Convection Oven	Blodgett	Unknown	090514CE062Z	2005
Double Deck Convection Oven	Blodgett	Unknown	090514CE062Z	2005
Walk-In Cooler # 1	Nor-Lake	Unknown	Unknown	2000
Walk-In Cooler # 2	Nor-Lake	Unknown	Unknown	2000
Walk-In Freezer	Nor-Lake	Unknown	89201966	2000
Kettle	Groen	DHT/1-40	91477	2012
Skillet	Groen	Unknown	Unknown	2012
Fryer	Unknown	Unknown	Unknown	2012
Fryer	Unknown	Unknown	Unknown	2012
Double Burner	Unknown	Unknown	Unknown	2012
Refrigerator	Victory	RS-2D-S6-HD-RH-EW	D8916P1028	1989
Single Rack High / Low Temperature Straight Dishwasher	Hobart	AM15	23-1125-511	2015

11.2 Condition

With two marked exceptions, the interior areas within the various buildings were in generally adequate condition and of a level that they supported the use type of the facility. The first exception was the resilient vinyl floor tiles contained at the Modular Housing building. At the building, we noted numerous instances of curled and detached floor tiles. We have recommended budgeting for replacement of all floor tiles within the building. However, if required a lesser approach could be adopted whereby all floor tile in the upper level common room is replaced and localized replacement is completed at other areas. The second exception was at the Quonset Hut where prolonged water ingress had created biological growth at the face and underside of the wall and ceiling system. All interior finishes and systems (electric, piping etc.) within the building should be removed and (if required) replaced.

Showers were in fair to good condition. We anticipate that repair and as-needed recoating of showers can be completed as an operating expense. The condition of the kitchen equipment ranged from fair to good. Table 11-2 summarizes the condition and recommended replacement program for the kitchen equipment.

Table 11-2 - Kitchen Equipment Condition and Replacement Summary

Item Description	Manufacturer	Manufacturer Date	Condition	Replacement Date
Warming Cabinet	Victory	2005	Good	Beyond 10 Years
Serving Line	Unknown	Circa 2000	Good	Beyond 10 Years
Double Deck Convection Oven	Blodgett	2005	Good	Beyond 10 Years
Double Deck Convection Oven	Blodgett	2005	Good	Beyond 10 Years
Walk-In Cooler # 1	Nor-Lake	2000	Good	Beyond 10 Years
Walk-In Cooler # 2	Nor-Lake	2000	Good	Beyond 10 Years
Walk-In Freezer	Nor-Lake	2000	Good	Beyond 10 Years
Kettle	Groen	2012	Good	Beyond 10 Years
Skillet	Groen	2012	Good	Beyond 10 Years
Fryer	Unknown	2012	Good	Beyond 10 Years
Fryer	Unknown	2012	Good	Beyond 10 Years
Double Burner	Unknown	2012	Good	Beyond 10 Years
Refrigerator	Victory	1989	Fair	2023
Single Rack High / Low Temperature	Hobart	2015	Good	2023

Item Description	Manufacturer	Manufacturer Date	Condition	Replacement Date
Straight Dishwasher				

11.3 Projected Capital Expenditures

Capital expenditures required over the ten-year study period are provided below:

Project Title	Year	Priority	Deficiency Category	Total Project Cost
Main Housing				
No capital expenditures are currently anticipated				
Modular Housing				
Replace Resilient Vinyl Floor Tiles	2021	3- Necessary / Not Critical	Capital Renewal	$418,320
Administration				
No capital expenditures are currently anticipated				
Gymnasium				
No capital expenditures are currently anticipated				
Kitchen				
Replace Victory Refrigerator	2023	3- Necessary / Not Critical	Capital Renewal	$15,000
Replace Dishwasher	2023	3- Necessary / Not Critical	Capital Renewal	$10,000
Gate House				
No capital expenditures are currently anticipated				
Visitor Building				
No capital expenditures are currently anticipated				
Morton Building				
No capital expenditures are currently anticipated				
Quonset Hut				
Demolish & Reconstruct Interior Finishes & Services	2021	2 – Currently Critical	Deferred Maintenance	$46,920
Quonset Hut Extension				
No capital expenditures are currently anticipated				

12.0 ACCESSIBILITY

Pending

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Appendix A
Photographs

Photograph No. ST-01

Front parking lot.

Photograph No. ST-02

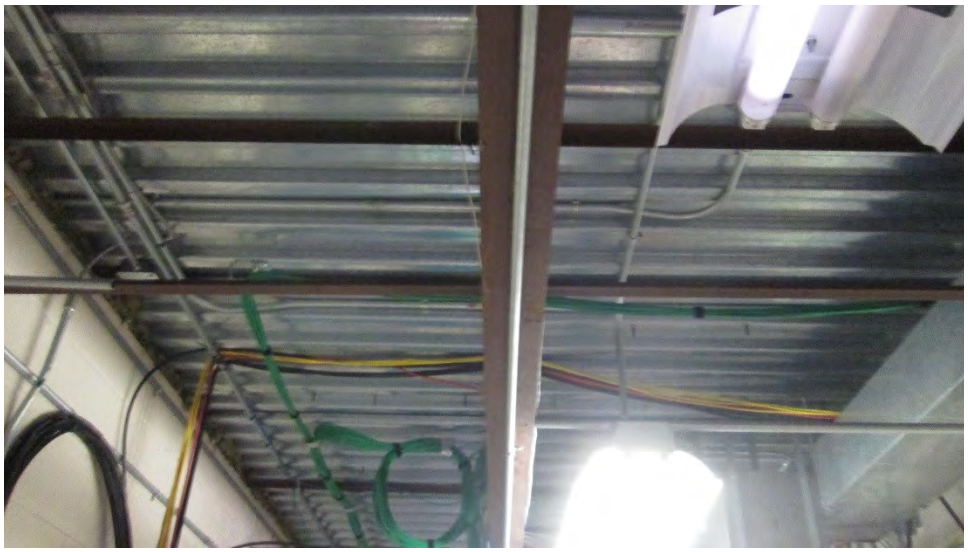
Surface of parking lot in good condition.

Photograph No. ST-03

Failed concrete at Gate House steps.

Photograph No. ST-04

Typical condition of interior roadway.



Photograph No. S-01

Roof structure at Gate House

Photograph No. S-01

Failed structure at Modular Housing

Photograph No. S-03

Failed roof framing and decking at Quonset Hut extension.

Photograph No. R-1

Gate House roof.

Photograph No. R-2

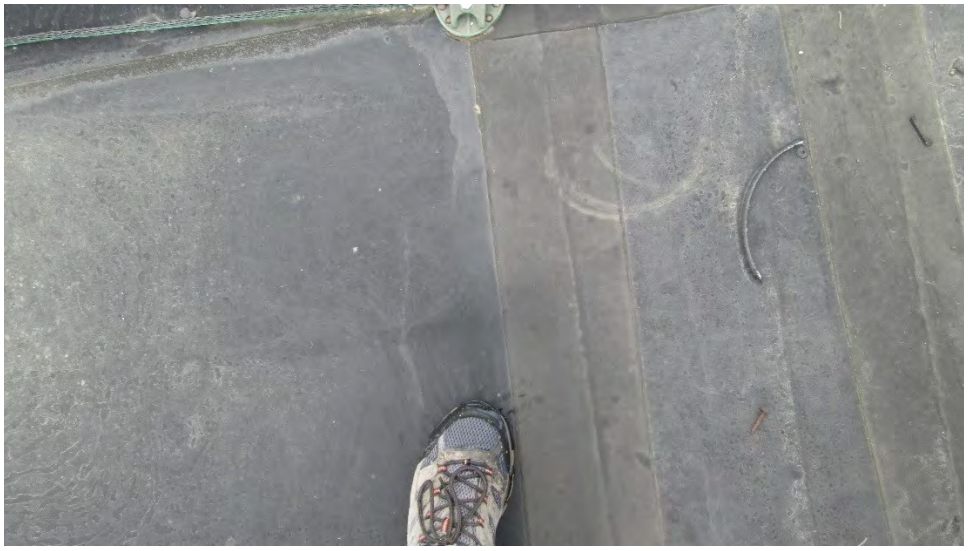
Soft insulation at Gate House roof.

Photograph No. R-3

Failed seam at Gate House roof.

Photograph No. R-4

Visitor Building roof.



Photograph No. R-5

Soft insulation at Visitor Building roof.

Photograph No. R-6

Poorly adhered flashing at Visitor Building roof.

Photograph No. R-6

Failed gutter at Administration Building.

Photograph No. R-7

Missing gutter at Administration Building.

Photograph No. R-8

Shingle roof at Main Housing.

Photograph No. R-9

Slate roof at Administration Building.

Photograph No. R-10

Roof at Modular Housing.

Photograph No. R-11

Failed seam at Modular Housing roof.

Photograph No. EX-1

Gate House building.

Photograph No. EX-2

Exposed insulation at Gate House exterior wall.

Photograph No. EX-3

Failed sealant at Gate House wall.

Photograph No. EX-4

Visitor building.

Photograph No. EX-5

Exterior of Administration Building (far left) and Main Housing (right).

Photograph No. EX-6

Failed sealants at Visitor Building.

Photograph No. EX-7

Exterior of Main Housing.

Photograph No. EX-8

Cracked lintel at Administration Building.

Photograph No. EX-9

Failed sealant at Administration Building.

Photograph No. EX-10

Failed sealant at Main Housing.

Photograph No. EX-11

Failed paint at Administration Building fascia resulting from lack of gutter.

Photograph No. EX-12

Overview of Modular Housing.

Photograph No. EX-13

Failed sealant at Modular Housing.

Photograph No. EX-14

Morton building.

Photograph No. EX-15

Quonset Hut.

Photograph No. EX-16

Quonset Hut extension.

Photograph No. C-01

Elevator controller.

Photograph No. SE-1

Perimeter fence.

Photograph No. I-1

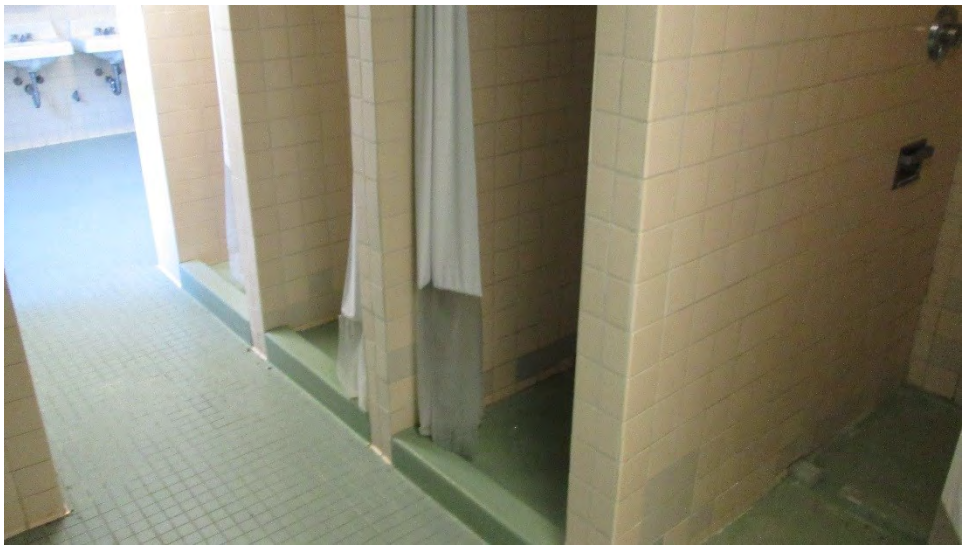
Interior of Gate House.

Photograph No. I-2

Interior of Visitor Building.

Photograph No. I-3

Library at Administration Building.



Photograph No. I-4

Showers at Main Housing.

Photograph No. I-5

Kitchen.

Photograph No. I-6

Failed flooring at Modular Housing, upper level.

Photograph No. I-7

Gymnasium interior.

Photograph No. I-7

Failed interior wall at Quonset Hut.

Photograph No. M-01

Boilers and hot water storage tank

Photograph No. M-02

Heating water pumps

Photograph No. M-03

Heating water zone pumps

Photograph No. M-04

Central station air handling unit with chilled water coils serving the Administration office areas

Photograph No. M-05

Carrier reciprocating chiller (1988 vintage)

Photograph No. M-06

Air-cooled condenser

Photograph No. M-07

Gate House packaged rooftop air conditioning unit

Photograph No. M-08

Modular Housing gas-fired furnaces

Photograph No. M-09

Modular Housing packaged rooftop air conditioning unt

Photograph No. M-10

Original gas-fired furnace serving Modular Housing

Photograph No. M-11

Heating water boilers

Photograph No. M-12

Hybrid Pneumatic / Digital HVAC system controls

Photograph No. E-01

4,160-volt service disconnects

Photograph No. E-02

Gate House primary electrical service (subfeeds 1990's expansion effort)

Photograph No. E-03

2,000-amp electrical service (Administration, Main Housing, Gym, Kitchen)

Photograph No. E-04

Emergency power generator (Administration, Gym, Kitchen, Main Housing)

Photograph No. E-05

350-kilowatt diesel generator (Modular Housing, Visitor Building, Gate House, Morton)

Photograph No. E-06

Typical Secondary Electrical Distribution Breaker Panel

Photograph No. E-07

Door alarm control panel and Bosch CCTV camera controls

Photograph No. E-08

Pad mounted electrical service transformer

Photograph No. P-01

Kitchen water heater

Photograph No. P-02

Main Housing / Administration domestic hot water boiler

Photograph No. P-03

Typical modular housing domestic water heater

Photograph No. P-04

Typical correctional grad pluming fixtures

Photograph No. P-05

Typical Staff Restroom Fixtures and Finishes

Photograph No. P-06

Modular housing plumbing chase

Photograph No. FLS-01

Fire Alarm Control Panel (Administration, Main Housing, Gym, Kitchen)

Photograph No. FLS-02

Fire Alarm Control Panel (Gate House)

Photograph No. FLS-03

Electric fire pump

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Appendix B

Ten Year Capital Expenditure Forecast

Ten Year Capital Expenditure Forecast
Bay State Correctional Center
28 Clark Street
Norfolk, Massachusetts 02056

SNC·LAVALIN

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Component No.	CAPEX Recommendation	Priority Category	Deficiency Category	Building	Estimated Useful Life or Replacement Cycle (Yrs.)	Remaining Useful Life (Yrs.)	Quantity	Unit of Measurement	Unit Cost	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Required
									Year	1	2	3	4	5	6	7	8	9	10	
Site System																				
Required																				
1	Crack Fill, Seal Coat & Re-Stripe Parking Lot (Cycle 1)	3 - Necessary, Not Yet Critical	Capital Renewal	Common Asset	10	1	6,660	SY	$3.00	$19,980										$19,980
2	Crack Fill, Seal Coat & Re-Stripe Parking Lot (Cycle 2)	3 - Necessary, Not Yet Critical	Capital Renewal	Common Asset	5	6	6,660	SY	$3.00						$19,980					$19,980
3	Crack Fill & Seal Coat Interior Roadways	3 - Necessary, Not Yet Critical	Capital Renewal	Common Asset	20	1	3,900	SY	$5.00	$19,500										$19,500
4	Resurface Interior Roadways	3 - Necessary, Not Yet Critical	Capital Renewal	Common Asset	20	6	3,900	SY	$25.00						$97,500					$97,500
5	Concrete Repairs at Building Entrances and Driveways	3 - Necessary, Not Yet Critical	Deferred Maintenance	Common Asset	10	1	1,000	SF	$25.00	$25,000										$25,000
6	Resurface Asphalt Track	3 - Necessary, Not Yet Critical	Deferred Maintenance	Common Asset	10	1	1,000	SY	$22.00	$22,000										$22,000
Security Systems																				
Required																				
1	Vehicle Trap Gate Replacements	2 - Potentially Critical	Deferred Maintenance	Common Asset	30	1	1	LS	$80,000.00	$80,000										$80,000
2	Upgrade Analog CCTV Cameras to Latest IP Standard	3 - Necessary, Not Yet Critical	Capital Renewal	Common Asset	15	1	47	EA	$3,500.00	$164,500										$164,500
3	Phone System Modernization	3 - Necessary, Not Yet Critical	Capital Improvement	Common Asset	15	2	150,000	SF	$3.00		$450,000									$450,000
Structural Systems																				
Required																				
1	Structural Repairs to Modular Housing First Floor Office	1 - Currently Critical and/or Code Violations	Deferred Maintenance	Modular Housing	15	1	150	SF	$150.00	$22,500										$22,500
Roofing Systems																				
Required																				
1	Main Housing Gutter & Downspout Installation	2 - Potentially Critical	Deferred Maintenance	Main Housing	20	1	810	LF	$110.00	$89,100										$89,100
2	Main Housing Asphalt Shingle Roof Replacement	3 - Necessary, Not Yet Critical	Capital Renewal	Main Housing	20	7	30,000	SF	$12.00							$360,000				$360,000
3	Gymnasium Asphalt Shingle Roof Replacement	3 - Necessary, Not Yet Critical	Capital Renewal	Gymnasium	20	7	6,000	SF	$12.00							$72,000				$72,000
4	Gymnasium Gutter & Downspout Installation	2 - Potentially Critical	Deferred Maintenance	Main Housing	20	1	100	LF	$110.00	$11,000										$11,000
5	Kitchen Asphalt Shingle Roof Replacement	3 - Necessary, Not Yet Critical	Capital Renewal	Kitchen	20	7	5,000	SF	$12.00							$60,000				$60,000
6	Kitchen Gutter & Downspout Installation	2 - Potentially Critical	Deferred Maintenance	Main Housing	20	1	100	LF	$110.00	$11,000										$11,000
7	Replace Low-Slope EPDM Roof System	2 - Potentially Critical	Deferred Maintenance	Modular Housing	20	2	37,500	SF	$30.00		$1,125,000									$1,125,000
8	Replace Gutters and Downspouts	3 - Necessary, Not Yet Critical	Capital Renewal	Administration Building	20	3	1,000	LF	$76.00			$76,000								$76,000

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Component No.	CAPEX Recommendation	Priority Category	Deficiency Category	Building	Estimated Useful Life or Replacement Cycle (Yrs.)	Remaining Useful Life (Yrs.)	Quantity	Unit of Measurement	Unit Cost	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Required
									Year	1	2	3	4	5	6	7	8	9	10	
9	Replace Low-Slope EPDM Roof System	2 - Potentially Critical	Deferred Maintenance	Gate House	20	1	12,000	SF	$30.00	$360,000										$360,000
10	Replace Low-Slope EPDM Roof System	2 - Potentially Critical	Capital Renewal	Visitor Building	20	3	8,310	SF	$30.00			$249,300								$249,300
11	Replace Roof & Exterior Wall Panels	2 - Potentially Critical	Deferred Maintenance	Quonset Hut	20	1	2,040	SF	$32.00	$65,280										$65,280
12	Replace Roof System & Roof Structure	2 - Potentially Critical	Deferred Maintenance	Quonset Hut Extension	20	1	529	SF	$56.00	$29,624										$29,624
Exterior Elements																				
Required																				
1	Replace Sealants at Windows and Control Joints	3 - Necessary, Not Yet Critical	Deferred Maintenance	Main Housing	15	1	2,500	LF	$25.00	$62,500										$62,500
2	Repaint Soffits and Fascia	3 - Necessary, Not Yet Critical	Deferred Maintenance	Main Housing	10	1	600	LF	$55.00	$33,000										$33,000
3	Replace Rotted Soffit and Fascia Boards	3 - Necessary, Not Yet Critical	Deferred Maintenance	Main Housing	10	1	120	LF	$300.00	$36,000										$36,000
4	Replace Sealants at Control Joints	3 - Necessary, Not Yet Critical	Deferred Maintenance	Gymnasium	15	1	100	LF	$52.00	$5,200										$5,200
5	Repaint Soffits and Fascia	3 - Necessary, Not Yet Critical	Deferred Maintenance	Gymnasium	10	1	200	LF	$49.00	$9,800										$9,800
6	Replace Sealants at Control Joints and Windows	3 - Necessary, Not Yet Critical	Deferred Maintenance	Modular Housing	15	1	3,000	LF	$25.00	$75,000										$75,000
7	Repaint Building Exterior	3 - Necessary, Not Yet Critical	Deferred Maintenance	Modular Housing	10	1	10,000	SF	$6.00	$60,000										$60,000
8	Replace Sealants at Control Joints and Windows	3 - Necessary, Not Yet Critical	Deferred Maintenance	Administration Building	15	1	1,650	LF	$25.00	$41,250										$41,250
9	Repaint Building Exterior	3 - Necessary, Not Yet Critical	Capital Renewal	Administration Building	10	4	8,000	SF	$9.00				$72,000							$72,000
10	Replace Cracked Lintels	3 - Necessary, Not Yet Critical	Deferred Maintenance	Administration Building	10	1	10	EA	$4,500.00	$45,000										$45,000
11	Replace Sealants at Control Joints and Windows	3 - Necessary, Not Yet Critical	Deferred Maintenance	Gate House	15	1	750	LF	$25.00	$18,750										$18,750
12	Repaint Building Exterior	3 - Necessary, Not Yet Critical	Deferred Maintenance	Gate House	10	1	3,500	SF	$6.00	$21,000										$21,000
13	Replace Sealants at Control Joints and Windows	3 - Necessary, Not Yet Critical	Deferred Maintenance	Visitor Building	15	1	650	LF	$25.00	$16,250										$16,250
14	Repaint Building Exterior	3 - Necessary, Not Yet Critical	Deferred Maintenance	Visitor Building	10	1	3,000	SF	$6.00	$18,000										$18,000
15	Replace T1-11 Siding	3 - Necessary, Not Yet Critical	Deferred Maintenance	Quonset Hut	20	1	240	SF	$65.00	$15,600										$15,600

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Component No.	CAPEX Recommendation	Priority Category	Deficiency Category	Building	Estimated Useful Life or Replacement Cycle (Yrs.)	Remaining Useful Life (Yrs.)	Quantity	Unit of Measurement	Unit Cost	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Required
									Year	1	2	3	4	5	6	7	8	9	10	
16	Replace Window & Door	3 - Necessary, Not Yet Critical	Deferred Maintenance	Quonset Hut	20	1	1	LS	$5,000.00	$5,000										$5,000
17	Replace Siding	3 - Necessary, Not Yet Critical	Deferred Maintenance	Quonset Hut Extension	20	1	705	SF	$35.00	$24,675										$24,675
18	Replace Window & Door	3 - Necessary, Not Yet Critical	Deferred Maintenance	Quonset Hut Extension	20	1	1	LS	$7,500.00	$7,500										$7,500
Mechanical																				
Required																				
1	Replace Main Housing Heating Water Boiler (Cleaver Brooks)	3 - Necessary, Not Yet Critical	Capital Renewal	Main Housing	30	5	2,500	MBH	$150.00					$375,000						$375,000
2	Main Housing Heating Water Pump Replacements	3 - Necessary, Not Yet Critical	Capital Renewal	Main Housing	20	2	15	HP	$1,500.00		$22,500									$22,500
3	Replace Packaged Gas-Fired Rooftop Air-Conditioning Units	3 - Necessary, Not Yet Critical	Capital Renewal	Modular Housing	15	5	20	TON	$3,000.00					$60,000						$60,000
4	Replace Original Hastings Rooftop Furnace	2 - Potentially Critical	Capital Renewal	Modular Housing	15	1	250	MBH	$150.00	$37,500										$37,500
5	Replace Gas-Fired Rooftop Furnaces	3 - Necessary, Not Yet Critical	Capital Renewal	Modular Housing	15	6	750	MBH	$150.00						$112,500					$112,500
6	Administration Above Ground Fuel Storage	1 - Currently Critical and/or Code Violations	Deferred Maintenance	Administration Building	30	1	15,000	GAL	$10.00	$150,000										$150,000
7	Administration Primary and Secondary Heating Water Pump Replacements	2 - Potentially Critical	Capital Renewal	Administration Building	20	2	15	HP	$1,500.00		$22,500									$22,500
8	Administration Air-Cooled Chiller Replacement	2 - Potentially Critical	Capital Renewal	Administration Building	20	2	50	TON	$2,000.00		$100,000									$100,000
9	Administration Heating / Ventilating Unit Replacements	3 - Necessary, Not Yet Critical	Capital Renewal	Administration Building	30	5	27,000	CFM	$15.00					$405,000						$405,000
10	Administration Fan-Coil Unit Replacements	3 - Necessary, Not Yet Critical	Capital Renewal	Administration Building	30	5	41	EA	$3,000.00					$123,000						$123,000
11	Administration HVAC System Controls Upgrade	3 - Necessary, Not Yet Critical	Capital Renewal	Administration Building	30	5	32,754	SF	$10.00					$327,540						$327,540
12	Replace Packaged Gas-Fired Rooftop Air-Conditioning Units	3 - Necessary, Not Yet Critical	Capital Renewal	Gate House	15	5	20	TON	$3,000.00					$60,000						$60,000
13	Replace Packaged Gas-Fired Rooftop Air-Conditioning Units	3 - Necessary, Not Yet Critical	Capital Renewal	Visitor Building	15	5	13	TON	$2,500.00					$32,500						$32,500
Electrical																				
Required																				
1	Replace & Increase Capacity of Emergency Power Generator	2 - Potentially Critical	Capital Improvement	Administration Building	30	2	400	KW	$1,000.00		$400,000									$400,000
2	Administration Generator Fuel Storage (Above Ground)	2 - Potentially Critical	Deferred Maintenance	Administration Building	30	1	10,000	GAL	$10.00	$100,000										$100,000
3	Main Generator Fuel Storage (Above Ground)	2 - Potentially Critical	Deferred Maintenance	Gate House	30	1	10,000	GAL	$10.00	$100,000										$100,000

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Component No.	CAPEX Recommendation	Priority Category	Deficiency Category	Building	Estimated Useful Life or Replacement Cycle (Yrs.)	Remaining Useful Life (Yrs.)	Quantity	Unit of Measurement	Unit Cost	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Required
									Year	1	2	3	4	5	6	7	8	9	10	
4	LED Lighting Upgrades	3 - Necessary, Not Yet Critical	Capital Improvement	Modular Housing	20	5	74,496	SF	$10.00					$744,960						$744,960
5	LED Lighting Upgrades	3 - Necessary, Not Yet Critical	Capital Improvement	Main Housing	20	5	75,762	SF	$10.00					$757,620						$757,620
6	LED Lighting Upgrades	3 - Necessary, Not Yet Critical	Capital Improvement	Administration Building	20	5	32,754	SF	$10.00					$327,540						$327,540
7	LED Lighting Upgrades	3 - Necessary, Not Yet Critical	Capital Improvement	Gymnasium	20	5	5,040	SF	$10.00					$50,400						$50,400
8	LED Lighting Upgrades	3 - Necessary, Not Yet Critical	Capital Improvement	Kitchen	20	5	7,080	SF	$10.00					$70,800						$70,800
9	LED Lighting Upgrades	3 - Necessary, Not Yet Critical	Capital Improvement	Gate House	20	5	11,312	SF	$10.00					$113,120						$113,120
10	LED Lighting Upgrades	3 - Necessary, Not Yet Critical	Capital Improvement	Visitor Building	20	5	6,972	SF	$10.00					$69,720						$69,720
Plumbing																				
Required																				
1	Main Housing Domestic Hot Water Boiler Replacement	3 - Necessary, Not Yet Critical	Capital Renewal	Main Housing	20	9	872	MBH	$150.00									$130,800		$130,800
2	Modular Housing Domestic Water Heater Replacements	3 - Necessary, Not Yet Critical	Capital Renewal	Modular Housing	12	3	4	EA	$15,000.00			$60,000								$60,000
3	Site Sewage Ejector Pump Replacements	2 - Potentially Critical	Capital Renewal	Common Asset	20	1	1	SYS	$50,000.00	$50,000										$50,000
4	Administration Sump Pump Replacements	3 - Necessary, Not Yet Critical	Capital Renewal	Main Housing	20	1	1	SYS	$15,000.00	$15,000										$15,000
5	Kitchen Grease Trap Replacement	2 - Potentially Critical	Capital Renewal	Kitchen	20	1	1	SYS	$150,000.00	$150,000										$150,000
Fire & Life Safety																				
Required																				
1	Study / Design for Fire Alarm System Replacements	3 - Necessary, Not Yet Critical	Capital Renewal	Common Asset	20	1	200	HRS	$200.00	$40,000										$40,000
2	Fire Alarm System Replacement	1 - Currently Critical and/or Code Violations	Deferred Maintenance	Main Housing	20	1	75,762	SF	$10.00	$757,620										$757,620
3	Fire Alarm System Replacement	1 - Currently Critical and/or Code Violations	Deferred Maintenance	Administration Building	20	1	32,754	SF	$10.00	$327,540										$327,540
4	Fire Alarm System Replacement	1 - Currently Critical and/or Code Violations	Deferred Maintenance	Gate House	20	1	11,312	SF	$10.00	$113,120										$113,120
5	Fire Alarm System Replacement	1 - Currently Critical and/or Code Violations	Deferred Maintenance	Gymnasium	20	1	5,040	SF	$10.00	$50,400										$50,400
6	Fire Alarm System Replacement	1 - Currently Critical and/or Code Violations	Deferred Maintenance	Kitchen	20	1	7,080	SF	$10.00	$70,800										$70,800
Conveyance Systems																				
Required																				

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Component No.	CAPEX Recommendation	Priority Category	Deficiency Category	Building	Estimated Useful Life or Replacement Cycle (Yrs.)	Remaining Useful Life (Yrs.)	Quantity	Unit of Measurement	Unit Cost	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Required
									Year	1	2	3	4	5	6	7	8	9	10	
1	Modernize Passenger Elevator	3 - Necessary, Not Yet Critical	Capital Renewal	Administration Building	20	6	1	EA	$350,000.00						$350,000					$350,000
Interiors																				
Required																				
1	Replace Resilient Vinyl Floor Tiles	3 - Necessary, Not Yet Critical	Deferred Maintenance	Modular Housing	15	1	69,720	SF	$6.00	$418,320										$418,320
2	Replace Victory Refrigerator	3 - Necessary, Not Yet Critical	Capital Renewal	Kitchen	15	3	1	EA	$15,000.00			$15,000								$15,000
3	Replace Dishwasher	3 - Necessary, Not Yet Critical	Capital Renewal	Kitchen	15	3	1	EA	$10,000.00			$10,000								$10,000
4	Demolish & Reconstruct Interior Finishes & Services	2 - Potentially Critical	Deferred Maintenance	Quonset Hut	30	1	2,040	SF	$23.00	$46,920										$46,920
Accessibility																				
Required																				
1	Waiting for DCAMM's Accessibility Team																			$0
									Required Cost (2019 USD)	$3,841,229	$2,120,000	$410,300	$72,000	$3,517,200	$579,980	$492,000	$0	$130,800	$0	$11,163,509
									Required Cost (Inflated @ 4.5% Per Yr.)	$4,194,718	$2,419,272	$489,290	$89,725	$4,580,309	$789,273	$699,674	$0	$203,128	$0	$13,465,390
									Total Cost (2019 USD/ SF/ Yr.)	$17.67	$9.75	$1.89	$0.33	$16.18	$2.67	$2.26	$0.00	$0.60	$0.00	$51.36

Notes:

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Appendix C

CAMIS Input Sheet

Project ID	Building Code	Site Code	Building Name	Uniformat Code	Project Description / Deficiency Title	Deficiency Description	CAMIS Number	System Condition	DCAMM Priority	Project Cost / Deficiency Cost	Investment Criteria	Project Category	Package	ADA Program Access / Min Compliance	Project Type	Campus Name	Project Input Year
	N/A	DOC07	Common Asset	G2020	Asphalt Maintenance	Crack Fill, Seal Coat & Re-Stripe Parking Lot (Cycle 1)		Good	3 - Necessary, Not Yet Critical	$19,980.00	Asset Preservation	Repair / Maintenance	Infrastructure		Capital Project	Bay State Correctional Center	2021
	N/A	DOC07	Common Asset	G2020	Asphalt Maintenance	Crack Fill, Seal Coat & Re-Stripe Parking Lot (Cycle 2)		Good	3 - Necessary, Not Yet Critical	$19,980.00	Asset Preservation	Repair / Maintenance	Infrastructure		Capital Project	Bay State Correctional Center	2026
	N/A	DOC07	Common Asset	G2020	Resurface Asphalt Pavements	Crack Fill & Seal Coat Interior Roadways		Fair	3 - Necessary, Not Yet Critical	$19,500.00	Asset Preservation	Repair / Maintenance	Infrastructure		Capital Project	Bay State Correctional Center	2021
	N/A	DOC07	Common Asset	G2020	Resurface Asphalt Pavements	Resurface Interior Roadways		Fair	3 - Necessary, Not Yet Critical	$97,500.00	Asset Preservation	Repair / Maintenance	Infrastructure		Capital Project	Bay State Correctional Center	2026
	N/A	DOC07	Common Asset	G2020	Replace Concrete Flatwork	Concrete Repairs at Building Entrances and Driveways		Fair	3 - Necessary, Not Yet Critical	$25,000.00	Asset Preservation	Repair / Maintenance	Infrastructure		Capital Project	Bay State Correctional Center	2021
	N/A	DOC07	Common Asset	G2020	Resurface Asphalt Track	Resurface Asphalt Track		Poor	3 - Necessary, Not Yet Critical	$22,000.00	Asset Preservation	Repair / Maintenance	Infrastructure		Capital Project	Bay State Correctional Center	2021
	N/A	DOC07	Common Asset	G2060.20	Vehicle Trap Improvements	Vehicle Trap Gate Replacements		Poor	2 - Potentially Critical	$80,000.00	Asset Preservation	Repair / Maintenance	Infrastructure		Capital Project	Bay State Correctional Center	2021
	N/A	DOC07	Common Asset	D7030.10	CCTV Analog to IP	Upgrade Analog CCTV Cameras to Latest IP Standard		Fair	3 - Necessary, Not Yet Critical	$164,500.00	Program Improvement	Modernization	Building Systems		Capital Project	Bay State Correctional Center	2021
	N/A	DOC07	Common Asset	D6020	Phone System	Phone System Modernization		Fair	3 - Necessary, Not Yet Critical	$450,000.00	Program Improvement	Modernization	Building Systems		Capital Project	Bay State Correctional Center	2022
	625DOCPB15	DOC07	Modular Housing	B1010.10	First Floor Office Structural Repair	Structural Repairs to Modular Housing First Floor Office		Fail	1 - Currently Critical and/or Code Violations	$22,500.00	Safety / Code	Repair / Maintenance	Building Systems		Capital Project	Bay State Correctional Center	2021
	625DOCPB13	DOC07	Main Housing	B3010.10	Install Gutters & Downspouts	Main Housing Gutter & Downspout Installation		Fail	2 - Potentially Critical	$89,100.00	Asset Preservation	Repair / Maintenance	Building Envelope		Capital Project	Bay State Correctional Center	2021
	625DOCPB13	DOC07	Main Housing	B3010.10	Shingle Roof Replacement	Main Housing Asphalt Shingle Roof Replacement		Good	3 - Necessary, Not Yet Critical	$360,000.00	Asset Preservation	Repair / Maintenance	Building Envelope		Capital Project	Bay State Correctional Center	2027
	625DOCPB10	DOC07	Gymnasium	B3010.10	Shingle Roof Replacement	Gymnasium Asphalt Shingle Roof Replacement		Good	3 - Necessary, Not Yet Critical	$72,000.00	Asset Preservation	Repair / Maintenance	Building Envelope		Capital Project	Bay State Correctional Center	2027
	625DOCPB13	DOC07	Main Housing	B3010.10	Install Gutters & Downspouts	Gymnasium Gutter & Downspout Installation		Fail	2 - Potentially Critical	$11,000.00	Asset Preservation	Repair / Maintenance	Building Envelope		Capital Project	Bay State Correctional Center	2021
	625DOCPB12	DOC07	Kitchen	B3010.10	Shingle Roof Replacement	Kitchen Asphalt Shingle Roof Replacement		Good	3 - Necessary, Not Yet Critical	$60,000.00	Asset Preservation	Repair / Maintenance	Building Envelope		Capital Project	Bay State Correctional Center	2027
	625DOCPB13	DOC07	Main Housing	B3010.10	Install Gutters & Downspouts	Kitchen Gutter & Downspout Installation		Fail	2 - Potentially Critical	$11,000.00	Asset Preservation	Repair / Maintenance	Building Envelope		Capital Project	Bay State Correctional Center	2021
	625DOCPB15	DOC07	Modular Housing	B3010.50	Replace EPDM Roof	Replace Low-Slope EPDM Roof System		Poor	2 - Potentially Critical	$1,125,000.00	Asset Preservation	Repair / Maintenance	Building Envelope		Capital Project	Bay State Correctional Center	2022
	625DOCPB83	DOC07	Administration Building	B3020.70	Replace Gutters and Downspouts	Replace Gutters and Downspouts		Fail	3 - Necessary, Not Yet Critical	$76,000.00	Asset Preservation	Repair / Maintenance	Building Envelope		Capital Project	Bay State Correctional Center	2023
	625DOCPB02	DOC07	Gate House	B3010.50	Replace EPDM Roof	Replace Low-Slope EPDM Roof System		Poor	2 - Potentially Critical	$360,000.00	Asset Preservation	Repair / Maintenance	Building Envelope		Capital Project	Bay State Correctional Center	2021
	625DOCPB20	DOC07	Visitor Building	B3010.50	Replace EPDM Roof	Replace Low-Slope EPDM Roof System		Fair	2 - Potentially Critical	$249,300.00	Asset Preservation	Repair / Maintenance	Building Envelope		Capital Project	Bay State Correctional Center	2023
	625DOCPB17	DOC07	Quonset Hut	B3010.50	Replace Roof and Walls	Replace Roof & Exterior Wall Panels		Fail	2 - Potentially Critical	$65,280.00	Asset Preservation	Repair / Maintenance	Building Envelope		Capital Project	Bay State Correctional Center	2021
	625DOCPB18	DOC07	Quonset Hut Extension	B3010.50	Replace Roof & Roof Structure	Replace Roof System & Roof Structure		Fail	2 - Potentially Critical	$29,624.00	Asset Preservation	Repair / Maintenance	Building Envelope		Capital Project	Bay State Correctional Center	2021
	625DOCPB13	DOC07	Main Housing	B2010	Replace Sealants	Replace Sealants at Windows and Control Joints		Fair	3 - Necessary, Not Yet Critical	$62,500.00	Asset Preservation	Repair / Maintenance	Building Envelope		Capital Project	Bay State Correctional Center	2021
	625DOCPB13	DOC07	Main Housing	B2010	Repaint Soffits and Fascia	Repaint Soffits and Fascia		Poor	3 - Necessary, Not Yet Critical	$33,000.00	Asset Preservation	Repair / Maintenance	Building Envelope		Capital Project	Bay State Correctional Center	2021
	625DOCPB13	DOC07	Main Housing	B2010	Repaint Soffits and Fascia	Replace Rotted Soffit and Fascia Boards		Poor	3 - Necessary, Not Yet Critical	$36,000.00	Asset Preservation	Repair / Maintenance	Building Envelope		Capital Project	Bay State Correctional Center	2021
	625DOCPB10	DOC07	Gymnasium	B2010	Replace Sealants	Replace Sealants at Control Joints		Fair	3 - Necessary, Not Yet Critical	$5,200.00	Asset Preservation	Repair / Maintenance	Building Envelope		Capital Project	Bay State Correctional Center	2021
	625DOCPB10	DOC07	Gymnasium	B2010	Repaint Soffits and Fascia	Repaint Soffits and Fascia		Poor	3 - Necessary, Not Yet Critical	$9,800.00	Asset Preservation	Repair / Maintenance	Building Envelope		Capital Project	Bay State Correctional Center	2021
	625DOCPB15	DOC07	Modular Housing	B2010	Replace Sealants	Replace Sealants at Control Joints and Windows		Fair	3 - Necessary, Not Yet Critical	$75,000.00	Asset Preservation	Repair / Maintenance	Building Envelope		Capital Project	Bay State Correctional Center	2021
	625DOCPB15	DOC07	Modular Housing	B2010	Repaint Building Exterior	Repaint Building Exterior		Fair	3 - Necessary, Not Yet Critical	$60,000.00	Asset Preservation	Repair / Maintenance	Building Envelope		Capital Project	Bay State Correctional Center	2021
	625DOCPB83	DOC07	Administration Building	B2010	Replace Sealants	Replace Sealants at Control Joints and Windows		Fair	3 - Necessary, Not Yet Critical	$41,250.00	Asset Preservation	Repair / Maintenance	Building Envelope		Capital Project	Bay State Correctional Center	2021
	625DOCPB83	DOC07	Administration Building	B2010	Repaint Building Exterior	Repaint Building Exterior		Fair	3 - Necessary, Not Yet Critical	$72,000.00	Asset Preservation	Repair / Maintenance	Building Envelope		Capital Project	Bay State Correctional Center	2024
	625DOCPB83	DOC07	Administration Building	B2010	Replace Cracked Lintels	Replace Cracked Lintels		Fair	3 - Necessary, Not Yet Critical	$45,000.00	Asset Preservation	Repair / Maintenance	Building Envelope		Capital Project	Bay State Correctional Center	2021
	625DOCPB02	DOC07	Gate House	B2010	Replace Sealants	Replace Sealants at Control Joints and Windows		Poor	3 - Necessary, Not Yet Critical	$18,750.00	Asset Preservation	Repair / Maintenance	Building Envelope		Capital Project	Bay State Correctional Center	2021
	625DOCPB02	DOC07	Gate House	B2010	Repaint Building Exterior	Repaint Building Exterior		Fair	3 - Necessary, Not Yet Critical	$21,000.00	Asset Preservation	Repair / Maintenance	Building Envelope		Capital Project	Bay State Correctional Center	2021
	625DOCPB20	DOC07	Visitor Building	B2010	Replace Sealants	Replace Sealants at Control Joints and Windows		Fair	3 - Necessary, Not Yet Critical	$16,250.00	Asset Preservation	Repair / Maintenance	Building Envelope		Capital Project	Bay State Correctional Center	2021
	625DOCPB20	DOC07	Visitor Building	B2010	Repaint Building Exterior	Repaint Building Exterior		Fair	3 - Necessary, Not Yet Critical	$18,000.00	Asset Preservation	Repair / Maintenance	Building Envelope		Capital Project	Bay State Correctional Center	2021
	625DOCPB17	DOC07	Quonset Hut	B2010	Replace Wood Siding	Replace T1-11 Siding		Fair	3 - Necessary, Not Yet Critical	$15,600.00	Asset Preservation	Repair / Maintenance	Building Envelope		Capital Project	Bay State Correctional Center	2021
	625DOCPB17	DOC07	Quonset Hut	B2010	Replace Window & Door	Replace Window & Door		Fair	3 - Necessary, Not Yet Critical	$5,000.00	Asset Preservation	Repair / Maintenance	Building Envelope		Capital Project	Bay State Correctional Center	2021
	625DOCPB18	DOC07	Quonset Hut Extension	B2010	Replace Wood Siding	Replace Siding		Fair	3 - Necessary, Not Yet Critical	$24,675.00	Asset Preservation	Repair / Maintenance	Building Envelope		Capital Project	Bay State Correctional Center	2021
	625DOCPB18	DOC07	Quonset Hut Extension	B2010	Replace Window & Door	Replace Window & Door		Fair	3 - Necessary, Not Yet Critical	$7,500.00	Asset Preservation	Repair / Maintenance	Building Envelope		Capital Project	Bay State Correctional Center	2021
	625DOCPB13	DOC07	Main Housing	D3020.10	1988 Cleaver Brooks Boiler Replacement	Replace Main Housing Heating Water Boiler (Cleaver Brooks)		Adequate	3 - Necessary, Not Yet Critical	$375,000.00	Reliability	Repair / Maintenance	Building Systems			Bay State Correctional Center	2025
	625DOCPB13	DOC07	Main Housing	D3050.10	Main Housing Heating Water Pumps	Main Housing Heating Water Pump Replacements		Fair	3 - Necessary, Not Yet Critical	$22,500.00	Reliability	Repair / Maintenance	Building Systems			Bay State Correctional Center	2022
	625DOCPB15	DOC07	Modular Housing	D3020.70	Modular Housing Rooftop A/C	Replace Packaged Gas-Fired Rooftop Air-Conditioning Units		Adequate	3 - Necessary, Not Yet Critical	$60,000.00	Reliability	Repair / Maintenance	Building Systems			Bay State Correctional Center	2025
	625DOCPB15	DOC07	Modular Housing	D3030.70	Modular Housing Original Furnace	Replace Original Hastings Rooftop Furnace		Adequate	2 - Potentially Critical	$37,500.00	Reliability	Repair / Maintenance	Building Systems			Bay State Correctional Center	2021
	625DOCPB15	DOC07	Modular Housing	D3030.70	Modular Housing Rooftop Furnaces	Replace Gas-Fired Rooftop Furnaces		Adequate	3 - Necessary, Not Yet Critical	$112,500.00	Reliability	Repair / Maintenance	Building Systems			Bay State Correctional Center	2026

	625DOCPB83	DOC07	Administration Building	D3010.50	Above Ground Fuel Storage	Administration Above Ground Fuel Storage	Poor	1 - Currently Critical and/or Code Violations	$150,000.00	Safety / Code	Modernization	Safety / Code	Bay State Correctional Center	2021
	625DOCPB83	DOC07	Administration Building	D3050.10	Admin Heating Water Pumps	Administration Primary and Secondary Heating Water Pump Replacements	Fair	2 - Potentially Critical	$22,500.00	Reliability	Repair / Maintenance	Building Systems	Bay State Correctional Center	2022
	625DOCPB83	DOC07	Administration Building	D3030.10	Admin Chiller	Administration Air-Cooled Chiller Replacement	Poor	2 - Potentially Critical	$100,000.00	Reliability	Repair / Maintenance	Building Systems	Bay State Correctional Center	2022
	625DOCPB83	DOC07	Administration Building	D3050.50	Admin Air Handling Units	Administration Heating / Ventilating Unit Replacements	Fair	3 - Necessary, Not Yet Critical	$405,000.00	Reliability	Repair / Maintenance	Building Systems	Bay State Correctional Center	2025
	625DOCPB83	DOC07	Administration Building	D3050.50	Admin Fan-Coil Units	Administration Fan-Coil Unit Replacements	Fair	3 - Necessary, Not Yet Critical	$123,000.00	Reliability	Repair / Maintenance	Building Systems	Bay State Correctional Center	2025
	625DOCPB83	DOC07	Administration Building	D8010.50	Admin DDC Upgrade	Administration HVAC System Controls Upgrade	Fair	3 - Necessary, Not Yet Critical	$327,540.00	Economic Opportunity	Modernization	Building Systems	Bay State Correctional Center	2025
	625DOCPB02	DOC07	Gate House	D3030.70	Gate House Rooftop Units	Replace Packaged Gas-Fired Rooftop Air-Conditioning Units	Adequate	3 - Necessary, Not Yet Critical	$60,000.00	Reliability	Repair / Maintenance	Building Systems	Bay State Correctional Center	2025
	625DOCPB20	DOC07	Visitor Building	D3050.10	Visitation Rooftop Units	Replace Packaged Gas-Fired Rooftop Air-Conditioning Units	Fair	3 - Necessary, Not Yet Critical	$32,500.00	Reliability	Repair / Maintenance	Building Systems	Bay State Correctional Center	2025
	625DOCPB83	DOC07	Administration Building	D5010.10	Replace Emergency Power Generator	Replace & Increase Capacity of Emergency Power Generator	Fair	2 - Potentially Critical	$400,000.00	Reliability	Infrastructure	Building Systems	Bay State Correctional Center	2022
	625DOCPB83	DOC07	Administration Building	D3010.50	Install Above Ground Fuel Storage	Administration Generator Fuel Storage (Above Ground)	Fair	2 - Potentially Critical	$100,000.00	Safety / Code	Modernization	Safety / Code	Bay State Correctional Center	2021
	625DOCPB02	DOC07	Gate House	D3010.50	Install Above Ground Fuel Storage	Main Generator Fuel Storage (Above Ground)	Fair	2 - Potentially Critical	$100,000.00	Safety / Code	Modernization	Safety / Code	Bay State Correctional Center	2021
	625DOCPB15	DOC07	Modular Housing	D5040.50	LED Lighting Upgrades	LED Lighting Upgrades	Adequate	3 - Necessary, Not Yet Critical	$744,960.00	Economic Opportunity	Modernization	Building Systems	Bay State Correctional Center	2025
	625DOCPB13	DOC07	Main Housing	D5040.50	LED Lighting Upgrades	LED Lighting Upgrades	Adequate	3 - Necessary, Not Yet Critical	$757,620.00	Economic Opportunity	Modernization	Building Systems	Bay State Correctional Center	2025
	625DOCPB83	DOC07	Administration Building	D5040.50	LED Lighting Upgrades	LED Lighting Upgrades	Adequate	3 - Necessary, Not Yet Critical	$327,540.00	Economic Opportunity	Modernization	Building Systems	Bay State Correctional Center	2025
	625DOCPB10	DOC07	Gymnasium	D5040.50	LED Lighting Upgrades	LED Lighting Upgrades	Adequate	3 - Necessary, Not Yet Critical	$50,400.00	Economic Opportunity	Modernization	Building Systems	Bay State Correctional Center	2025
	625DOCPB12	DOC07	Kitchen	D5040.50	LED Lighting Upgrades	LED Lighting Upgrades	Adequate	3 - Necessary, Not Yet Critical	$70,800.00	Economic Opportunity	Modernization	Building Systems	Bay State Correctional Center	2025
	625DOCPB02	DOC07	Gate House	D5040.50	LED Lighting Upgrades	LED Lighting Upgrades	Adequate	3 - Necessary, Not Yet Critical	$113,120.00	Economic Opportunity	Modernization	Building Systems	Bay State Correctional Center	2025
	625DOCPB20	DOC07	Visitor Building	D5040.50	LED Lighting Upgrades	LED Lighting Upgrades	Adequate	3 - Necessary, Not Yet Critical	$69,720.00	Economic Opportunity	Modernization	Building Systems	Bay State Correctional Center	2025
	625DOCPB13	DOC07	Main Housing	D2020.30	Domestic Water Boiler Replacement	Main Housing Domestic Hot Water Boiler Replacement	Adequate	3 - Necessary, Not Yet Critical	$130,800.00	Reliability	Infrastructure	Building Systems	Bay State Correctional Center	2029
	625DOCPB15	DOC07	Modular Housing	D2020.30	Domestic Water Heater Replacement	Modular Housing Domestic Water Heater Replacements	Fair	3 - Necessary, Not Yet Critical	$60,000.00	Reliability	Infrastructure	Building Systems	Bay State Correctional Center	2023
	N/A	DOC07	Common Asset	D2020.10	Site Sewage Ejector	Site Sewage Ejector Pump Replacements	Adequate	2 - Potentially Critical	$50,000.00	Reliability	Infrastructure	Building Systems	Bay State Correctional Center	2021
	625DOCPB13	DOC07	Main Housing	D2030.60	Sump Pump Replacement	Administration Sump Pump Replacements	Adequate	3 - Necessary, Not Yet Critical	$15,000.00	Reliability	Infrastructure	Building Systems	Bay State Correctional Center	2021
	625DOCPB12	DOC07	Kitchen	D2010.10	Grease Trap	Kitchen Grease Trap Replacement	Poor	2 - Potentially Critical	$150,000.00	Reliability	Infrastructure	Building Systems	Bay State Correctional Center	2021
	N/A	DOC07	Common Asset	D4010.10	Replace Fire Alarm System	Study / Design for Fire Alarm System Replacements	Fail	3 - Necessary, Not Yet Critical	$40,000.00	Safety / Code	Infrastructure	Building Systems	Bay State Correctional Center	2021
	625DOCPB13	DOC07	Main Housing	D4010.10	Replace Fire Alarm System	Fire Alarm System Replacement	Fail	1 - Currently Critical and/or Code Violations	$757,620.00	Safety / Code	Infrastructure	Building Systems	Bay State Correctional Center	2021
	625DOCPB83	DOC07	Administration Building	D4010.10	Replace Fire Alarm System	Fire Alarm System Replacement	Fail	1 - Currently Critical and/or Code Violations	$327,540.00	Safety / Code	Infrastructure	Building Systems	Bay State Correctional Center	2021
	625DOCPB02	DOC07	Gate House	D4010.10	Replace Fire Alarm System	Fire Alarm System Replacement	Poor	1 - Currently Critical and/or Code Violations	$113,120.00	Safety / Code	Infrastructure	Building Systems	Bay State Correctional Center	2021
	625DOCPB10	DOC07	Gymnasium	D4010.10	Replace Fire Alarm System	Fire Alarm System Replacement	Fail	1 - Currently Critical and/or Code Violations	$50,400.00	Safety / Code	Infrastructure	Building Systems	Bay State Correctional Center	2021
	625DOCPB12	DOC07	Kitchen	D4010.10	Replace Fire Alarm System	Fire Alarm System Replacement	Fail	1 - Currently Critical and/or Code Violations	$70,800.00	Safety / Code	Infrastructure	Building Systems	Bay State Correctional Center	2021
	625DOCPB83	DOC07	Administration Building	D1010.10	Modernize Passenger Elevator	Modernize Passenger Elevator	Fair	3 - Necessary, Not Yet Critical	$350,000.00	Asset Preservation	Modernization	Building Systems	Bay State Correctional Center	2026
	625DOCPB15	DOC07	Modular Housing	C20	Replace Resilient Vinyl Floor Tiles	Replace Resilient Vinyl Floor Tiles	Poor	3 - Necessary, Not Yet Critical	$418,320.00	Reliability	Modernization	Building Systems	Bay State Correctional Center	2021
	625DOCPB12	DOC07	Kitchen	C20	Replace Victory Refrigerator	Replace Victory Refrigerator	Fair	3 - Necessary, Not Yet Critical	$15,000.00	Reliability	Modernization	Building Systems	Bay State Correctional Center	2023
	625DOCPB12	DOC07	Kitchen	C20	Replace Dishwasher	Replace Dishwasher	Fair	3 - Necessary, Not Yet Critical	$10,000.00	Reliability	Modernization	Building Systems	Bay State Correctional Center	2023
	625DOCPB17	DOC07	Quonset Hut	C20	Demolish & Reconstruct Interior Finishes & Services	Demolish & Reconstruct Interior Finishes & Services	Fail	2 - Potentially Critical	$46,920.00	Asset Preservation	Modernization	Building Systems	Bay State Correctional Center	2021

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Appendix D

Climate Resiliency Checklist

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Appendix E
Glossary

GLOSSARY OF TERMS

FACILITY CONDITION INDEX (FCI)

An industry standard created to measure the relative condition of assets. The total value, or subset, of requirements divided by the current replacement value for the asset produces the FCI. Generally speaking, the higher the FCI is, the poorer the condition of the facility. The set of the requirements used to calculate FCI depends upon the method of FCI calculation that is used. FCI for the site is configured by an administrator.

REPLACEMENT VALUE

The amount of funds required to replace a specific asset in like kind. It is the result of multiplying the cost per square foot from the appropriate asset template by the number of square feet (gross area).

ESTIMATES USEFUL LIFE OR REPLACEMENT CYCLE

The average amount of time in years that an item, component or system is estimated to function without material repair when installed new and assuming routine maintenance is practiced. This is also referred to be the component's expected useful life (EUL).

REMAINING USEFUL LIFE

A subjective estimate based upon observations, or average estimates of similar items, components, or systems, or a combination thereof, of the number of remaining years that an item, component, or system is estimated to be able to function in accordance with its intended purpose before warranting replacement. Such period of time is affected by the initial quality of an item, component, or system, the quality of the initial installation, the quality and amount of preventive maintenance exercised, climatic conditions, extent of use, etc

ADJUSTMENT FACTOR

A number assigned to an action signifying the complexity and/or resources required to fix a requirement. The requirement factor is multiplied against the line items for the total action cost.

COST MULTIPLIER

A number assigned to an action signifying the complexity and/or resources required to fix a requirement. The requirement factor is multiplied against the line items for the total action cost.

LINE ITEM

A discrete cost in an action. It includes the class, the code, the description, the number of units, the unit of measurement, a unit cost, and a total cost that includes the Overhead and Profit for the given trade.

WORK ELEMENT CATEGORIZATIONS

Work Element Priority Grouping

Each identified project was assigned a priority. Priorities were assigned based upon the impact to the EOPSS's mission and the potential for failure. There are three priorities discussed below:

- **Priority I –** Currently Critical: These are needs and/or projects which significantly impact the mission of the EOPSS and require immediate action to return a facility to normal operation, stop accelerated deterioration, or correct a cited safety hazard, especially those conditions which potentially impact an entire site or pose a significant risk to health and safety.

  Examples of such conditions would be: Overall facility impact: A chilled water system is in imminent danger of failing. Failure would make all buildings at a particular site non-functional. Health and Safety Impact: Previously undiscovered dry rot has compromised structural beams. The building cannot be safely used without immediate repair.

- **Priority II –** Potentially Critical: These needs and/or projects will become critical within a year if not corrected expeditiously. Situations in this category include intermittent interruptions, rapid deterioration, and potential safety hazards. The significance of these conditions to the mission of the EOPSS should be a factor.

- **Priority III –** Necessary, Not Yet Critical. These needs and/or projects include conditions requiring reasonably prompt attention to preclude predictable deterioration or potential downtime and the associated damage or higher costs if deferred further. Conditions which do not significantly impact the mission of the EOPSS should be placed in this category.

Work Element Deficiency Category

Each identified project was assigned one of the four deficiency categories as discussed below:

- **Deferred Maintenance:** Deferred Maintenance is maintenance or repair work on existing facilities and infrastructure that is past due and is already detrimentally affecting the building or facility in question in one of a variety of ways varying from the deterioration of a Heritage Asset to the outright inability to use a building or some portion thereof as intended and needed. In other words, a portion of the building or facility – a system or component – has already failed. Although, there can be situations where one could not have reasonably projected such a failure, in the vast majority of cases, there are warning signs that a failure will occur in the future or, there are industry standards and on-site measurements that can be made to project in advance such a failure. While the impact of addressing some failures after the fact may not be great, in other situations, such failures must be avoided at all cost.

  Accomplishing a Deferred Maintenance project will return a system or component to an acceptable condition, but not necessarily its original condition. It will prevent physical depreciation or loss in the value of a building, minimize or correct wear, and ensure the maximum reliability and current useful life or the facility or component. Deferred Maintenance does not include preventative maintenance or replacement of minor constituent parts of a facility while performing routine maintenance.

- **Capital Renewal:** Accomplishing a Capital Renewal project prevents a situation from deteriorating to where a Deferred Maintenance situation exists. Accomplishing a Capital Renewal project can be essential for some building systems and components if a subsequent failure of that system or component would have a major, detrimental impact on the functioning of the activities supported by that building. Capital Renewal projects generally correct unacceptable conditions caused by building systems or components approaching the end of their useful life. In some instances, the system or component in question may continue to function as originally intended right up to the point of failure; in other instances, there may be an observable and progressive erosion or deterioration. The former situation can be the most problematic and require more careful monitoring as occurs through the periodic updating of condition assessment.

  A Capital Renewal project may return the building system or component to its original, like new condition, or it may prolong the life of the system or component for an extensive period of time. Either way, after the accomplishment of a Capital Renewal project, the system or component in question will function as originally intended. Capital Renewal projects may be performed by overhaul, reconstruction or replacement of constituent parts or materials which are damaged or deteriorated to the point where they cannot be maintained. Capital Renewal does not include additions, expansions, alterations, or modifications required solely for a change in purpose or mission; these would be a classified as Capital Improvements. However, when such elements are only a minor portion of the overall project scope, such projects can be considered to be Capital Renewal projects.

- **Capital Improvement:** Capital Improvements include the addition, expansion, extension, alteration, conversion, or replacement (complete reconstruction due to damage or major repair) of a facility. Work accomplished that improves, enhances or modernizes a building or facility is a Capital Improvement. Additionally, where the use of a building or facility, or portion thereof changes, this is a Capital Improvement. For example, bringing a building into compliance with current codes, such as the addition of a handicapped accessible curb ramp, or work which improves a building's performance, such as installing a new air conditioning unit where none previously existed, is classified as a Capital Improvement. A Capital Improvement project may incorporate incidental Deferred Maintenance or Capital Renewal work.

- **Capital Construction:** The construction of a new building, facility or other infrastructure where none previously existed or, construction that enlarges or expands an existing facility is classified as Capital Construction. Included in this definition are amenities such as roadways, sidewalks, signage, water towers, landscaping, and other site improvements.

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Appendix F

Review of CAMIS Deferred Maintenance Reports

FY2018 DEFERRED MAINTENANCE REQUEST - CONSIDERATION WITHIN FAITHFUL+GOULD FACILITY CONDITION ASSESSMENT

DEPARTMENT OF CORRECTION

Priority	Project Type	Project	Facility	CAMIS #	Comments	Estimated Cost	Project Duration	Consideration within FCA
2	Security	Renovate vehicle trap gates	Bay State	J000111140	On hold	$80,000	0.5	Included in FCA
3	Expansion	Replace Modular Unit w/Perm. Housing (150 beds)	Bay State	J000109527	On hold	$40,000,000	4	Included in FCA as permanent asset
1	Clean State	Grease Trap at Main building	Bay State	J000111123	On hold	$150,000	1.5	Included in FCA
3	Infrastructure	Replace Roof top units (HVAC)	Bay State	J000111125	8 of 10 units completed	$50,000	2	Included in FCA
3	Infrastructure	Warehouse, Storage Building	Bay State	J000109533	on hold	$250,000	2	None
3	Infrastructure	Repair Windows and Add Security Screens	Bay State	J000109535	some work being done in-house - on hold	$1,200,000	2	Sealants and Paint included in FCA

FY2019 DEFERRED MAINTENANCE REQUEST - CONSIDERATION WITHIN FAITHFUL+GOULD FACILITY CONDITION ASSESSMENT

DEPARTMENT OF CORRECTIONS

Priority	Project Type	Project	Facility	CAMIS #	Comments	Estimated Cost	Project Duration	Consideration within FCA
2	Security	Renovate vehicle trap gates	Bay State	J000111140	On hold	$80,000	0.5	Included in FCA
3	Expansion	Replace Modular Unit w/Perm. Housing (150 beds)	Bay State	J000109527	On hold	$0	4	Included in FCA as permanent asset
1	Clean State	Grease Trap at Main building	Bay State	J000111123	On hold	$0	1.5	Included in FCA
3	Infrastructure	Replace Roof top units (HVAC)	Bay State	J000111125	8 of 10 units completed	$150,000	2	Included in FCA
3	Infrastructure	Warehouse, Storage Building	Bay State	J000109533	on hold	$0	2	None
3	Infrastructure	Repair Windows and Add Security Screens	Bay State	J000109535	some work being done in-house - on hold	$0	2	Sealants and Paint included in FCA

FY2020 DEFERRED MAINTENANCE REQUEST - CONSIDERATION WITHIN FAITHFUL+GOULD FACILITY CONDITION ASSESSMENT								
DEPARTMENT OF CORRECTIONS								
Priority	**Project Type**	**Project**	**Facility**	**CAMIS #**	**Comments**	**Estimated Cost**	**Project Duration**	**Consideration within FCA**
2	Security	Renovate vehicle trap gates	Bay State	J000111140	On hold	$80,000	0.5	Included in FCA
3	Expansion	Replace Modular Unit w/Perm. Housing (150 beds)	Bay State	J000109527	On hold	$0	4	Included in FCA as permanent asset
1	Clean State	Grease Trap at Main building	Bay State	J000111123	On hold	$0	1.5	Included in FCA
3	Infrastructure	Replace Roof top units (HVAC)	Bay State	J000111125	8 of 10 units completed	$150,000	2	Included in FCA
3	Infrastructure	Warehouse, Storage Building	Bay State	J000109533	on hold	$0	2	None
3	Infrastructure	Repair Windows and Add Security Screens	Bay State	J000109535	some work being done in-house - on hold	$0	2	Sealants and Paint included in FCA

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Appendix G
Accessibility Compliance Report (Pending)

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Appendix H

Comparison between as-building conditions and the Commonwealth of Massachusetts Department of Correction 103 DOC 703 Design Criteria & Planning Guidelines

Appendix G – Security Systems Checklist

I. Introduction

Correctional facilities are designed to be secure buildings to prevent prison the population from escaping. As well as escape prevention outside of the facility, it is important that inmates cannot escape their holding area, whether it be a cell or block, to move through spaces within the Property they are not supposed to. An escapee prisoner is a danger risk to public and any visitors, staff or other inmates within the correctional facility. As part of our assessment we have reviewed the physical condition of security components at the facility. However, our assessment does not include a review of staffing levels or review of staff security procedures.

II. Project Information

Project Name	
Project Name:	Facility Conditions Assessment of Correctional Facilities
Project Address:	28 Clark Street, Norfolk, Massachusetts 02056
Site Name:	Bay State Correction Facility
CAMIS Site Code:	DOC 07
Number of Buildings:	11
Security Levels	Medium Security
What is the estimated occupancy?	266
Male or Female Prison Population?	Male
CAMIS Project Number:	None
Project Team	
DCAMM Project Manager:	Emmanuel Andrade
FCA Consultant:	Faithful & Gould, Inc

Comparison Between As-Built Conditions and Commonwealth of Massachusetts Department of Correction 103 DOC 703 Design Criteria and Planning Guidelines. Sourced from "Physical Item Issues Matrix Item Issues".

Physical Item	Maximum	Medium	Minimum	Pre-Release	Faithful+Gould Comment
1. HOUSING AREA WINDOWS	Non-operable; restricted size, five (5) inch vertical or horizontal opening with security window glazing	Four (4) percent of floor area; fixed, non-operable	Standard size commercial grade	Same as *MINIMUM SECURITY LEVEL*	Compliant
2. SECURITY SCREENS	Ten (10) mesh per inch; security gauge	Twelve (12) mesh per inch; security gauge	Sixteen (16) mesh per inch; commercial grade	Sixteen (16) mesh per inch; commercial grade	Compliant
3. PLUMBING FIXTURES	Colored epoxy coated stainless steel, heavy duty correctional use; serviced via a locked chase outside the cell area	Durable, epoxy colored, stainless steel fixtures and mountings; serviced by a locked chase outside the cell area	Vitreous china	Same as MINIMUM SECURITY LEVEL	Compliant
4. FLOOR DRAINS IN HOUSING AREAS	Independent drain system adjacent to & outside cell; drains required in day rooms; scupper drains required on mezzanine or tiers	Same as MAXIMUM SECURITY LEVEL	Not required	Not required	Compliant
5. CELL DOOR	Fully selective electro mechanical solid sliding door with vision panel, speaking panel, & food pass; remotely controlled with manual override; gang lock release with individual override; segregation cells shall have hand & ankle cuff slots	Sliding security door; remotely controlled with manual override; gang lock release with individual override; vision panel & food pass; swinging door allowed depending on housing unit type & inmate served	Swing, commercial grade hollow metal or solid wood; vision panel; doors may be lockable from the inside	Same as MINIMUM SECURITY LEVEL	Swinging door provided. DOC to make determination as to whether compliant based upon housing unit type and inmate served.
6. CELL/BEDROOM	Steel or concrete, fixed in place; bed, writing surface, and seat, storage space for personal belongings; segregation beds shall have restraint capabilities	Steel, fixed in place; bed, writing surface, and seat, storage space for personal belongings	Movable, durable, commercial grade; bed, writing surface, & seat, storage space for personal belongings	Durable, residential type; bed, writing surface, & seat, storage space for personal belongings	Writing surface and seat not fixed.
7. HOUSING AREA WALL.	Cast-in-place concrete reinforced vertically every eight (8) inches & every course horizontally; ii. Concrete block reinforced vertically every eight (8) inches	Same as MAXIMUM SECURITY LEVELS	Commercial grade construction	Same as MINIMUM SECURITY LEVEL	Exterior walls at Modular Housing do not meet this requirement.

Physical Item	Maximum	Medium	Minimum	Pre-Release	Faithful+Gould Comment
	& every course horizontally; equivalent modular precast allowed; iii. Steel; reinforcement shall be to outside, end, interior walls between cells; all walls in segregation housing units shall be reinforced; reinforcement shall be to outside, end, walls, and walls to mount beds				
8. CONTROL STATION CENTRAL OR HOUSING AREA.	A virtually indestructible control station that has complete visual observation of the area; security assault resistant glazing on windows; voice panel; package pass; unimpeded access to toilet facilities; entrance from secure area	A secure control room as in MAXIMUM SECURITY LEVELS and/or a post that has complete visual observation	Fully secured control station not required; Officers station, which serves as an office; heavy reliance upon contact with inmates	Reception desk-open area; heavy reliance upon contact with inmates	Not provided.
9. PERIMETER	Two (2) sixteen (16) foot fences with six (6)gauge fence fabric; Thirty (30) foot no-mans-land in between; eight (8) rolls of razor ribbon/barbed tape uter fence (three (3) rolls on interior fence); site specific electronic detection system between fences and on inner fence; zoned CCTV; security lighting; fence fabric buried two (2) feet deep in ground; four (4) inch fence posts with six and three fourth (6-3/4) inch posts at selected spots; posts buried minimum four (4) feet beneath ground; top eight (8) feet of outer fence to be three eighths (3/8) inch, eleven (11) gauge, climbable mesh; fixed towers around perimeter; perimeter patrol road	Two (2) sixteen (16) foot fences with six (6) gauge fence fabric; Thirty (30) foot no-mans-land in between; six (6) rolls of razor ribbon/barbed tape outer fence; site specific electronic detection; zoned CCTV optional; security lighting; fence fabric buried two (2) feet deep in ground; four (4) inch fence posts with six and three fourth (6-3/4) inch posts at selected spots; posts buried minimum four (4) feet beneath ground; top four (4) feet of outer fence to be three eighths (3/8) inch, eleven (11) gauge, unclimbable mesh; fixed towers around perimeter optional; perimeter patrol road	None required, but a boundary fence may be installed as a demarcation line with the community; electronic monitors on doors & windows optional; perimeter patrols	None required in terms of perimeter security; perimeter security shall consist of strict monitoring of inmate movement, frequent head counts, etc.	Not compliant - inner fence is 12’ tall and the outer fence is 16’ tall.
10. PERIMETER	Building walls to be constructed as in a MAXIMUM SECURITY LEVEL housing unit (see Section 7); building specific electronic perimeter security system required; perimeter security system required; perimeter proximity intrusion system optional; inoperable windows	Same as MAXIMUM SECURITY LEVEL (URBAN)	Same as SECURITY LEVEL MINIMUM (GENERAL) (See Section 9)	Same as PRE- RELEASE SECURITY LEVEL (GENERAL) (See Section 9)	Compliant
11. PERIMETER	Thirty (30) foot light poles spaced at ninety (90) feet around the perimeter with a finite cut off angle capable of producing five (5) to ten (10) foot-candles at ground level	Same as MAXIMUM SECURITY LEVEL Maximum	Not required	Not required	Not compliant.

Physical Item	Maximum	Medium	Minimum	Pre-Release	Faithful+Gould Comment
12. SALLY PORT AT PERIMETER ENTRANCES	One (1) vehicle trap with tower required; one (1) staff trap; one pedestrian trap required; tower to have 360 vision; operable sliding windows; roof mounted search light capable of being manually operated by the tower officer	Same as MAXIMUM SECURITY LEVEL	Use of check point optional for vehicles; monitoring of vehicles & visitors required	None required; monitoring of vehicles & visitors required	Not compliant. No tower.
13. SECURE PHYSICAL BARRIERS WITHIN FACILITY	Access to and from housing area controlled by sally port; it is typical to sub divide areas by locked doors; exterior doors electronically monitored	Sally port optional if housing areas can be contained; exterior doors electronically monitored	None required	Same as MINIMUM SECURITY LEVEL	Compliant
14. BUILDING STRUCTURE; NON-HOLDING AREAS WITHIN PERIMETER. .	Reinforcement masonry or approved equal type construction	Same as MAXIMUM SECURITY LEVEL	Standard commercial	Same as MINIMUM SECURITY LEVEL	Only Administration Building is compliant.
15. PLUMBING FIXTURES - STAFF/PUBLIC ACCESSIBLE	Vitreous china; serviced via locked chases	Vitreous china; serviced via locked chases	Vitreous china	Vitreous china	Compliant
16. LOCATION OF SECURITY GRILLES.	Reinforced. Tool resistant, security grilles wherever security walls, floor, or ceilings are penetrated; no openings over five inches; skylights are exempt	Same as MAXIMUM SECURITY LEVEL	None required	None required	Compliant
17. VENTILATION SYSTEM	Climate control in all administrative, housing, and program areas	Same as MAXIMUM SECURITY LEVEL	Staff & public areas optional depending on specific site & conditions	Same as MINIMUM SECURITY LEVEL	Compliant
18. ARMORY	Required; outside secure perimeter; access controlled by outer control but outer control area not breached to attain armory; per 103	Same as MAXIMUM SECURITY LEVEL	Optional	None required	Compliant
19. DISORDER MANAGEMENT ROOM	Adjacent to Armory	Adjacent to Armory	None required	None required	Compliant
20. KEY REPAIR CENTER	Required; in-house staff; Outside secure perimeter	Same as MAXIMUM SECURITY LEVEL	Optional	None required	Compliant
21. FIRE PROTECTION SYSTEM	Meets code for use classification; tamper proof devices	Same as MAXIMUM SECURITY LEVEL	Same as MEDIUM SECURITY LEVEL	Same as MEDIUM SECURITY LEVEL	Compliant
22. SEWERAGE SYSTEM.	As required by DEP; pipes leaving the perimeter to be baffled to no larger than TWELVE (12) inches	Same as SECURITY LEVEL Maximum	As required by DEP	As required by DEP	Unknown
23. WATER SYSTEM.	As required by code; secure; thermostatically controlled ranging from 100 safety & promote hygienic practices; shut off system including individual cells	Same as MAXIMUM SECURITY LEVEL	As required by code	As required by code	Compliant

Physical Item	Maximum	Medium	Minimum	Pre-Release	Faithful+Gould Comment
24. EMERGENCY GENERATION SYSTEM	Required for 100% total facility; back-up in specific areas per Life Safety Code	Same as MAXIMUM SECURITY LEVEL	Same as MAXIMUM SECURITY LEVEL	Same as MAXIMUM SECURITY LEVEL	Not compliant
25. CEILINGS	Secure; no suspended ceilings in cells; sound absorbing materials in day room, circulation, visiting, dining, etc.,; any accessible suspended ceiling is security type	Same as MAXIMUM SECURITY LEVEL	Secure; suspended ceiling allowed in cells; sound absorbing materials in day room, circulation, visiting, dining, etc.,; any suspended ceiling system should be a security type	Same as MINIMUM SECURITY LEVEL	Compliant
26. FLOORS	Concrete with vinyl compositions tile; bathrooms are preferably a non-absorbent, non- slip, composition type floor; kitchen-composition type, non- absorbent, easily cleanable; gymnasiums - per design & industries standards	Same as MAXIMUM SECURITY LEVEL; may utilize carpeting in selected areas	Durability & flammability of material are the essential standards	Same as MINIMUM SECURITY LEVEL	Modular Housing not compliant
27. COMMUNICATION DEVICES	CCTV - as required inside & outside; paging systems - required; two-way radios - required; telephone equipment - controlled access; no outside calls except through switchboard or pre-designated phones; phones for collect calls by inmates; personal body alarms - required duress alarms	Same as MAXIMUM SECURITY LEVEL	CCTV - optional; paging systems - required; two-way radios - required; telephone equipment - limited access; phones for collect calls by inmates; personal body alarms – not required	Same as MINIMUM SECURITY LEVEL	Compliant
28. INSTITUTIONAL ENTRANCE AREA	Secure control room; visitor processing area; mail processing area; pedestrian trap with metal detector; search area; toilets for males & females; lobby area; waiting area	Same as MAXIMUM SECURITY LEVEL	Open type of reception & screening area	Same as MINIMUM SECURITY LEVEL	Compliant
29. DINING.	One dining hall capable of holding 33% of the population at any one time; two (2) serving lines if needed	Same as MAXIMUM SECURITY LEVEL	One dining hall capable of holding 50% of the population at any one time	Same as MINIMUM SECURITY LEVEL	Compliant
30. FACILITY CONFIGURATION	Megastructure preferred	Megastructure, campus, or combination; site specific & population driven	Site specific	Site specific	Not compliant
31. OUTDOOR RECREATION Subject to facility configuration & site restriction	In general, each management unit shall have individual outdoor recreation areas at a minimum of fifteen (15) square feet per inmate using the area at one time; in addition, minimum requirements for outdoor recreation shall include facilities for softball and football; outdoor weight pit; a track for aerobic exercise; at least two (2) outside basketball courts	Same as MAXIMUM SECURITY LEVEL	Ballfield; track for aerobic exercise; basketball court desirable	Desirable, but not necessary	Compliant
32. INDOOR RECREATION	Required; minimum height at eaves of twenty-two	Same as MAXIMUM SECURITY LEVEL	Gym required if population exceeds two- hundred (200)	Desirable, but not necessary	Compliant

Physical Item	Maximum	Medium	Minimum	Pre-Release	Faithful+Gould Comment
	(22) feet; basketball courts (one (1) court per five-hundred (500) inmates); observable weight room; administrative office; staff shower; inmate viewing/ bleacher area		inmates; recreation room; weight room		
33. DAYROOMS	Required; minimum of thirty-five (35) square feet per inmate for maximum amount of inmates who use it at one time; natural light; observable from Officers' Station	Same as MAXIMUM SECURITY LEVEL	Day rooms required; minimum of thirty-five (35) square feet per inmate for maximum amount of inmates who use it at one time	Same as MINIMUM SECURITY LEVEL	Compliant
34. STAFF AREAS	Locker/shower areas outside secure perimeter; muster/ training area outside secure perimeter; exercise/fitness area outside secure perimeter; staff dining/lounge area	Same as MAXIMUM SECURITY LEVEL	Muster/training area; staff dining/lounge area	Staff dining/ lounge area	Compliant
35. TOOL CONTROL	Main tool control/storage area is outside secure perimeter; tools stored inside perimeter are in fully secured areas only accessible to staff	Same as MAXIMUM SECURITY LEVEL	Secure storage/ control areas supervised by staff	Same as MINIMUM SECURITY LEVEL Minimum	Compliant
36. PLAN ROOM	Required for facility plans, archives, etc.,; inside secure perimeter within a secure area	Same as MAXIMUM SECURITY LEVEL	An area for this purpose is recommended; it is required if the facility	An area for this purpose is recommended	Compliant

The table below summarizes other capital expenditure needs for the security systems.

Deficiency	Solution
Reference FCA cost tables.	