Irondequoit Public Library
Building Condition Survey
Cost Report
2012

Passero Associates
100 Liberty Pole Way | Rochester, NY 14604
Office: 585 325 1000 | www.passero.com

in association with:

Christa Construction, LLC
119 Victor Heights Parkway | Victor, NY 14564
Office: 585 924 3050 | www.christa.com

Passero Associates

Engineering Architecture

100 Liberty Pole Way
Rochester, NY 14604

www.passero.com

585-325-1000
585-325-1691 Fax

April 18, 2012

Cost Evaluation and Process

Passero Associates was hired to re-evaluate the 2005 Building Condition Survey as necessary to establish current costs for 2012. Passero Associates worked with Christa Construction's estimating staff in order to help evaluate the cost with a higher level of accuracy.

A walk-through was completed at both project locations, and the Library Director and Branch Managers were interviewed. The buildings, in general, appear to be in much the same shape as they were in 2005. There has been preventative maintenance completed as would be necessary for buildings of this type and age. Finishes have been upgraded, including carpeting and wall painting.

Enclosed you will find the summary of the previous report, and a detailed report with the individual items reviewed. Both the 2005 and the 2012 pricing is included for reference.

Summary

Renovation costs for the branches has increased by approximately 12-13%. The cost for new construction, we feel, was understated in the previous report. Anticipated new construction costs range from $205-215 per square foot for the building alone, with total project costs ranging from $275-315 per square foot. The enclosed spreadsheet reviews all the previously studied options and costs. Additionally, there is a detailed report updating the Building Condition Survey and the costs associated with those renovations.

We hope this report helps to analyze the current status of your potential project, and we are here to help you in any way possible as the project moves forward. If you have any questions please contact me directly at 585-325-1000, ext. 228, or via email at pwehner@passero.com.

Sincerely,

peter wehner

Peter Wehner, AIA LEED AP-BD+C
Associate and Senior Project Architect

Irondequoit Public Library System

Passero Associates
Engineering Architecture

CHRISTA CONSTRUCTION

Conceptual Cost/Budget Matrix

Criteria	Option "A" (2 Branch 24,000 sf) Do Nothing/Asset Preservation	Option "B" (2 Branch 24,000 sf) Renovations/No Additions	Option "C" (2 Branch 50,000 sf) Renovations w/ Additions	Option "D" (2 Branch 55,500 sf) Two (2) New Buildings	Option "E" (1 Library 50,000 sf) One (1) New Building
Asset Preservation	$1,689,500	$1,689,500	$1,689,500	-	-
Existing Facilities Re-Use/Re-Development/Re-sale/Demolition Costs	-	-	-	Not Accounted For	Not Accounted For
Land Acquisition **	-	-	-	*$500,000*	*$500,000*
Site Development [1,2]	-	$224,000 (1)	$597,000 (2)	$1,349,120 (2)	$1,164,000 (2)
Renovations 24,000 sf @ $115/sf	-	$2,760,000	$2,760,000	-	-
Additions 26,000 sf @$205/sf	-	-	$5,330,000	-	-
2 Branch New Construction 55,500 sf @ $215/sf	-	-	-	$11,932,500	-
1 Library New Construction 50,000 sf @$210/sf	-	-	-	-	$10,500,000
Sub-Total	$1,689,500	$4,673,500	$10,376,500	$13,781,620	$12,164,000
Contingency ***	$168,950	$467,350	$1,037,650	$1,033,622	$912,300
FF&E (By Owner)					
Incidental Costs (20%)	$371,690	$1,028,170	$2,282,830	$2,963,048	$2,615,260
TOTAL PROJECT COSTS	$2,230,140	$6,169,020	$13,696,980	$17,778,290	$15,691,560
Total Project Cost per SF	$92.92	$257.04	$273.94	$320.33	$313.83

*All costs are preliminary and conceptual in nature;

**Assume 5 acres @ 100,000/Acre (Per Irondequoit Recreation and Open Space Committee;

***Contingency = 10% on Renov./ADD's and 7.5% on New Construction

(1) Site improvements ie parking lot lighting, Sealer/striping, sidewalks, landscaping

(2) Site development ie excavation, backfill, utilities, parking lot, sidewalks, landscaping

SITE WORK

I. EXISTING CONDITIONS

A.	Acreage	:	0.72 Acres.
B.	Contiguous Sites	:	Mixed commercial establishments and residential housing sit contiguously to the Library.
C.	Topography	:	Flat and predominantly paved.
D.	Access:		
	1. Road	:	Cooper Road.
	2. Sidewalks	:	Along Cooper Road, as well as at perimeter areas of the building to facilitate access into the library's main entry.
E.	Parking Lots:		
	1. Location	:	The main parking lot for the building is located on the south side of the library and is directly accessible from Cooper Road.
	2. Handicapped Access	:	Four (4) parking spaces are designated for handicapped use; the building is presently wheelchair accessible.
F.	Stormwater Drainage	:	Stormwater presently sheet drains to existing catch basins and leaves the site through municipal storm infrastructure.

II. CODE REQUIREMENTS

2012	2005	
$ 0	$ 0	None
$ 0	**$ 0**	**TOTAL – CODE REQUIREMENTS WORK**

III. ARCHITECT'S AND ENGINEER'S RECOMMENDATIONS

III.A. HEALTH AND SAFETY IMPROVEMENTS

2012	2005	
$ 0	$ 0	None
$ 0	**$ 0**	**TOTAL – HEALTH AND SAFETY IMPROVEMENTS**

III.B. FACILITY IMPROVEMENTS

2012	2005	
$ 2,100	$ 1,800	**Seal Parking Lot:** Clean all asphalt pavement, rout, and fill cracks and relinestripe parking lot.
$ 6,300	$ 5,600	1. **Parking Lot Repairs:** Remove and replace approximate 10' x 100' section of existing parking lot that is presently depressed in elevation and as a result is ponding storm runoff.
$ 8,400	**$ 7,400**	**TOTAL – FACILITY IMPROVEMENTS**

III.C. ENERGY CONSERVATION

2012	2005	
$ 0	$ 0	None
$ 0	**$ 0**	**TOTAL – ENERGY CONSERVATION MEASURES**

III.D. HANDICAPPED ACCESSIBILITY

2012	2005	
$ 600	$ 500	1. **Parking:** The existing parking lot has four (4) linestriped handicapped parking spaces, however only two (2) are required in a parking lot of its size. NYS Building Code required that each space have a minimum of eight-foot wide side aisle. Reline the parking spaces to include the proper sized access aisles, relocate metal signage, and install a "No Parking" sign at the head of the access aisle.
$ 600	**$ 500**	**TOTAL – HANDICAPPED ACCESSIBILITY**

III.E. RECOMMENDED STUDIES AND TESTING

2012	2005	
$ 0	$ 0	None
$ 0	**$ 0**	**TOTAL – RECOMMENDED STUDIES AND TESTING**

$ 9,000	**$ 7,900**	**TOTAL – SITE SYSTEMS**

GENERAL CONSTRUCTION SYSTEMS

I. EXISTING CONDITIONS

A. ORIGINAL BUILDING

Date of Construction	:	1963
Construction Classification	:	IIB
Total Floor Area	:	Total: 6,100 sf: 1,600 sf basement; 4,500 sf first floor
Number of Floors	:	Ground floor with basement
Structural System	:	Masonry bearing wall
Floor Construction	:	Concrete slab on grade (basement); concrete slab on protected steel framing (first floor).
Roof Construction	:	Built-up tar and gravel roofing over insulation (1995) over 2" poured gypsum deck over 1" fiberboard over protected steel joists.
Exterior Wall Construction	:	Brick veneer and limestone water table with 8" cmu back-up (no cavity); interior finish is metal lath and plaster over 1" rigid polyurethane insulation.
Interior Wall Construction	:	6" cmu with metal lath and plaster; painted.
Windows	:	Aluminum sash and frame; single pane.
Exterior Doors	:	Aluminum doors and frames; thermal pane.

B. ADDITION

Date of Construction	:	1985
Construction Classification	:	IIB
Total Floor Area	:	Total: 6,000 sf: 3,000 sf basement; 3,000 sf first floor
Number of Floors	:	Ground floor with basement
Structural System	:	Masonry bearing wall
Floor Construction	:	Concrete slab on grade (basement); concrete slab on unprotected steel deck and beam framing (first floor).
Roof Construction	:	Adhered single-ply EPDM membrane over 3" insulation (1985) over unprotected 1½" metal deck and steel bar joists.
Exterior Wall Construction	:	Brick veneer with 8" cmu back-up (no cavity); interior finish is 5/8" Type "X" gypsum board over 2" rigid insulation over vapor barrier.
Interior Wall Construction	:	5/8" gypsum board over 3 5/8" metal studs; painted.
Windows	:	Aluminum sash and frame; thermal pane.
Exterior Doors	:	Aluminum door and frame; thermal pane. Hollow metal door and frame; painted.

II. CODE REQUIREMENTS

2012	2005		
$ 0	$ 0	1.	**Stairway Storage:** The open design of the stairs encourages storage beneath. Remove stored materials beneath stairs and maintain a no storage policy within the stair tower to comply with code.
$ 1,100	$ 900	2.	**Safety Glazing:** Glazing of panels and doors that extend within 18" of the floor must be of a safety glazing material to reduce the chance of injury due to accidental contact. Reglaze the doors and sidelites at lower level Meeting Room with safety glazing.
$ 0	$ 0	3.	**Path of Egress:** Remove carts, furniture, displays, etc. to maintain a 5' clear path of egress in vestibules and main aisles and 3'8" in secondary aisles.
$ 400	$ 300	4.	**Door Hardware:** Replace closer unit on door to lower level Mechancial Room. Fire rated doors must be self-closing to maintain rating of enclosure.
$ 400	$ 300	5.	**Lavatory Guards:** Provide premolded lavatory guards on piping beneath wall-mounted lavatory in two (2) accessible Toilet Rooms.
$ 1,900	**$ 1,500**		**TOTAL – CODE REQUIREMENTS WORK**

III. ARCHITECT'S AND ENGINEER'S RECOMMENDATIONS

III.A. HEALTH AND SAFETY IMPROVEMENTS

2012	2005		
$ 2,600	$ 2,300	1.	**Roof Access:** Currently, access to roof is only by way of portable ladder. Provide new roof hatch with steel ladder within secure area on first floor to improve safety/access to roof.
$ 200	$ 100	2.	**Glazing Replacement:** Replace broken window glazing in Staff Toilet Room.
$ 1,100	$ 900	3.	**Exterior Door:** Replace weatherstripping and paint hollow metal door at stair exit; adjust hardware to latch properly. Provide concrete stoop flush with exit; regrade to eliminate drop off.
$ 800	$ 700	4.	**Wall Shelving Anchorage:** Cost includes an allowance to re-anchor current shelving that is not attached to embedded grounds provided in the construction of the original building.

$ 2,600	$ 2,300	5.	**Water Infiltration:** East wall and ceiling in Director's Office is damaged due to water infiltration from Main Entrance directly above. Cost includes an allowance to investigate source/ path, mediate infiltration, replace damaged acoustical ceiling tiles, and repair damaged plaster wall.
$ 1,500	$ 1,300	6.	**Changing Station:** Provide a diaper changing station in the Men's and Women's accessible toilet stall (total of 2). Cost includes providing unit, properly installed with blocking in the wall and patching ceramic wall tile.
$ 8,800	**$ 7,600**		**TOTAL – HEALTH AND SAFETY IMPROVEMENTS**

III.B. FACILITY IMPROVEMENTS

INTERIOR

2012	**2005**		
$ 700	$ 600	1.	**Door Hardware:** Replace damaged door closers on lower level Playroom and Storage Rooms.
$ 300	$ 200	2.	**Elevator:** Existing 2,500 pound hydraulic elevator is in serviceable condition. Controls are accessible for physically and visually impaired. Carpet should be replaced.
$ 2,300	$ 2,000	3.	**Computers:** Replace two (2) inoperable computer stations.
$ 24,700	$ 22,000	4.	**Casework/Furnishings:** The Circulation Desk and many office workstations are damaged and worn. Cost includes an allowance to replace existing Circulation Desk and selected workstations and provide additional storage in Workroom. a. Size constraints at Circulation Desk and Workroom may require displacement of staff to Lower Level in order to maintain path of egress noted in Section II above.
$ 23,800	$ 21,200	5.	**Furnishings:** Much of the furnishing used by the public are damaged and worn. Cost includes an allowance to replace and/or reupholster furnishings. a. Replace tables to improve uniformity and appearance. Includes adjustable tables to accommodate accessibility; plastic laminate tabletops with a PVC/rubber edge to improve durability.
$ 35,300	$ 31,500	6.	**Bookshelves:** Cost includes an allowance to replace selected worn bookshelves in the Reading Areas.
$ 2,100	$ 1,800	7.	**Kitchenette:** Replace worn base and wall cabinets in Workroom with approximately 6 lf of plastic laminate cabinets/ accessible sink.

$ 2,500	$ 2,200	8.	**Ceramic Tile:** Regrout ceramic tile floor and walls in Men's, Women's, and Staff Toilet Rooms and Custodial Closet of original building; miscellaneous patching required.
$ 38,000	$ 33,900	9.	**Floor - Carpet:** Replace carpet in all areas. Replace with higher quality/weight carpet with multiple colors to help conceal dirt. In the original building, the carpet has been installed over vinyl asbestos floor tile that may also be inadvertently removed with the carpet. Also see Section III.E. below.
$ 1,800	$ 1,600	10.	**Floor - Concrete:** Provide resilient stair treads and risers in south stair; provide vinyl composition tile on landings.
$ 4,100	$ 3,600	11.	**Floor - Concrete:** Prepare and reseal concrete floors in lower level Mechanical Room.
$ 17,200	$ 15,300	12.	**Wall Finishes:** Interior wall finishes are fairly modest. Consider a program of repainting walls to enhance appearance and upgrade the visual environment. Includes repair of incidental plaster damage, and sealing of cracks where needed.
$ 20,200	$ 18,000	13.	**Natural Light:** Improve level of natural lighting by providing new skylights in existing roof. Cost includes an allowance for three (3) sets of sklylights approximately 8' x 8' (no structural modifications).
$ 1,100	$ 900	14.	**Acoustical Ceiling Tile:** Provide ceiling and lighting upgrades in the south stair tower of the addition. Cost includes an allowance to provide new lay-in acoustical tile and suspension grid. See Section III.B. in Electrical Systems Section of this report for lighting upgrades.
$ 15,700	$ 14,000	15.	**Acoustical Ceiling Tile:** Provide ceiling and lighting upgrades on the first floor of the original building. Cost includes an allowance to abandon existing spline ceiling and provide new lay-in acoustical tile. See Section III.B. in Electrical Systems Section of this report for lighting upgrades. Also see Section III.E. below.
$ 20,200	$ 18,000	16.	**Children's Area:** Provide separate enclosed area. Cost includes an allowance for glazed aluminum framing enclosure and modest mechanical and electrical modifications.

EXTERIOR

2012	**2005**		
$ 16,800	$ 15,000	17.	**Brick/Stonework:** Minor brick and stone restoration is required. Repoint brick and joints in stone where necessary. Minor stone/precast patching and brick cleaning required.

$ 67,200	$ 60,000	18.	**Roof:** The lack of a roof hatch and inclement weather precluded visual inspection of the roof. The roof on the original building was replaced in 1995 and is under warranty until May 3, 2015. One (1) active roof leak was noted in the addition (Children's Area) on the first floor. The EPDM roof on the addition is at or near its expected serviceable life and should be replaced. New roof based on Carlisle Design A Fully-Adhered System: • Tapered polyisocyanurate insulation attached to deck • 0.060 non-reinforced EPDM membrane attached with bonding adhesive to insulation • Walkway mats to and around mechanical equipment • New roof drain bodies • New metal edge around perimeter
$ 1,100	$ 900	19.	**Sealant - Joints:** Sealant in building expansion joints have dried and become brittle or split. Replace sealant.
$ 700	$ 300	20.	**Sealant – Thermal Pane Aluminum Entrances and Windows:** Sealant around existing thermal pane aluminum entrances and windows have dried and become brittle or split. Replace sealant to maintain weather tight condition.
$ 0	$ 0	21.	**Sealant - Windows:** Much of the exterior window sealant has weathered, become brittle, cracked, or split. Replace sealant to maintain weather tight condition. *Cost allowance of $1,500 to implement this recommendation is NOT included in total.* See III.C. Windows Section for a preferred recommendation.
$ 295,800	**$ 263,000**		**TOTAL – FACILITY IMPROVEMENTS**

III.C. ENERGY CONSERVATION

2012	2005		
$ 0	$ 0	1.	**Roof Insulation:** Install insulation as part of the new roof system for a minimum roof system value of R-23.
$ 29,700	$ 26,500	2.	**Windows:** Existing windows provide poor thermal and air resistance. Exterior window sealant has weathered and cracked or split. Replace all single glazed windows (including bay window in front of building) with new thermally broken dual glazed aluminum framed system to improve energy efficiency and appearance. Cost also includes allowance for new blinds or shades of type to be determined.
$ 29,700	**$ 26,500**		**TOTAL – ENERGY CONSERVATION MEASURES**

III.D. HANDICAPPED ACCESSIBILITY

Our evaluation and recommendations are based on the design and site criteria established by the American National Standards Institute – ANSI A117.1 "Accessible and Useable Buildings and Facilities," and the Rehabilitation Act of 1973, Public Law 93-112, Section 504. Our proposal will benefit, in our opinion, most disabled individuals requiring building and program accessibility. We believe that in addition to general accessibility, the Library may need to further implement building and programmatic modifications in response to an individual's specific and unique needs as provided under the legislative intent of aforementioned law, as well as the ADA. The Americans with Disabilities Act (ADA), signed into law on July 26, 1990 mandates that all public and private accommodations be accessible to people with disabilities and that employers make reasonable accommodations to facilitate the employment of people with disabilities.

BUILDING ENTRY

2012	2005		
$ 0	$ 0	1.	**Building Access:** The building is presently accessible; the accessible route at the main doors has automatic operators and the south exit has a ramp with railings on each side.

INTERIOR ELEMENTS

2012	2005		
$ 3,200	$ 2,800	2.	**Door Hardware:** Many doors have orbit-style (door knobs) cylindrical locksets that do not comply with accessibility guidelines. Cost includes providing levers for doors on the accessible route, and all doors to unique programs: Offices, Playroom, Workroom, etc. Lever handles are available knurled or with abrasive coatings for entrances to hazardous spaces.
$ 900	$ 800	3.	**Other Modifications:** a. Provide knurling on door hardware to hazardous areas that currently have lever sets. b. Provide tactile surface at top of all staircases. c. Install signage that provides emergency information and room identification.
$ 4,100	**$ 3,600**		**TOTAL – HANDICAPPED ACCESSIBILITY**

III.E. RECOMMENDED STUDIES AND TESTING

1. **Asbestos Containing Building Materials:** We recommend further investigation of the suspected materials noted below. The cost allowances are intended to provide an allowance for remediation of disturbed asbestos containing materials during renovation work. Items noted are based entirely on our past experience of similar materials that have a high likelihood of containing asbestos. In order to be in compliance with state and federal regulations, all materials that might contain asbestos and that will be disturbed by the renovations must be tested to confirm or refute the presence of asbestos. Testing has not been performed for this report.

2012	2005	
$ 21,300	$ 19,000	a. **Flooring:** Carpet removal sometimes leads to the unintentional removal of vinyl asbestos floor tile (VAT) beneath. Cost assumes abatement of all existing VAT and mastic in original building.
$ 21,500	$ 19,200	b. **Spline Ceiling:** The mastic used to install 12" x 12" spline ceilings of this era may contain asbestos. Removal of the existing ceiling would allow for mechanical modifications, an accessible ceiling plenum, and potential for increased ceiling height in some areas. Cost assumes abatement of all existing ceiling tile and mastic in original building.
$ 13,500	$ 12,000	c. **Pipe Fitting Insulation:** Some observed fittings are suspected of asbestos and could affect modifications of the piping in those areas.
$ 56,300	**$ 50,200**	**TOTAL – RECOMMENDED STUDIES AND TESTING**
$ 396,600	**$ 352,400**	**TOTAL – GENERAL CONSTRUCTION SYSTEMS**

ELECTRICAL SYSTEMS

I. EXISTING CONDITIONS

A. ORIGINAL BUILDING

1. Service and Distribution:
   a. Service Entrance : Overhead, Primary, Underground, Secondary
   b. Metering : Secondary
   c. Voltages : 120/240V, delta, 3PH
   d. Size : 600 amperes
   e. Main Distribution Panel : Circuit breaker
   f. Local Panels : Circuit breaker

2. General Wiring:
   a. Majority of wiring does meet the National Electrical Code.
   b. Location and quantity of convenience receptacles is adequate, per code.
   c. Majority of convenience receptacles are of the grounded type.
   d. Location and quantity of light switches is adequate.

3. Lighting:
   a. The majority of the lighting throughout the facility is fluorescent lighting fixtures, utilizing T12 fluorescent lamps and electro-magnetic ballasts. Some Storage and Mechanical Rooms have incandescent lamp sockets, with retro-fitted fluorescent bulbs. Exterior lighting is mainly HID lighting, with building-mounted floodlights and some parking lot lighting poles.

4. Fire Alarm System:
   a. Make : Westec
   b. Equipment : Smoke detectors, thermal detectors, drill switches, remote annunciator, trouble light.

5. Clock and Program System : None

6. Sound System : None

7. Intercom System : None

8. Emergency Lighting/Power:
   a. Lighting : Local emergency lighting battery units located throughout the facility, including stairwells, corridors, and public spaces. Location and spacing are adequate.
   b. Power : None

II. CODE REQUIREMENTS

2012	2005		
*$ 0	$ 0	1.	**Emergency Lighting:** None. See III.A. Emergency Generator (below) for a preferred recommendation.
*$ 600	$ 500	2.	**Exit Lights:** Install exit lights, to replace some unlit exit signs, to more clearly define the path of egress.
*$ 27,500	$ 24,500	3.	**Fire Alarm System:** Replace the entire fire alarm system including all devices and wiring with a new 24 Volt DC supervised fire alarm system with fire alarm pull stations, heat detectors, smoke detectors, battery backup, and municipal connection. New system will be zoned with associated graphic annunciator panels. Also system to be microprocessor based with remove monitoring of system capable from an assigned PC.
$ 28,100	**$ 25,000**		**TOTAL – CODE REQUIREMENTS WORK**

III. ARCHITECT'S AND ENGINEER'S RECOMMENDATIONS

III.A. HEALTH AND SAFETY IMPROVEMENTS

2012	2005		
$ 33,600	$ 30,000	1.	**Emergency Generator:** Install a new 75KW emergency generator in the building and install new emergency lighting in all areas of assembly, all corridors, and all stairwells in the building. Also generator shall be connected to elevator, HVAC system, and all exit lights in the building.
$ 33,600	**$ 30,000**		**TOTAL – HEALTH AND SAFETY IMPROVEMENTS**

III.B. FACILITY IMPROVEMENTS

2012	2005		
$ 22,400	$ 20,000	1.	**Computer Network Cabling System:** Expand the Ethernet based computer networking system throughout the building, including a new enclosed data distribution rack(s) with additional space for all network hardware. Reuse existing network hardware where possible and upgrade where necessary. Additional computer network outlets will be installed in all staff and public occupied spaces and office areas.
$ 6,100	$ 5,400	2.	**Convenience Receptacles:** Provide additional convenience receptacles in most offices and public spaces to discourage the use of adapters and extension cords.

$ 67,800	$ 60,500	3.	**Lighting System:** Install new light fixtures in all public spaces and offices. Existing light fixtures are nearing the end of life expectancy and are in fair condition. New lights would be fluorescent high-efficiency with T -8 lamps and electronic ballast. Circuit wiring and switches to be replaced and switching patterns revised to facilitate operational use of the facility.
$ 1,700	$ 1,500	4.	**Exterior Lighting:** Provide additional vandal resistant high-pressure sodium exterior lighting north side of the building to increase building security.
$ 13,500	$ 12,000	5.	**Power Panels and Circuit Wiring:** Upgrade existing power panels and provide with TVSS (transient voltage surge suppression), to enhance protection to the circuits associated with computers, televisions, and similar electrical devices. Increase new panel circuit capacity. Provide two (2) additional branch circuits per classroom and one (1) per office.
$ 21,900	$ 19,500	6.	**Security System:** Install a new microprocessor based security system with municipal connection, graphic panel, and office annunciator. The system will consist of passive infrared sensors in the corridors and sensitive office areas, magnetic door contacts for all exterior doors, and security horns for local annunciation. The system will have the capability for silent alarm, with reporting to the local law enforcement agencies.
$ 19,900	$ 17,750	7.	**Telecommunications/Sound System:** Provide a new telecommunications and public address sound system that shall provide for telephone with touch pads will be installed in each room to allow communication between rooms without disturbing the Main Desk. Provide public address speakers and wiring to all occupied rooms.
$ 6,800	$ 6,000	8.	**CATV Television System:** Install a new broadband television distribution system throughout the building. The new system will include amplifiers, modulators, combiners, and RG-6 and RG-11 coaxial cable with new television outlets in all public spaces.
$ 160,100	**$ 142,650**		**TOTAL – FACILITY IMPROVEMENTS**

III.C. ENERGY CONSERVATION

2012	**2005**	
$ 0	$ 0	None
$ 0	**$ 0**	**TOTAL – ENERGY CONSERVATION MEASURES**

III.D. HANDICAPPED ACCESSIBILITY

2012	2005		
$ 3,600	$ 3,200	1.	**Assistive Listening:** Provide an enhanced assistive listening system for public spaces, particularly presentation areas. (Expand existing portable system.)
$ 3,600	**$ 3,200**		**TOTAL – HANDICAPPED ACCESSIBILITY**

III.E. RECOMMENDED STUDIES AND TESTING

2012	2005	
$ 0	$ 0	None
$ 0	**$ 0**	**TOTAL – RECOMMENDED STUDIES AND TESTING**

$ 225,400	**$ 200,850**	**TOTAL – ELECTRICAL SYSTEMS**

MECHANICAL SYSTEMS

I. EXISTING CONDITIONS

A. PRIMARY SYSTEMS

1. Water Systems : Municipal system; water is not softened

2. Sewage Disposal : Municipal system

3. Stormwater Disposal : Municipal system

4. Fuel : Low pressure natural gas

5. Heating Plant :
   1 – Burnham Boiler
   - Sectional cast iron
   - Natural gas – 594mbh input/475 out
   - Atmospheric burner
   - Single inline circulator pump
   - Hot water

   1 – Carrier roof-top furnace
   - Natural gas fired – 203mbh input/160 out

6. Domestic Hot Water :
   Directly heated
   - 40 gallon tank
   - Natural gas heat
   - General building use

   Directly heated
   - 30 gallon tank
   - Electric heat
   - General building use (addition)

7. Air Conditioning : Roof-top AHU; two-stage reciprocating (~5T ea.)
   Roof-top condensing unit serves basement AHU
   Electric steam humidifier serves main AHU only

8. Fire Protection :
   Fire hydrant; off-site
   Sprinklers; none
   Standpipes; none
   Fire Extinguishers
   - Appropriate types
   - Suitably located, surface mounted
   - Recently inspected

9. Distribution System:
   a. Heating Hot Water : Water to serve the heating requirements is pumped through the boiler, adjacent duct coils, and incidental radiation by a single pipe mounted in line pump. The piping appears original, is a mix of black steel and copper, and is partially insulated with mud packed fittings that may contain asbestos.
   b. Domestic Water : Domestic water piping is copper.
   c. Air : Plenum and ducted return, partially un-insulated galvanized steel supply duct. Main AHU in basement serves original building. RTU serves addition.
   d. Controls : The building has an early vintage Direct Digital Control (DDC) system without reasonable user interface.

B. SECONDARY SYSTEMS

1. Main Library Room (Original Construction)
   a. Heating : Heating coils in ducted system.
   b. Cooling : Dx in AHU.
   c. Ventilation : Through AHU.
   d. Relief Air : No apparent dedicated path.

2. Main Library Room (Addition)
   a. Heating : Furnace in RTU.
   b. Cooling : Dx in RTU.
   c. Ventilation : Through RTU.
   d. Relief Air : Through RTU.

3. Staff Room (Upstairs)
   a. Heating : Heating coil in ducted system.
   b. Cooling : Dx in AHU.
   c. Ventilation : Through AHU.
   d. Relief Air : No apparent dedicated path.

4. Administrative Office Area (Downstairs)
   a. Heating : Heating coil in ducted system.
   b. Cooling : Dx in AHU.
   c. Ventilation : Through AHU.
   d. Relief Air : No apparent dedicated path.

5. Various Meeting Rooms (Downstairs)
   a. Heating : Furnace in RTU.
   b. Cooling : Dx in RTU.
   c. Ventilation : Through RTU.
   d. Relief Air : Through RTU.

6. Corridors and Vestibules (Construction Year Varies)
   a. Heating : Fin tube radiation and convectors/minimal.
   b. Cooling : None.
   c. Ventilation : None.
   d. Relief Air : None.

7. Toilets (Construction Year Varies)
   a. Heating : Typically transfer air from corridors or convectors.
   b. Cooling : None.
   c. Ventilation : Exhaust air drawn from corridor under door.
   d. Exhaust Air : Exhaust air exits the building through ceiling fan.

8. Custodial Closets/Storage Spaces/Mechanical Spaces (Construction Year Varies)
   a. Heating : Typically transfer air from corridors and un-insulated heating piping.
   b. Cooling : None.
   c. Ventilation : Transfer air from corridors.
   d. Mechanical Exhaust : Some have power exhaust fans, others have no exhaust.

II. CODE REQUIREMENTS

2012	2005		
$ 0	$ 0	1.	**Flame Safeguard:** Provide electronic flame safeguard controls for the gas fired heater to close the main fuel valve within four (4) seconds of flame failure. (Include in main boiler replacement recommendation.)
$ 0	**$ 0**		**TOTAL – CODE REQUIREMENTS WORK**

III. ARCHITECT'S AND ENGINEER'S RECOMMENDATIONS

III.A. HEALTH AND SAFETY IMPROVEMENTS

2012	2005		
$ 3,400	$ 3,000	1.	**Combustion Air Intake/Boiler Room Ventilation:** Provide dedicated combustion air intake separate from ventilation air inlet to AHU. Install power exhaust system in Boiler Room to prevent heat buildup.
$ 4,500	$ 4,000	2.	**Fire Dampers:** Install fire dampers and access doors on all ductwork penetrations of Boiler Room walls.
$ 5,600	$ 5,000	3.	**Janitor's Closet Exhaust:** Install power exhaust system to provide proper ventilation in Janitor's Closets and Toilet Rooms.

$ 4,500	$ 4,000	4.	**Elevator Machine Room Exhaust:** Install power exhaust system to provide required ventilation in Elevator Machine Room.
$ 1,200	$ 1,000	5.	**Domestic Hot Water:** Reduce domestic hot water temperature for general use to a nominal 105E F. to improve safety. Provide a new gas fired water heater to maintain 140E F. storage temperature.
$ 28,000	$ 25,000	6.	**Duct Cleaning and Insulation:** Original HVAC ductwork serving building should be thoroughly cleaned and sanitized. Ductwork should be insulated to minimize energy use and eliminate condensation and subsequent moisture damage. Recommendation includes minor duct reconfiguration as required to better match original duct system to current space uses, but complete replacement is not required or included. Includes re-balancing and associated ceiling work as required.
$ 2,800	$ 2,500	7.	**Added Heat:** Work Room was cold and in need of additional radiation or other form of heat. Provide with additional hydronic heat and associated temperature control.
$ 600	$ 500	8.	**Backflow Preventers:** Provide reduced pressure zone backflow preventers on boiler feed lines to protect the potable water supply from boiler chemicals.
$ 600	$ 500	9.	**Wrist Blades:** Provide a "hands-free" hospital type faucet for the sinks in the Toilet and Staff Rooms to improve hand washing sanitation and accessibility.
$ 9,000	$ 8,000	10.	**Humidity Control:** Repair/upgrade humidifier to maintain building humidity at recommended levels.
$ 60,200	**$ 53,500**		**TOTAL – HEALTH AND SAFETY IMPROVEMENTS**

III.B. FACILITY IMPROVEMENTS

2012	2005		
$ 5,600	$ 5,000	1.	**Testing and Balancing:** Test, adjust, and balance air distribution of heating and ventilating units and hot water heating system to insure system is operating as required to maintain required ventilation levels and comfort at lowest energy use levels.
$ 22,400	$ 20,000	2.	**New Controls:** Install new energy management and control system to allow more individualized zone by zone control of temperature and humidity in various spaces. Includes graphical computerized interface for ease of monitoring, scheduling, and adjustments.

$ 29,200	$ 26,000	3.	**Boilers:** Replace existing boiler, which has reached the end of its useful life. Replacement recommended includes two (2) smaller boilers of higher (condensing) efficiency for reduced energy cost and redundancy, and associated pumps and controls.
$ 61,600	$ 55,000	4.	**Roof-Top HAC Unit and Condensing Unit:** Replace old RTU and condensing unit, which have reached the end of their useful life. Replacement recommended before failure removes AC and associated humidity control. Replacement units will be of higher energy efficiency. Cost listed includes controls to allow full capacity cooling without over-cooling certain spaces.
$ 2,300	$ 2,000	5.	**Filters:** Install new filter rack in AHU return plenum designed to minimize pressure drop while allowing higher efficiency filters – thereby minimizing maintenance time, as well as the accumulation of lint, dust, dirt, etc., on equipment and in air.
$ 121,100	**$ 108,000**		**TOTAL – FACILITY IMPROVEMENTS**

III.C. ENERGY CONSERVATION

2012	2005		
$ 0	$ 0	1.	**Energy Conservation Measures Included:** Many of the upgrades listed above assume premium efficiency equipment, however they may also include increased ventilation rates or adding heat elsewhere, so savings are not predicted at this point.
$ 0	**$ 0**		**TOTAL – ENERGY CONSERVATION MEAUSRES**

III.D. HANDICAPPED ACCESSIBILITY

2012	2005	
$ 0	$ 0	None
$ 0	**$ 0**	**TOTAL – HANDICAPPED ACCESSIBILITY**

III.E. RECOMMENDED STUDIES AND TESTING

Note: Costs presented for each item listed below include the cost of the study and/or test only.

2012	2005		
*$ 1,200	$ 1,000	1.	**Asbestos Survey and Removals:** Many of the heating and plumbing pipes are insulated with "mud" packing, installed at a time when asbestos was used for this purpose, and they appear to be asbestos. This should be tested and if found positive, abated. Cost listed is for testing only.
$ 1,200	**$ 1,000**		**TOTAL – RECOMMENDED STUDIES AND TESTING**
$ 182,500	**$ 162,500**		**TOTAL – MECHANICAL SYSTEMS**

2012	2005	
$ 813,500	**$ 723,650**	**GRAND TOTAL – EVANS BRANCH**

SITE WORK

I. EXISTING CONDITIONS

A.	Acreage	:	1.41 Acres.
B.	Contiguous Sites	:	Town owned parking lot linestriped to accommodate approximately 84 cars. Commercial areas including Wegmans, mixed retail establishments in the Culver Ridge Plaza, and residential properties are additionally contiguous to the Library.
C.	Topography	:	Flat and predominantly paved.
D.	Access:		
	1. Road	:	East Ridge Road.
	2. Sidewalks	:	Along East Ridge Road, as well as at perimeter areas of the building to facilitate access to the library's main entry.
E.	Parking Lots:		
	1. Location	:	The main parking lot for the building is located on the south and west sides of the library and are directly accessible from East Ridge Road. Secondary parking is additionally available in a large lot on the far west side of the property.
	2. Handicapped Access	:	Three (3) parking spaces are designated for handicapped use; the building is presently wheelchair accessible.
F.	Stormwater Drainage	:	Stormwater presently sheet drains to existing catch basins and leaves the site through municipal storm infrastructure.

II. CODE REQUIREMENTS

2012	2005	
$ _____	$ 0	None
$ _____	**$ 0**	**TOTAL – CODE REQUIREMENTS WORK**

III. ARCHITECT'S AND ENGINEER'S RECOMMENDATIONS

III.A. HEALTH AND SAFETY IMPROVEMENTS

2012	2005	
$ 0	$ 0	None
$ 0	**$ 0**	**TOTAL – HEALTH AND SAFETY IMPROVEMENTS**

III.B. FACILITY IMPROVEMENTS

2012	2005	
$ 2,400	$ 2,100	**Seal Parking Lot:** Clean all asphalt pavement, rout, and fill cracks and relinestripe parking lot.
		1. **Parking Lot Repairs:** Remove and replace sections of existing parking lot that are presently depressed in elevation and as a result, ponding storm runoff.
$ 2,600	$ 2,300	a. Approximately 20' x 20' area on the west side of the building.
$ 5,200	$ 4,600	b. Approximately 20' x 40' area on the south side of the building.
$ 2,300	$ 2,000	2. **Concrete Curb:** Install section of concrete curb on the east side of the driveway entry to prevent cars from cutting the corner. Work includes some asphalt patching work and backfill of cub with screened topsoil.
$ 12,500	**$ 11,000**	**TOTAL – FACILITY IMPROVEMENTS**

III.C. ENERGY CONSERVATION

2012	2005	
$ 0	$ 0	None
$ 0	**$ 0**	**TOTAL – ENERGY CONSERVATION MEASURES**

III.D. HANDICAPPED ACCESSIBILITY

2012	2005	
$ 6,800	$ 6,000	1. **Building Access:** The concrete slab under the main entry canopy appears to be sloped greater than 5%. If the slope in fact does exceed 5%, ADA code would classify it as a ramp. As a result, railings would be required and a flat landing would be needed directly in front of the exterior of the doors. Remove and replace the entire entry slab area, creating a step on the western edge of the canopy overhang. Install an accessible walk to the north in the direction of the existing

			flagpole. Install a cub cut and relocate the handicapped parking spaces to directly in front of the new walk.
$ 1,200	$ 1,000	2.	**Parking:** The existing parking lot has the proper amount of linestriped handicapped parking spaces. However, NYS Building Code requires that each space have metal signage installed at the head of the space with a "No Parking" sign installed at the head of the access aisles.
$ 8,000	**$ 7,000**		**TOTAL – HANDICAPPED ACCESSIBILITY**

III.E. RECOMMENDED STUDIES AND TESTING

2012	2005	
$ 0	$ 0	None
$ 0	**$ 0**	**TOTAL – RECOMMENDED STUDIES AND TESTING**
$ 20,500	**$ 18,000**	**TOTAL – SITE SYSTEMS**

GENERAL CONSTRUCTION SYSTEMS

I. EXISTING CONDITIONS

A. ORIGINAL BUILDING

Date of Construction	:	1962
Construction Classification	:	IIB
Total Floor Area	:	Total 6,100 sf: 1,700 sf basement; 4,400 sf ground floor
Number of Floors	:	Ground floor with basement
Structural System	:	Masonry bearing wall
Floor Construction	:	Concrete slab on grade (basement); concrete slab on protected steel framing (first floor)
Roof Construction	:	Built-up tar and gravel roofing over insulation (1995) over 2" poured gypsum deck over 1" fiberboard over protected steel joists
Exterior Wall Construction	:	Brick veneer and limestone water table with 8" cmu back-up (no cavity); interior finish is metal lath and plaster over 1" rigid polyurethane insulation
Interior Wall Construction	:	6" cmu with metal lath and plaster; painted
Windows	:	Aluminum sash and frame; single pane
Exterior Doors	:	Hollow metal doors and frames; painted

B. ADDITION

Date of Construction	:	1987
Construction Classification	:	IIB
Total Floor Area	:	Total 6,300 sf: 3,100 sf basement; 3,200 sf ground floor
Number of Floors	:	Ground floor with basement
Structural System	:	Masonry bearing wall
Floor Construction	:	Concrete slab on grade (basement); concrete slab on unprotected steel deck and beam framing (first floor)
Roof Construction	:	Adhered single-ply EPDM membrane over 3" insulation (1987) over unprotected 1½" metal deck and steel bar joists
Exterior Wall Construction	:	Brick veneer with 8" cmu back-up (no cavity); portions of building have Exterior Insulation & Finish System (EIFS) panels over cmu back-up (continuous fascia and water table, panels beneath windows on south elevation; interior finish is 5/8" Type "X" gypsum board over 2" rigid insulation over vapor barrier
Interior Wall Construction	:	5/8" gypsum board over 3 5/8" metal studs; painted
Windows	:	Aluminum sash and frame; thermal pane

Exterior Doors : Aluminum door and frame, thermal pane; hollow metal door and frame, painted

II. CODE REQUIREMENTS

2012	2005		
$ 0	$ 0	1.	**Stairway Storage:** The intent of the rated access panel beneath the southwest stair is for access only. Remove stored materials beneath stairs and maintain a no storage policy within the stair tower to comply with code.
$ 1,100	$ 900	2.	**Safety Glazing:** Glazing of panels and doors that extend within 18" of the floor must be of a safety glazing material to reduce the chance of injury due to accidental contact. Reglaze the doors and sidelites at lower level Meeting Room with safety glazing.
$ 400	$ 300	3.	**Lavatory Guards:** Provide premolded lavatory guards on piping beneath wall-mounted lavatory in two (2) accessible Toilet Rooms.
$ 0	$ 0	4.	**Path of Egress – General:** Remove carts, furniture, displays, etc. to maintain a 5' clear path of egress in vestibules and main aisles and a 3'-8" in secondary aisles.
$ 200	$ 100	5.	**Path of Egress – Lower Level:** Doors in a path of egress should generally swing in the direction of travel; remove the door between the Workroom and Storage Room.
$ 2,200	$ 1,950	6.	**Door Hardware:** Provide fire exit hardware (panic bars) at ramp into lower level Storage Room, north exit door from Reading Room and north exterior door.
$ 2,500	$ 2,200	7.	**Mechanical Room Enclosure:** Provide rated enclosure with labeled door between mechanical equipment and lower level Playroom.
$ 500	$ 400	8.	**Railings:** Provide hand railing at lower level ramp.
$ 6,900	**$ 5,850**		**TOTAL – CODE REQUIREMENTS WORK**

III. ARCHITECT'S AND ENGINEER'S RECOMMENDATIONS

III.A. HEALTH AND SAFETY IMPROVEMENTS

2012	2005		
$ 17,000	$ 15,100	1.	**Roof Drains:** Several existing roof drains are not in working order, due to blockages of tar and asphalt. Cost includes an allowance to replace existing roof drain piping and remove and patch chase walls in six (6) locations.

$ 900	$ 800	2.	**Exterior Door – Northeast Stair:** Provide concrete stoop flush with exit; regrade to eliminate drop off.
$ 800	$ 700	3.	**Wall Shelving Anchorage:** Cost includes an allowance to re-anchor current shelving that is not attached to embedded grounds provided in the construction of the original building.
$ 6,500	$ 5,800	4.	**Water Infiltration:** North and west walls of the north stair tower are damaged due to water infiltration and efflorescence. Cost includes an allowance to excavate along exterior wall, apply waterproofing, patch disturbed asphalt (slop away from building), and clean interior wall surfaces.
$ 2,800	$ 2,500	5.	**Water Infiltration:** Storage Room in basement has damaged plaster on walls and ceiling. Cost includes an allowance to investigate roof flashing, make repairs, and patch and paint interior wall and ceiling surfaces.
$ 1,500	$ 1,300	6.	**Changing Station:** Provide a diaper changing station in the Men's and Women's accessible toilet stall (total of 2). Cost includes providing unit, properly installed with blocking in the wall and patching ceramic wall tile.
$ 29,500	**$ 26,200**		**TOTAL – HEALTH AND SAFETY IMPROVEMENTS**

III.B. FACILITY IMPROVEMENTS

INTERIOR 2012	2005		
$ 1,600	$ 1,400	1.	**Entry Columns:** Replace damaged EIFS bases; provide expansion joint between bottom edge and adjacent concrete sidewalk.
$ 500	$ 400	2.	**Elevator:** Existing 2,500 pound hydraulic elevator is in serviceable condition. Controls are accessible for physically handicapped, however should be retrofitted with Braille controls for the visually impaired. Carpet should be replaced.
$ 32,000	$ 28,500	3.	**Casework/Furnishings:** The Circulation Desk and many office workstations are damaged and worn. Cost includes an allowance to replace existing Circulation Desk and selected workstations and provide additional storage in Workroom. a. Size constraints at Circulation Desk and Workroom may require displacement of staff to lower level in order to maintain path of egress noted in Section II above.

$ 23,800	$ 21,200	4.	**Furnishings:** Much of the furnishing used by the public are damaged and worn. Cost includes an allowance to replace and/or reupholster furnishings. a. Replace tables to improve uniformity and appearance. Includes adjustable tables to accommodate accessibility; plastic laminate tabletops with a PVC/rubber edge to improve durability.
$ 35,300	$ 31,500	5.	**Bookshelves:** Cost includes an allowance to replace selected worn bookshelves in the Reading Areas.
$ 2,100	$ 1,800	6.	**Kitchenette:** Replace worn base and wall cabinets in Workroom with approximately 6 lf of plastic laminate cabinets/ accessible sink.
$ 600	$ 500	7.	**Custodial Closet – Lower Level:** Provide lexan or acrylic panels to wall surfaces adjacent to mop sink. Add door closer; seal concrete floor.
$ 2,500	$ 2,200	8.	**Ceramic Tile:** Regrout ceramic tile floor and walls in Men's, Women's, and Staff Toilet Rooms and Custodial Closet of original building; miscellaneous patching required.
$ 3,700	$ 3,300	9.	**Floor - Carpet:** Replace carpet in lower level Workroom and Storage Room; remainder of carpet was installed in 1995 and is in fair condition. Replace with higher quality/weight carpet with multiple colors to help conceal dirt. In the original building, the carpet has been installed over vinyl asbestos floor tile that may also be inadvertently removed with the carpet. Also see Section III.E. below. *A cost allowance to replace remaining carpet in building is NOT included in subtotal below.*
$ 4,100	$ 3,600	10.	**Floor - Concrete:** Prepare and reseal concrete floors in lower level Mechanical Room.
$ 16,500	$ 14,700	11.	**Wall Finishes:** Interior wall finishes are fairly modest. Consider a program of repainting walls to enhance appearance and upgrade the visual environment. Includes repair of incidental plaster damage, and sealing of cracks where needed.
$ 20,200	$ 18,000	12.	**Natural Light:** Improve level of natural lighting by providing new skylights in existing roof. Cost includes an allowance for three (3) sets of sklylights approximately 8' x 8' (no structural modifications).

$ 16,500	$ 14,700	13.	**Acoustical Ceiling Tile:** Provide ceiling and lighting upgrades on the first floor of the original building. Cost includes an allowance to abandon existing spline ceiling and provide new lay-in acoustical tile. See Section III.B. in Electrical Systems Section of this report for lighting upgrades. Also see Section III.E. below.

EXTERIOR

2012	2005		
$ 13,500	$ 12,000	14.	**Brick/Stonework:** Minor brick and stone restoration is required. Repoint brick and joints in stone where necessary. Minor stone/precast patching and brick cleaning required.
$ 70,600	$ 63,000	15.	**Roof:** The roof on the original building was replaced in 1995 and is under warranty until 2015. The EPDM roof on the addition is at or near its expected serviceable life and should be replaced; numerous leaks have been reported. New roof based on Carlisle Design A fully adhered system: • Tapered polyisocyanurate insulation attached to deck • 0.060 non-reinforced EPDM membrane attached with bonding adhesive to insulation • Walkway mats from existing hatch to and around mechanical equipment • New roof drain bodies • New metal edge around perimeter
$ 1,100	$ 900	16.	**Sealant - Joints:** Sealant in building expansion joints have dried and become brittle or split. Replace sealant.
$ 600	$ 500	17.	**Sealant – Thermal Pane Aluminum Entrances and Windows:** Sealant around thermal pane aluminum entrances and windows have dried and become brittle or split. Replace sealant to maintain weathertight condition.
$ 0	$ 0	18.	**Sealant – Windows and Doors:** Much of the exterior window sealant has weathered, become brittle, cracked, or split. Replace sealant to maintain weathertight condition. *Cost allowance of $1,200 to implement this recommendation is NOT included in total.* See III.C. Windows Section for a preferred recommendation.
$ 245,200	**$ 218,200**		**TOTAL – FACILITY IMPROVEMENTS**

III.C. ENERGY CONSERVATION

2012	2005		
$ 0	$ 0	1.	**Roof Insulation:** Install insulation as part of the new roof system for a minimum roof system value of R-23.

2012	2005		
$ 12,000	$ 10,700	2.	**Windows:** Existing windows (original building) provide poor thermal and air resistance. Exterior window sealant has weathered and cracked or split. Replace all single glazed windows with new thermally broken dual glazed aluminum framed system to improve energy efficiency and appearance. Cost also includes allowance for new blinds or shades of type to be determined.
$ 12,000	**$ 10,700**		**TOTAL – ENERGY CONSERVATION MEASURES**

III.D. HANDICAPPED ACCESSIBILITY

Our evaluation and recommendations are based on the design and site criteria established by the American National Standards Institute – ANSI A117.1 "Accessible and Useable Buildings and Facilities," and the Rehabilitation Act of 1973, Public Law 93-112, Section 504. Our proposal will benefit, in our opinion, most disabled individuals requiring building and program accessibility. We believe that in addition to general accessibility, the Library may need to further implement building and programmatic modifications in response to an individual's specific and unique needs as provided under the legislative intent of aforementioned law, as well as the ADA. The Americans with Disabilities Act (ADA), signed into law on July 26, 1990 mandates that all public and private accommodations be accessible to people with disabilities and that employers make reasonable accommodations to facilitate the employment of people with disabilities.

BUILDING ENTRY

2012	2005		
$ 200	$ 100	1.	**Building Access:** The building is presently accessible; the accessible route at the main doors has automatic operators and the south exit has a ramp with railings on each side. Automatic operators should be adjusted to provide smooth and proper operation.

INTERIOR ELEMENTS

2012	2005		
$ 2,100	$ 1,800	2.	**Door Hardware:** Many doors have orbit-style (door knobs) cylindrical locksets that do not comply with accessibility guidelines. Cost includes providing levers for doors on the accessible route, and all doors to unique programs: Offices, Playroom, Workroom, Toilet Rooms, etc. Lever handles are available knurled or with abrasive coatings for entrances to hazardous spaces.
$ 900	$ 800	3.	**Other Modifications:** a. Provide knurling on door hardware to hazardous areas that currently have lever sets. b. Provide tactile surface at top of all staircases. c. Install signage that provides emergency information and room identification.

$ 3,200	$ 2,700	**TOTAL – HANDICAPPED ACCESSIBILITY**

III.E. RECOMMENDED STUDIES AND TESTING

2012	2005	
		1. **Asbestos Containing Building Materials:** We recommend further investigation of the suspected materials noted below. The cost allowances are intended to provide an allowance for remediation of disturbed asbestos containing materials during renovation work. Items noted are based entirely on our past experience of similar materials that have a high likelihood of containing asbestos. In order to be in compliance with state and federal regulations, all materials that might contain asbestos and that will be disturbed by the renovations must be tested to confirm or refute the presence of asbestos. Testing has not been performed for this report.
$ 21,700	$ 19,300	a. **Flooring:** Carpet removal sometimes leads to the unintentional removal of vinyl asbestos floor tile (VAT) beneath. Cost assumes abatement of all existing VAT and mastic in original building.
$ 21,500	$ 19,200	b. **Spline Ceiling:** The mastic used to install 12" x 12" spline ceilings of this era may contain asbestos. Removal of the existing ceiling would allow for mechanical modifications, an accessible ceiling plenum, and potential for increased ceiling height in some areas. Cost assumes abatement of all existing ceiling tile and mastic in original building.
$ 13,500	$ 12,000	c. **Pipe Fitting Insulation:** Some observed fittings are suspected of asbestos and could affect modifications of the piping in those areas.
$ 56,700	**$ 50,500**	**TOTAL – RECOMMENDED STUDIES AND TESTING**
$ 353,500	**$ 314,150**	**TOTAL – GENERAL CONSTRUCTION SYSTEMS**

ELECTRICAL SYSTEMS

I. EXISTING CONDITIONS

A. ORIGINAL BUILDING AND ADDITION

1. Service and Distribution:
   a. Service Entrance : Overhead, Primary, Underground, Secondary
   b. Metering : Secondary
   c. Voltages : 120/240V, delta, 3PH
   d. Size : 400 amperes
   e. Main Distribution Panel : Circuit breaker
   f. Local Panels : Circuit breaker

2. General Wiring:
   a. Majority of wiring does meet the National Electrical Code.
   b. Location and quantity of convenience receptacles is adequate, per code.
   c. Majority of convenience receptacles are of the grounded type.
   d. Location and quantity of light switches is adequate.

3. Lighting:
   a. The majority of the lighting throughout the facility is fluorescent lighting fixtures, utilizing T12 fluorescent lamps and electro-magnetic ballasts. Some Storage and Mechanical Rooms have incandescent lamp sockets, with retro-fitted fluorescent bulbs. Exterior lighting is mainly HID lighting, with building-mounted floodlights and some parking lot lighting poles.

4. Fire Alarm System:
   a. Make : Westec
   b. Equipment : Smoke detectors, thermal detectors, door holders, drill switches, remote annunciator, trouble light.
   c. System does not appear to be operational.

5. Clock and Program System : None

6. Sound System : None

7. Intercom System : Nu-Tone Intercom System between a few of the rooms.

8. Emergency Lighting/Power:
   a. Lighting : Local emergency lighting battery units located throughout the facility, including stairwells, corridors, and public spaces. Location and spacing are adequate.
   b. Power : None

II. CODE REQUIREMENTS

2012	2005		
*$ 0	$ 0	1.	**Emergency Lighting:** None. See III.A. Emergency Generator (below) for a preferred recommendation.
*$ 2,800	$ 25,000	2.	**Fire Alarm System:** Replace the entire fire alarm system including all devices and wiring with a new 24 Volt DC supervised fire alarm system with fire alarm pull stations, heat detectors, smoke detectors, battery backup, and municipal connection. New system will be zoned with associated graphic annunciator panels. Also system to be microprocessor based with remove monitoring of system capable from an assigned PC. (Current system is not fully operational.)
$ 28,000	**$ 25,000**		**TOTAL – CODE REQUIREMENTS WORK**

III. ARCHITECT'S AND ENGINEER'S RECOMMENDATIONS

III.A. HEALTH AND SAFETY IMPROVEMENTS

2012	2005		
$ 33,600	$ 30,000	1.	**Emergency Generator:** Install a new 75KW emergency generator in the building and install new emergency lighting in all public spaces, all corridors, and all stairwells in the building. Also generator shall be connected to elevator, HVAC system, and all exit lights in the building.
$ 33,600	**$ 30,000**		**TOTAL – HEALTH AND SAFETY IMPROVEMENTS**

III.B. FACILITY IMPROVEMENTS

2012	2005		
$ 69,500	$ 62,000	1.	**Lighting System:** Install new light fixtures in all public spaces and offices. Existing light fixtures are nearing the end of life expectancy and are in fair condition. New lights would be fluorescent high-efficiency with T -8 lamps and electronic ballast. Circuit wiring and switches to be replaced and switching patterns revised to facilitate operational use of the facility.
$ 23,600	$ 21,000	2.	**Computer Network Cabling System:** Expand the Ethernet based computer networking system throughout the building, including a new enclosed data distribution rack(s) with additional space for all network hardware. Reuse existing network hardware where possible and upgrade where necessary. Additional computer network outlets will be installed in all staff and public occupied spaces and office areas.

$ 7,300	$ 6,500	3.	**Convenience Receptacles:** Provide additional convenience receptacles in most offices and public spaces to discourage the use of adapters and extension cords.
$ 56,000	$ 50,000	4.	**Electric Service and Main Distribution Panel:** Upgrade the existing main electric service to provide additional capacity for future loads. Replace original existing switch and fuse main disconnect switch with a new circuit breaker type MDP to improve safety.
$ 16,300	$ 14,500	5.	**Power Panels and Circuit Wiring:** Upgrade existing power panels and provide with TVSS (transient voltage surge suppression), to enhance protection to the circuits associated with computers, televisions, and similar electrical devices. Increase new panel circuit. Provide two (2) additional branch circuits per classroom and one (1) per office.
$ 23,600	$ 21,000	6.	**Security System:** Install a new microprocessor based security system with municipal connection, graphic panel, and office annunciator. The system will consist of passive infrared sensors in the corridors and sensitive office areas, magnetic door contacts for all exterior doors, and security horns for local annunciation. The system will have the capability for silent alarm, with reporting to the local law enforcement agencies.
$ 20,800	$ 18,500	7.	**Telecommunications/Sound System:** Provide a new telecommunications and public address sound system that shall provide for telephones with touch pads will be installed in each room to allow communication between rooms without disturbing the Main Desk. Provide public address speakers and wiring to all occupied rooms.
$ 7,300	$ 6,500	8.	**CATV Television System:** Install a new broadband television distribution system throughout the building. The new system will include amplifiers, modulators, combiners, and RG-6 and RG-11 coaxial cable with new television outlets in all public spaces.
$ 224,400	**$ 200,000**		**TOTAL – FACILITY IMPROVEMENTS**

III.C. ENERGY CONSERVATION

2012	**2005**	
$ 0	$ 0	None
$ 0	**$ 0**	**TOTAL – ENERGY CONSERVATION MEASURES**

III.D. HANDICAPPED ACCESSIBILITY

2012	2005		
$ 4,800	$ 4,200	1.	**Assistive Listening:** Provide an enhanced assistive listening system for public spaces, particularly presentation areas.
$ 4,800	**$ 4,200**		**TOTAL – HANDICAPPED ACCESSIBILITY**

III.E. RECOMMENDED STUDIES AND TESTING

2012	2005	
$ 0	$ 0	None
$ 0	$ 0	**TOTAL – RECOMMENDED STUDIES AND TESTING**

$ 290,800	**$ 259,200**	**TOTAL – ELECTRICAL SYSTEMS**

MECHANICAL SYSTEMS

I. EXISTING CONDITIONS

A. PRIMARY SYSTEMS

1. Water Systems : Municipal system; water is not softened

2. Sewage Disposal : Municipal system

3. Stormwater Disposal : Municipal system

4. Fuel : Low pressure natural gas

5. Heating Plant :
   1 – Burnham Boiler
   - Sectional cast iron
   - Natural gas – 594mbh input/475 out
   - Atmospheric burner
   - Single inline circulator pump
   - Hot water

   1 – Carrier roof-top furnace
   - Natural gas fired – 203mbh input/160 out

6. Domestic Hot Water :
   Directly heated
   - 40 gallon tank
   - Natural gas heat
   - General building use

   Directly heated
   - 30 gallon tank
   - Electric heat
   - General building use (addition)

7. Air Conditioning : Roof-top AHU; two-stage reciprocating (~5T ea.)
   Roof-top condensing unit serves basement AHU
   Electric steam humidifier serves main AHU only

8. Fire Protection :
   Fire hydrant; off-site
   Sprinklers; none
   Standpipes; none
   Fire Extinguishers
   - Appropriate types
   - Suitably located, surface mounted
   - Recently inspected

9. Distribution System:
   a. Heating Hot Water : Water to serve the heating requirements is pumped through the boiler, adjacent duct coils, and incidental radiation by a single pipe mounted in line pump. The piping appears original, is a mix of black steel and copper, and is partially insulated with mud packed fittings that may contain asbestos.
   b. Domestic Water : Domestic water piping is copper.
   c. Air : Plenum and ducted return, partially un-insulated galvanized steel supply duct. Main AHU in basement serves original building. RTU serves addition.
   d. Controls : The building has an early vintage Direct Digital Control (DDC) system without reasonable user interface.

B. SECONDARY SYSTEMS

1. Main Library Room (Original Construction)
   a. Heating : Heating coils in ducted system.
   b. Cooling : Dx in AHU.
   c. Ventilation : Through AHU.
   d. Relief Air : No apparent dedicated path.

2. Main Library Room (Addition)
   a. Heating : Furnace in RTU.
   b. Cooling : Dx in RTU.
   c. Ventilation : Through RTU.
   d. Relief Air : Through RTU.

3. Staff Room (Upstairs)
   a. Heating : Heating coil in ducted system.
   b. Cooling : Dx in AHU.
   c. Ventilation : Through AHU.
   d. Relief Air : No apparent dedicated path.

4. Activity Room (Downstairs)
   e. Heating : Heating coil in ducted system.
   f. Cooling : Dx in AHU.
   g. Ventilation : Through AHU.
   h. Relief Air : No apparent dedicated path.

5. Meeting/Conference/Play Rooms (Downstairs)
   a. Heating : Small branch duct off of main AHU with duct coil.
   b. Cooling : Dx coil in air handler.
   c. Ventilation : Air handler appears to be recirculation only.
   d. Relief Air : No apparent path.

6. Corridors and Vestibules (Construction Year Varies)
   a. Heating : Fin tube radiation and convectors/minimal.
   b. Cooling : None.
   c. Ventilation : None.
   d. Relief Air : None.

7. Toilets (Construction Year Varies)
   a. Heating : Typically transfer air from corridors or convectors.
   b. Cooling : None.
   c. Ventilation : Exhaust air drawn from corridor under door.
   d. Exhaust Air : Exhaust air exits the building through ceiling fan.

8. Custodial Closets/Storage Spaces/Mechanical Spaces (Construction Year Varies)
   a. Heating : Typically transfer air from corridors and un-insulated heating piping.
   b. Cooling : None.
   c. Ventilation : Transfer air from corridors.
   d. Mechanical Exhaust : Some have power exhaust fans, others have no exhaust.

II. CODE REQUIREMENTS

2012	2005		
$ 0	$ 0	1.	**Flame Safeguard:** Provide electronic flame safeguard controls for the gas fired water heater to close the main fuel valve within four (4) seconds of flame failure. (Include in main boiler replacement recommendation.)
$ 0	**$ 0**		**TOTAL – CODE REQUIREMENTS WORK**

III. ARCHITECT'S AND ENGINEER'S RECOMMENDATIONS

III.A. HEALTH AND SAFETY IMPROVEMENTS

2012	2005		
$ 3,400	$ 3,000	1.	**Combustion Air Intake/Boiler Room Ventilation:** Provide dedicated combustion air intake separate from ventilation air inlet to AHU. Install power exhaust system in Boiler Room to prevent heat buildup.
$ 4,500	$ 4,000	2.	**Fire Dampers:** Install fire dampers and access doors on all ductwork penetrations of Boiler Room walls.
$ 5,600	$ 5,000	3.	**Janitor's Closet Exhaust:** Install power exhaust system to provide proper ventilation in Janitor's Closets and Toilet Rooms.

$ 4,500	$ 4,000	4.	**Elevator Machine Room Exhaust:** Install power exhaust system to provide required ventilation in Elevator Machine Room.
$ 1,200	$ 1,000	5.	**Domestic Hot Water:** Reduce domestic hot water temperature for general use to a nominal 105E F. via a listed mixing value to improve safety. Provide a new gas fired water heater to maintain 140E F. storage temperature.
$ 28,000	$ 25,000	6.	**Duct Cleaning and Insulation:** Original HVAC ductwork serving building should be thoroughly cleaned and sanitized. Ductwork should be insulated to minimize energy use and eliminate condensation and subsequent moisture damage. Recommendation includes minor duct reconfiguration as required to better match original duct system to current space uses, but complete replacement is not required or included. Includes re-balancing and associated ceiling work as required.
$ 12,900	$ 11,500	7.	**Ventilation Air Intake:** Ventilation air intake is currently adjacent to dumpster and loading area, resulting in garbage and exhaust fumes being drawn into air handler and distributed. Recommend raising ventilation air intake to above roof line. Includes ductwork and brick chase to match building exterior.
$ 12,400	$ 11,000	8.	**Drain System Replacement:** Existing roof drains showed evidence of failure, Owner reports of drain backups into basement Conference Room and slow drains elsewhere. Replace/upgrade drain and waste system as required to solve problems.
$ 6,200	$ 5,500	9.	**Added Heat:** Work Room upstairs and Meeting/Conference/ Play Rooms downstairs were cold and in need of additional radiation or other form of heat. Provide with additional hydronic heat and associates temperature controls.
$ 600	$ 500	10.	**Backflow Preventers:** Provide reduced pressure zone backflow preventers on boiler feed lines to protect the potable water supply from boiler chemicals.
$ 600	$ 500	11.	**Wrist Blades:** Provide a "hands-free" hospital type faucet for the sinks in the Toilet and Staff Rooms to improve hand washing sanitation and accessibility.
$ 9,000	$ 8,000	12.	**Humidity Control:** Repair/upgrade humidifier to maintain building humidity at recommended levels.
$ 88,900	**$ 79,000**		**TOTAL – HEALTH AND SAFETY IMPROVEMENTS**

III.B. FACILITY IMPROVEMENTS

2012	2005		
$ 5,600	$ 5,000	1.	**Testing and Balancing:** Test, adjust, and balance air distribution of heating and ventilating units and hot water heating system to insure system is operating as required to maintain required ventilation levels and comfort at lowest energy use levels.
$ 22,900	$ 20,000	2.	**New Controls:** Install new energy management and control system to allow more individualized zone by zone control of temperature and humidity in various spaces. Includes graphical computerized interface for ease of monitoring, scheduling, and adjustments.
$ 29,200	$ 26,000	3.	**Boilers:** Replace existing boiler, which has reached the end of its useful life. Replacement recommended includes two (2) smaller boilers of higher (condensing) efficiency for reduced energy cost and redundancy, and associated pumps and controls.
$ 61,600	$ 55,000	4.	**Roof-Top HAC Unit and Condensing Unit:** Replace old RTU and condensing unit, which have reached the end of their useful life. Replacement recommended before failure removes AC and associated humidity control. Replacement units will be of higher energy efficiency. Cost listed includes controls to allow full capacity cooling without over-cooling certain spaces.
$ 2,300	$ 2,000	5.	**Filters:** Install new filter rack in AHU return plenum designed to minimize pressure drop while allowing higher efficiency filters – thereby minimizing maintenance time, as well as the accumulation of lint, dust, dirt, etc., on equipment and in air.
$ 121,100	**$ 108,000**		**TOTAL – FACILITY IMPROVEMENTS**

III.C. ENERGY CONSERVATION

2012	2005		
$ 0	$ 0	1.	**Energy Conservation Measures Included:** Many of the upgrades listed above assume premium efficiency equipment, however they may also include increased ventilation rates or adding heat elsewhere, so savings are not predicted at this point.
$ 0	**$ 0**		**TOTAL – ENERGY CONSERVATION MEAUSRES**

III.D. HANDICAPPED ACCESSIBILITY

2012	2005	
$ 0	$ 0	None
$ 0	**$ 0**	**TOTAL – HANDICAPPED ACCESSIBILITY**

III.E. RECOMMENDED STUDIES AND TESTING

Note: Costs presented for each item listed below include the cost of the study and/or test only.

2012	2005		
*$ 1,200	$ 1,000	1.	**Asbestos Survey and Removals:** Many of the heating and plumbing pipes are insulated with "mud" packing, installed at a time when asbestos was used for this purpose, and they appear to be asbestos. This should be tested and if found positive, abated. Cost listed is for testing only.
$ 1,200	**$ 1,000**		**TOTAL – RECOMMENDED STUDIES AND TESTING**
$ 211,200	**$ 188,000**		**TOTAL – MECHANICAL SYSTEMS**

2012	2005	
$ 876,000	**$ 779,350**	**GRAND TOTAL – McGRAW BRANCH**