

*DRAFT COPY -- September 2, 2003*

Facility Improvement Study for the  
**Vinton War Memorial**  
Vinton, Virginia

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L. A. Gates Company  
Engineers & Consultants  
306 Market Street, SE  
Roanoke, VA 24011  
--David A. Sapp, PE  
--Nick A. Brash, PE

Rife + Wood Architects  
1326 Grandin Road  
Roanoke, VA 24015  
--Richard A. Rife, AIA  
--Stephen C. Feather, AIA

Meador & Associates  
Landscape Architecture & Urban Planning  
6100 Plantation Circle  
Roanoke, VA 24019  
--Rodney A. Meador, ASLA

## ***Part One – Building and Site Analysis***

### **A. Inspection Team:**

The property was inspected on December 14, 2002. The inspection team was comprised of David Sapp, PE, Structural Engineer; Richard Rife, AIA, Architect; Mark Donihe, PE, Mechanical Engineer, and Lee Eddy, PE, Electrical Engineer. Ms. Mary Beth Layman, Special Programs Coordinator for the Town, was on hand to answer questions about the building.

### **B. Property Description:**

The building was constructed in 1948 as a community effort to recognize the sacrifices of Vinton citizens during World War II. It is a two-story structure with a basement containing approximately 3,800 sf on the first floor and 2150 sf on the second floor. The main floor contains one large and one small meeting rooms, a kitchen, men's and women's toilets and storage areas. The second floor has two meeting rooms, a women's toilet, and a mechanical/storage room. A former apartment is utilized to house the office of the Town's Special Programs Coordinator.

### **C. Site Description:**

The War Memorial is located at 814 East Washington Avenue on a multi-acre site that is bounded on the west by Meadow Street. The War Memorial shares the site with other public facilities: the Vinton Branch of the Roanoke County Public Library, the Charles R. Hill Senior Center, the Vinton Swimming Pool and a sandlot baseball diamond. The majority of the site is fairly flat with a large lawn area sweeping down from Washington Avenue to the front of the War Memorial. The Senior Center and baseball diamond are behind the War Memorial; the Library is located at the corner of Washington and Meadow. The pool is located on a hill at the rear of the property.

The site is served by the following public utilities:

- Water: Town of Vinton
- Sanitary Sewer: Town of Vinton
- Storm Sewer: Town of Vinton
- Electricity: American Electric Power
- Natural Gas: Roanoke Gas Company
- Telephone: Verizon

Utility service is adequate except for storm drainage. The site has a very limited storm water management system that releases water into an already overloaded storm sewer in Meadow Street. Any new development on the site should not exacerbate this problem.

The driveways and parking areas on the site are confusing and are in deteriorating condition. Primary access into the War Memorial is via the entrance drive from Washington Avenue. While cars are not supposed to exit the site onto Washington, many do, despite the left-hand turn onto Washington being a very risky maneuver. The drive leads to the War Memorial's primary parking area, which contains 41 standard and four handicapped spaces. Another 38 spaces are located between the baseball field and the Senior Center. The pavement is in fair-to-poor condition in both areas. Additional parking is provided on a graveled area beside the

Senior Center (12-14 spaces) and on two former tennis courts (8-10 spaces). The two handicapped spaces serving the Senior Center are in the gravel area. A paved area formerly used as batting cages is unusable due to the condition of the pavement and is blocked off.

The parking area is dimly lit by three pole-mounted “cobra head” fixtures. The pavement is cracked throughout and shows signs of deterioration due to subsurface water pressure. There are limited areas of asphalt curbing that attempts to direct runoff.

The driveway continues behind the War Memorial and exits onto Meadow Street. The Library has a small parking area that is also accessed from Meadow Street. The drive allows cars to enter the site to park in the Library lot, but signage forbids cars to proceed further and continue to the main parking area. This traffic pattern is very confusing to the public and is often ignored. The parking lot contains one handicapped and fifteen standard spaces and has one cobra head light. The librarian states that their lot needs to be at least double its present size.

The pool has its own entry drive from Meadow Street and its own parking area.

#### **D. Site Evaluation:**

The site area that is encompassed by this evaluation includes the property from Washington Ave. north to the Senior Center, and west to Meadow Street. This area includes the War Memorial, the Senior Center, the entrance and exit drives, and parking lot at the War Memorial, the basketball court and batting cage area, and the front and rear lawns. The main areas omitted include the swimming pool area, the large hill in front of the pool and the ball field.

The initial evaluation of the site and the identification of the various problematic issues have been determined by a limited site survey, multiple walking tours of the site at times of dry and wet weather, and general comments presented by the War Memorial Committee. A general list of current conditions and deficiencies are as follows:

- The site has inadequate parking facilities for the current and projected use of the War Memorial, Senior Center, baseball field, and other uses. This is mostly problematic when multiple events are occurring at the same time at the various facilities.
- A large portion of the existing pavements in the drive areas, parking areas and paved areas for sports uses are severely deteriorated and inadequate to support traffic.
- Numerous underground springs daylight throughout the site including through the existing pavement.
- No storm drainage management facilities exist on the site to control the runoff that is currently contributing to periodic downstream flooding.
- The pavement elevation at the rear side of the War Memorial is higher than the basement and allows flooding of the basement during a strong rain event.
- The front lawn area does not drain well and is impacted by underground streams. This condition is problematic for any front lawn uses.
- The sidewalks are not ADA compliant and are severely deteriorated.
- Many vehicles ignore the signs and exit the site onto Washington Avenue, with vehicles turning left onto Washington Avenue causing a hazardous situation.

- The current library parking capacity is inadequate for the facility causing increased parking on Meadow Street parking and parking along the rear of the War Memorial exit drive.

### **E. Structural Review:**

- E.1 System Description: The building consists of two floors plus a full basement. The basic footprint is approximately 37'-4" by 125'-0". The building construction consists of masonry block bearing walls with wood framed floors and roof system. The basement walls are concrete and the floor is slab-on-grade. The masonry walls are covered with brick veneer.
- E.2 Structural Observations: On April 25, 2002, we performed a limited visual structural inspection of the War Memorial. The purpose of the inspection was limited to determining the current structural condition of the building. In general, the building was found to be in good to fair condition.
- E.2.1 Basement / Foundation: The majority of the building has basement below the first floor. The smaller first floor meeting room is located over a crawl space. There does not appear to be any major settlement issues related to the foundation that are impacting the performance of the building. There has been some minor to moderate settlement that has occurred in the left end wall closest to the library. This settlement has created a few cracks that should be repointed. There is a downspout located near the front left corner that drains right at the corner of the building that may be contributing to the settlement.

In general, the concrete walls appear to be in good condition. The exterior sides of the foundation walls are covered with a 1/4" to 3/4" thick concrete parging layer. In many locations around the building, including the rear wall and the skirt around the front porch, the parging layer has debonded from the main concrete wall and is breaking up. The moderate cracking will allow water to enter behind the parging layer and speedup the delamination of the remaining sound areas.

There are numerous abandoned openings in the front wall that have been boarded and leak. One opening houses an abandoned air conditioning unit that is prone to leaks.

The rear pavement appears to be as much as 4" in elevation above the basement floor. Obvious water staining is visible in the basement from previous flooding. It appears that at some point the exterior door thresholds were raised in an attempt to minimize water infiltration into the basement.

All downspouts adjacent to the front porch drain adjacent to the building. The grade between the front wall and the sidewalk is level and does not appear to drain water away from the building. It appears some of the water problems in the basement can be directly attributed to the front downspouts.

- E.2.2 First Floor Framing: In general, the first floor framing over the basement and crawlspace appears to be in good condition. The floor is constructed of 2x8 wood joists spaced at 16" o.c. The joists are supported by built-up 2x8 beams. The built-up beams have a continuous 2x4 ledger nailed along each side, flush with the bottom of

the beam. The floor joists bear on the ledger by way of notched ends. The joists are then toenailed to the ledger and the built-up beam.

An analysis of the floor system found the live load bending (flexural) capacity is approximately 75 to 80 psf average through the system. The connection of the joists to the ledger however, is problem, with less than a 25 psf live load capacity. This type of connection is problematic in that the ledger commonly slips downward, along with the joists, creating uneven floors. It is the reason for dips and sags in the wood floor systems at beam supports. The joist connection to the beams should be upgraded to achieve at least an 80 psf live load capacity, to match the capacity of the joists and beams. The current 1996 BOCA National Building Code requirements, as required by the Virginia Statewide Building Code, requires a minimum live load capacity in assembly areas to be 100 psf. However, chapter 34 of the 1996 BOCA National Building Code does not require that a structure that is being renovated be completely upgraded to match the current code structural requirements if the use and occupancy of the facility is not changing and the existing facility is safe. Therefore, the 80 psf live load capacity is not required to be upgraded to 100 psf. The inadequate connections of the joists to the beams, however, should be upgraded to insure a safe facility.

There is a large commercial walk-in cooler that was recently added across the hallway from the stair. The floor system supporting the cooler is inadequate to support heavy loads that may be imposed by the cooler. If the cooler remains in its current location, the floor system should be strengthened below it.

- E.2.3 Second Floor Framing: In general, the second floor framing is concealed and not accessible for a visual inspection. There are numerous wall and ceiling cracks that suggest minor to moderate building settlement. Based upon the general construction found at the first floor, no areas of the second floor should be used for moderate or heavy storage loads.

There is a concealed steel beam that spans over a former opening at the front of the choir loft. There is extensive cracking in the masonry walls at either end of the former opening where the beam is being supported. The cause of this cracking was most likely caused by thermal changes in the attic area, where the beam is exposed. Extreme summer to winter temperatures swings may have caused changes in the beam length or around 1/4". This would be sufficient to cause excessive cracking.

- E.2.4 Roof Framing: In general, the roof framing over the main building area appears to be in good condition. There are two rafters that have large notches cut out of them over the main assembly room. Each of these joists should be sistered with a new joist.

The roof framing system over the second floor offices and first floor smaller assembly room was improperly built. The roof is framed with 2x8 rafters with 2x6 ceiling joists spaced at 16" o.c. The ridge beam has been supported by 2x6 vertical members that bear on a non-bearing partition wall, that is in turn, supported by floor joists that span over the smaller assembly room. The War Memorial staff remembered a large crack in the ceiling of the smaller assembly room that had been repaired in 1998, where this

non-load bearing wall is supported. The exterior wall at the end of the ridge has moderate cracks in the brick veneer that suggest the roof framing has sagged and pushed the front and rear walls further apart.

This framing in this area can be modified with the addition of collar ties to allow the removal of the 2x6 support members that are overloading the floor joists below.

- E.2.5 Exterior Walls: In general, the exterior walls are concealed by brick veneer and interior finishes. As previously stated, there are areas that have minor to moderate cracking in the brick veneer. This suggests there are minor to moderate cracks in the CMU wall construction. The original construction drawings do not provide much detail on the wall construction; because of this, we assume the structural walls, in general, are not reinforced and may not be grouted.
- E.2.6 Miscellaneous: There is a painted steel emergency exit stair located on the left end of the building. The paint system is failing and parts of the stair assembly are starting to corrode. The entire stair assembly should be properly prepared and repainted to prevent extensive corrosion that could require partial or total replacement in the future. The end of the ridge has moderate cracks in the brick veneer that suggest the roof framing has sagged and pushed the front and rear walls further apart.
- E.2.7 Structural Conclusions and Recommendations: In general, the facility is in good to fair condition. The following is a list of items that require rehabilitation, removal or additions to the existing structure:
1. The exterior grade around the building should be adjusted to provide positive drainage away from the building.
  2. Lower rear parking lot/drive area below the basement floor level and slope away from building.
  3. All downspouts should be piped away from the building.
  4. Remove and replace 1/4" to 3/4" parging layer on exterior concrete foundation walls.
  5. Infill existing front side abandoned basement windows and provide waterproofing membrane at exterior side where occur below grade.
  6. Add joist hangers at all first floor joists to increase safe floor live load capacity.
  7. Remove and relocate existing cooler or strengthen wood floor system if to remain in place.
  8. Repair all moderate masonry cracks, inside and outside. Cracks should be repointed with the severe cracks receiving embedded repair straps in the mortar beds.
  9. Repair roof framing over second floor offices as discussed above in the Roof Framing section.
  10. Sister two existing notched roof rafters over the main assembly room.
  11. Properly prepare and recoat existing exit stair system at library end of building.

The repair costs for the structural items listed above are estimated at \$35,000. Items not included in the structural cost estimate include modifications to paving, grading and downspout piping.

#### **F. Architectural Review:**

The building was reviewed for functionality, handicapped accessibility, weathertightness and normal wear and tear. While the building's mechanical and electrical systems need substantial improvements, with a few exceptions, the building is holding up well architecturally. The building was partially renovated in 1998 and the wall and floor finishes in the large public rooms are in good condition.

#### **G. Building Envelope:**

The majority of the building's skin is running bond brick over concrete block backup. Its condition is addressed in the structural review above. The portico over the front entrance needs considerable repair work. Some years ago, it was wrapped in vinyl siding material, probably to cover up deteriorated wood. The siding is now loose in several places and appears to be in danger of falling off. It is also historically incorrect and detracts from the building's appearance. This is particularly undesirable for a landmark building like the War Memorial. The vinyl covering should be removed and the underlying material repaired as necessary to restore the building to its original appearance.

The roof system appears to be in generally good condition; no active leaks were found. The sloping portion of the roof is asphalt shingles that appear to be 5-7 years old. The front portico has a standing seam metal roof with internal gutters. The number and distribution of roof drains appears to be an adequate, although strainers should be installed on the drains to prevent them from being blocked by leaves. There are a number of places in the building where the ceilings are stained from water leaks. These appear to be related to the mechanical systems and are not indicative of roof leaks.

The original windows were removed some years ago and replaced with new double-glazed units. The new windows are historically appropriate in their appearance and are in very good condition.

#### **H. Building Interior:**

The lobby and the two meeting rooms have been partially refurbished in recent years and present an elegant appearance. The rooms have high ceilings and ample amounts of daylight. The wood strip floors and vinyl wall coverings are in good condition. A wide stairway with oak treads invites visitors to the second floor.

The two toilets are showing wear. The resilient tiles on the floors have shrunk with age and the resultant seams look dirty. The wall covering is stained or worn through in several areas. The toilet partitions show some areas of rust and the ceiling tiles are stained.

The kitchen is modern, but very crowded. A portion of the rear porch was enclosed in the early 1970's to add an area for a dishwashing machine. The kitchen is very short on storage space. A walk-in cooler, a freezer, and a manager's desk are located in a small room across a hall from the kitchen. This arrangement is very poor since kitchen traffic has to cross a public corridor that connects the back door to the lobby; it is impossible to shield the normal commotion of a commercial kitchen from the lobby. The lack of first floor storage areas means that the staff has to use the basement for storage. This is inconvenient for the kitchen staff and inefficient operationally.

The second floor meeting rooms are very basic in their décor and lack the elegance of the first floor spaces. They are in fair condition. The Women's Toilet is two spaces – a large powder room and a rather cramped toilet area. The finishes are in poor condition. There is no Men's Toilet or drinking fountain on this floor.

There is a former apartment on the second floor that is utilized for office space. While the old bathroom fixtures have been removed, the space has not been otherwise reconfigured. It represents space that could be remodeled into more efficient office space or additional meeting rooms if desired

#### **I. Building Code Compliance:**

The building is generally compliant with current building code requirements, with the exception of handicapped-accessibility, which is discussed below. There are a few minor areas of non-compliance, as would be expected for a building of its age, but is up to date in the major life safety areas. There are exit signs over the doors and an emergency lighting system. The entire building has a fire alarm system with manual pull stations at the exit doors.

The primary code compliance problem is having only one exit stair serving the second floor meeting rooms. The existing fire escape from the second floor cannot be counted as a second exit as it is typically locked to secure the Special Events office. The large room will hold forty people while the small room holds fifteen. This total of 55 exceeds the 50 allowed for a single-exit building. The maximum travel distance from the far corner of the large room to the front door is 83', which slightly exceeds the allowable maximum of 75'. The presence of the fire alarm system, which is not strictly required, helps mitigate this problem by giving early warning of a fire to occupants on the second floor.

#### **J. Americans With Disabilities Act Compliance:**

The War Memorial predates requirements for handicapped accessibility so it is not surprising that the building has deficiencies in this area. While modifications have been done to the building to improve its accessibility, it does not meet current ADA standards. The Building Code does not require that the building be made fully accessible, but it does require that any renovations incorporate ADA design requirements. For example, any renovations to the toilets must incorporate ADA standards.

A major goal of this study is to present a plan to make the building fully handicapped accessible. The first step is to provide an accessible path from a convenient parking area to the front door.

There are four existing handicapped parking spaces provided. The existing ramp is in two sections. While the lower section comes close to meeting current design standards, the upper ramp is too steep. The front door exceeds the required 3'-0" width, but does not have lever-style hardware

The first floor toilets are marginally accessible. The door to Men's Toilet is the required 3'-0" width, but again lacks the required lever-style hardware. Inside, one of the stalls has grab bars, but the clearance at the stall door is inadequate and the fixture is not a handicapped type. The door into the Women's Toilet is 2'-6" wide and will not permit passage of a wheelchair.

The doors into the two meeting rooms are accessible.

The second floor and basement are not accessible due to the lack of an elevator. While the basement is not open to the public, it should still be accessible to allow use by a handicapped staff member. An elevator should be added to allow public access to the second floor; it should have a key control to limit basement access to staff only.

Audible alarms are provided as part of the existing fire alarm system; there are no visual alarms as required by ADA standards. As the fire alarm system is modified or updated in the future, visual alarms should be added.

#### **K. HVAC and Plumbing Systems Evaluation:**

Information for this report was based on a walk-through visit on April 25, 2003. The purpose of this evaluation is to assess the existing condition of the heating, ventilating and air conditioning (HVAC) systems, provide general recommendations for improvements in operation and maintenance & recommended renovations, and provide budget cost estimates.

- K.1 Overall Comfort: Personnel in the facility were interviewed in order to get input on the overall comfort and operation of the HVAC systems. The following were noted:
- Special Events Office (Mary Beth's area) is either too hot or too cold.
  - Ballroom heating system is not adequate in extreme cold weather and cooling is not adequate during when fully occupied during a function and people are entering and leaving the space through the doors.
  - No ventilation is being supplied to the building spaces via any HVAC systems. The only outside air being provided to the interior spaces is by building leakage.
  - The insulation in the Ballroom area is perceived to be inadequate.
  - The kitchen office is always hot due to the heat load generated by the cooler. Please also note that the supply duct to this area is loose in the attic and communication wiring has been run inside the duct.
  - The kitchen area does not have A/C and it gets very hot in the summer.
  - No A/C is currently installed in the front entry lobby.
  - Upstairs meeting rooms get hot when fully occupied.

## K.2 Existing HVAC Systems:

K.2.1 Central Heating System: An American Standard natural gas hot water boiler is installed in the basement that serves the building's heating needs in all areas. Some areas have been retrofit with heat pumps which were intended to serve heating needs during moderate temperature months, with the boiler handling the additional heating loads during peak heating seasons. The boiler system is equipped with four heating HW zone pumps (1/8 HP qty 3 and one 800W pump) which are controlled by four heating tstats installed at various locations throughout the facility. The four boiler heating zones are 1) Ballroom (controlled by combination htg/clg stat), 2) Mary Beth's office area, 3) Small dining room on 1<sup>st</sup> floor, and 4) entry foyer. Hot water is supplied from boiler to exterior wall mounted convector type units throughout. Per our discussions with building personnel, this boiler was installed in about 1969 and is likely approaching the end of its useful life.

K.2.2 Ballroom: This area is served by a Carrier split system for cooling purposes and hot water convectors for heating. Seven hot water convectors (in decorative enclosures) are installed around the area perimeter, typically beneath windows. The Carrier air handling unit is a model #40RM-008-B600BC (nominal 7.5 tons, 3000 CFM) with 2.4 HP fan motor, 1 circuit cooling. A matching outdoor condensing unit, Carrier #38AK-008-501 is installed. The AHU is installed in the original balcony area, which has been closed in and now serves as a mechanical/storage area. We were advised that during hot weather this unit sweats (condensates) and we observed some water damage on the hardwood floors beneath the unit. We expect that the condensing problem is being caused by a combination of low airflow and low ventilation and cooling capacity in the enclosed Balcony room. The cooling is controlled by a space mounted thermostat which is interlocked with heat control for the exterior heating convectors. There is currently no outside air provided to the space via this system, which is in violation of mechanical codes for a space of this use group. This unit was installed approximately 3 years ago. Cooling air is supplied to the Ballroom via insulated ductwork in the attic area above. Four 12" ceiling diffusers are installed which are connected to the main ducts by flex. Ductwork in the attic is insulated with Type 75 FSK foil faced blanket wrap (2" thick). Insulation and ductwork appears to be in good shape. A fifth 12" takeoff from this system serves an old ceiling diffuser on the 2<sup>nd</sup> floor at the top of the stairwell. A small duct mounted supply grilled is installed on the main duct of the AHU which serves the Balcony mechanical/storage room. We believe that this airflow needs to be increased as well as a possible exhaust fan installed so that the sweating problem can be eliminated.

K.2.3 Small First Floor Meeting Room: This area is served by a Carrier split system for cooling purposes and hot water convectors for heating. Five hot water convectors (in decorative enclosures) are installed around the area perimeter, typically beneath windows. The air handling unit is installed in the crawl space beneath the area with a matching heat pump condensing unit in the rear of the building (adjacent to the natural gas meter). The outdoor heat pump is a Carrier model 38QN-030, nominal 2.5 tons, with 208 volt/ 1 phase electric service. The cooling air is supplied to the space via six decorative (brass) floor mounted supply grilles around the perimeter of the area.

Separate heating and cooling thermostats are installed in the wall adjacent to the entry door for HVAC control purposes.

- K.2.4 Lobby: This entry area has no A/C, except from air that migrates down from supply in the hallway at the top of the stairs. Two hot water convectors along the exterior wall beneath windows serve heating purposes.
- K.2.5 Kitchen Office: This room has a hot water convector unit beneath the window on exterior wall for heating. The air conditioning is supplied from the 3.5 ton unit in the attic (see 2<sup>nd</sup> floor notes below).
- K.2.6 Kitchen: A sidewall (36''+/-) centrifugal exhaust fan serves the large canopy hood in the kitchen. It appears to be functioning satisfactorily. We could not identify any make-up air systems for the exhaust hood. The Dishwashing area, which was built out on the original terrace, has a small hood for removal of steam. This hood is served by a relatively new rooftop exhaust fan. No heating (other than cooking equipment load) or A/C is present in the kitchen.
- K.2.7 Toilets: Two toilets on the first floor are heated by exterior wall hot water convectors similar to other areas. These toilets have no exhaust system, which is a code violation.
- K.2.8 Second Floor Meeting Rooms, Upstairs Hall, Kitchen Office (1<sup>st</sup> Floor): The second floor is served by the central boiler heating system and two split system heat pumps. The areas listed above are served by a nominal 3.5 ton split system heat pump. The air handler is installed in the upper attic area and has insulated ductwork, and flex duct takeoffs to ceiling supply diffusers. A condensate pump for this unit is sitting in a bucket and is piped with flexible tubing to the building's exterior. The pump is connected to electrical service with a standard extension cord. An auxiliary drain pan is installed beneath the AHU. The unit and drain pan are independently routed to the bucket, where condensate is pumped to exterior. AHU is Carrier #40YR-042-300, with ½ HP fan motor, 208V/1PH electric service, and 72.3A electric auxiliary heater, and outdoor unit is a Payne #PH10JA042-B. The original Carrier outdoor unit has been replaced by this unit, but we are not sure of the date of installation.

This split system has two ceiling return grilles (one in each Meeting Room) and eight ceiling supply diffusers (four in large Meeting Room, two in small Meeting Room, one in upper Hall, and one in downstairs Kitchen Office). The flex in attic serving the Kitchen office is disconnected at this time.

The heating for these areas is provided by hot water convectors. The large Meeting Room has three, small Meeting Room has two, hall has one, Women's toilet has one.

- K.2.9 Special Events Office and adjacent rooms: These areas are served by a 2 ton split system heat pump. The outdoor unit (Carrier 38QN024) is located on the fire escape landing outside the building just outside the door to the workroom. This unit is sitting on bricks and is falling over, but piping does not appear to be damaged. Five hot water

heating convectors are in place in each room of this area. Other areas are apparently used as workrooms and storage primarily.

### K.3 Recommendations and Budget Cost Estimates:

The following recommendations and associated cost estimates are for budget purposes only, based on our best estimate of current conditions and on the work being done by a commercial contractor. No guarantee is implied that the work can be accomplished for the estimated amounts.

#### K.3.1 HVAC Renovations:

- Replace boiler and zone pumps. Increase capacity of heating units to incorporate added outdoor air ventilation. Install new insulated hot water lines to certain areas which require more heating or enhanced heating control.
- Install new 25-ton air cooled scroll compressor chiller at satisfactory location outside the rear of the building and new zone chilled water pumps in basement area. Note that existing electrical service will require upgrading to facilitate installation of chiller and pumps.
- Upgrade heating and control controls to centralized Direct Digital Controls (DDC). This will allow building occupancy schedules to be set for automatic night setback/unoccupied control. Also, the HVAC systems will be more responsive to changes in building occupancy during peak load (event) periods. A personal computer (PC) interface and main control panel will be installed at a central area in the building.
- Replace heat pump cooling systems with chilled water system including new air handling units in place of DX units and new controls.
  - *Ballroom:* New chilled water cooling unit in place of existing 7.5 ton unit using existing ductwork. This unit will have outside air intake, new chilled water piping, zone terminal unit with controls to serve balcony area (to eliminate high humidity conditions). Hot water or electric pre-heat with sensors and controls to prevent chilled water cool freezing during winter months.
  - *Kitchen:* New chilled water AHU installed in Balcony and new ductwork down to kitchen for cooling. New outdoor air intake and thermostat controls in Kitchen. Make-up air can be provided by this unit to supplement kitchen exhaust. Hot water or electric pre-heat with sensors and controls to prevent chilled water cool freezing during winter months.
  - *First Floor Meeting Room:* New chilled water AHU installed in crawl space in place of existing 2.5 ton DX unit. This unit will be connected to existing ductwork and air distribution. New outdoor air intake. Hot water or electric pre-heat with sensors and controls to prevent chilled water cool freezing during winter months.
  - *Upstairs meeting rooms- served by existing 3.5 ton heat pump:* New chilled water AHU in attic connected to existing ductwork. Install new OA intake in attic. Hot water or electric pre-heat with sensors and controls to prevent chilled water cool freezing during winter months.

- *Special Events Office and adjacent areas:* New chilled water AHU in attic connected to existing ductwork. Install new OA intake in attic. Hot water or electric pre-heat with sensors and controls to prevent chilled water cool freezing during winter months. This unit will also serve downstairs Kitchen office via new terminal unit installed in supply duct in attic- new zone temperature sensor connected to TU shall be installed in Kitchen Office for control.
- Minor changes to existing ductwork and air distribution to provide improved comfort and zoning.
- Add exhaust in toilet areas to meet current codes. Add outdoor air intake to existing air handling systems to meet current codes. Airside economizers in certain areas of high occupancy.
- Add cooling (and possibly heating) to kitchen via new unit in Balcony. See 4.b. above.
- Replace two convectors in Lobby with new unit ventilators with hot water heating, chilled water cooling, supply fans, and controls.
- Replace seven convectors in Ballroom with new unit ventilators with hot water heating, supply fans, outdoor air intakes (to supplement outdoor air ventilation for high occupancy times), exterior intake louvers, and controls. Note: Cooling will be provided by new chilled water air handling unit in Balcony.
- Install new chilled water lines to all new HVAC air handling units and unit ventilators. 45 degree chilled water will be made by the new chiller and circulated to the new units for cooling purposes.

The total estimated cost for the items listed above is in the range of \$81,875 - \$125,275, depending upon the options desired, the sophistication of the HVAC building controls systems, and competitive pricing variables. This includes all required mechanical demolition work, new equipment, ductwork, accessories, controls, etc. This budget number does not include professional fees such as engineering evaluations, design work, or HVAC testing & balancing. These professional services would be an additional \$7,000 to \$12,000.

Before any construction work is started, a detailed investigation of the existing systems should be conducted and drawings and specifications prepared to show exact requirements of new equipment and the work to be accomplished. The mechanical changes described above will create a modern, energy efficient building capable of providing dependable service for many years to come.

#### K.4 Other Considerations:

Attic insulation was observed to be in poor condition. We recommend removing existing insulation and installing new blanket type insulation where possible. Also attic ventilation fans with humidity controls might be considered.

## **L. Electrical Systems Evaluation:**

Information for this report was based on a walk-through visit on the morning of April 25, 2003. The purpose of this evaluation is to assess the existing condition of lighting and power distribution and life safety facilities, provide recommendations for improvements in operation and maintenance, and provide budget cost estimates. The building, with two stories plus a partial basement and partial attic, was constructed in the late 1940's. Locations of the original lighting fixtures, lighting switch controls, and receptacles are shown on the original architectural floor plans.

### **L.1 Existing Power Supply and Distribution:**

L.1.1. **Supply:** Electric power is supplied to the building by American Electric Power from a set of pole-mounted transformers located on the north side of the parking area on the north side of the building. The supply voltage is 240/120 volts, 3-phase, 4-wire, delta, with a high leg. Overhead service drop conductors extend to metering current transformers and two service heads located high on the north side of the building. The utility meter is located at eye level on the outside of the building beneath the service heads. Service conductors in two conduits extend down the exterior of the building and separately feed two main panelboards located in the basement.

L.1.2 **Distribution:** An older main panelboard rated 400 amperes includes no main circuit breaker, three 3-pole breakers and two 2-pole breakers. A relatively new main panelboard has a 300-ampere main circuit breaker, numerous 3-pole and 1-pole branch circuit breakers, and approximately 17 1-pole spaces. Several small branch panelboards in the vicinity of the two main panelboards provide circuit breaker protection for lighting, receptacles, kitchen loads, and mechanical equipment loads in the building. Lighting and receptacle panelboards are single phase. A branch panelboard located in the attic includes circuit breakers for mechanical equipment located in the attic. There are no panelboards located on the first or second floors of the building. All panelboards appeared to be in relatively good condition, but very few have legible directories. No safety switches have circuit identification. The attic panelboard is missing some cover plates to close up spaces not occupied by circuit breakers. Duplex receptacles on the first floor and at the attic dormers, used for seasonal decorations, are controlled by a time switch located near the basement panelboards.

L.1.3 **Convenience Receptacles:** Convenience receptacles, some flush mounted and some surface mounted, appear to be adequate for the normal uses of the various spaces.

L.1.4 **Wiring:** Some of the existing service and feeder circuits are in metal conduits, but almost all branch circuit wiring is by means of non-metallic cables.

### **L.2 Existing Lighting Equipment:**

L.2.1 **Basement:** Lighting in the unfinished areas of the basement (west side) consists of bare incandescent lamps with pull chains and surface mounted strip fluorescent fixtures controlled by wall switches. Lighting in the finished areas of the basement (east side) is mainly by strip fluorescent fixtures surface mounted above 2'x4' prismatic plastic

- panels located in a 2'x4' ceiling grid, with wall switch control. In general the ceiling and lighting panels are in poor condition.
- L.2.2 First Floor: The reception area, main dining room and small dining room are illuminated by decorative incandescent chandeliers and wall sconces. The main dining room also has two track light fixtures for highlighting the space at the fireplace end of the room. All fixtures in the main dining room, and the sconces in the small dining room are controlled by wall box dimmers. Kitchen areas are illuminated by surface fluorescent fixtures. Toilets are illuminated by 2'x4' recessed fluorescent fixtures. Most smaller spaces have switch controlled surface incandescent fixtures. Most fixtures appear to be in good condition.
  - L.2.3 Second Floor: The large meeting room has decorative incandescent chandeliers controlled by wall switches. The small meeting room has two surface mounted lensed fluorescent fixtures. The coordinator's office suite has surface fluorescent fixtures and some surface incandescent fixtures. Most fixtures appear to be in good condition.
  - L.2.4 Attic: The Attic is poorly illuminated by bare lamp incandescent fixtures controlled by switches.
  - L.2.5 Life Safety Illumination: Exit doors and passages on the first floor are identified by self-luminous exit signs. There are no other exit signs in the building. The only emergency lighting fixture noted was a single two-lamp unit located at the top of the main stair.
  - L.2.6 Exterior: Most of the personnel doors have incandescent wall mounted fixtures controlled by interior manual switches. A wall mounted incandescent fixture at the top of the exterior fire escape at the west end of the building was not operating, presumably because of a burned out bulb. Projector type incandescent flood lamps located at the eave line around the building provide area illumination. Three ground-mounted quartz flood light fixtures are located to illuminate the front facade of the building. Exterior floodlights are controlled by a surface mounted time switch located near the top of the stair on the second floor.
  - L.3 Fire Alarm and Security System: A fire alarm and security system have been installed relatively recently and the fire alarm system appears to comply with applicable codes. Smoke detectors are installed in the attic. During the visit the location of the fire alarm control panel with associated zone identification and reset controls could not be identified.
  - L.4 Apparent Deficiencies: Staff indicated that occasionally circuit breakers serving kitchen equipment trip on overload and need to be re-set. The lack of accurate panelboard directories and safety switch nameplates is a potential problem for future operations and maintenance. Exterior lights at personnel doors should be converted to long life lamps such as compact fluorescent, with automatic controls, for reasons of security and lamp replacement. Exterior building mounted floodlights should be replaced with metal-halide fixtures to reduce energy cost and for longer lamp life.

Although the building probably complied with applicable codes at the time it was constructed, a number of conditions violate current electrical and safety requirements. A system of emergency lighting should be provided for public spaces and exit ways on the first and second floors. Emergency lights should be located on the outside of the building at the exit discharges. Exit signs should be provided on the second floor. Paragraph 518-4 of the 1996 National Electrical Code states that non-metallic sheathed cable shall not be used in places of Assembly except it shall be permitted in those buildings or portions thereof that are not required to be of fire-rated construction by the applicable building code. This issue may need to be reviewed with the building official having jurisdiction.

- L.5 Electrical Recommendations and Budget Cost Estimates: The following electrical recommendations and associated cost estimates are for budget purposes only, based on our best estimate of current conditions. No guarantee is implied that the work can be accomplished for the estimated amounts.
- Check all circuits and provide accurate complete directories for panelboards and for safety switches (\$1000).
  - Check kitchen circuits to verify they are not overloaded and make corrections (\$500).
  - Provide emergency lighting units in all public spaces and passageways, and outside exit discharges (\$1600).
  - Provide exit signs on the second floor (\$800).
  - Replace outside lighting fixtures at personnel doors with compact fluorescent fixtures (\$1000).
  - Replace building mounted incandescent floodlights with metal-halide fixtures (\$1500).
  - Upgrade the lighting in the basement and attic (\$3500).
  - Provide a fire alarm annunciator near the exterior door where the fire department is likely to respond to a fire (\$500).
  - Replace all existing non-metallic sheathed cable with conductors in metal raceway or in MC cable, to comply with NEC paragraph 518-4. Remove all un-needed wiring (\$12,000).

The electrical changes recommended above are expected to create a modern, energy-efficient building in compliance with current codes, capable of providing useful service for many years to come.

## ***Part Two -- Operational Considerations:***

### **A. Peer Facilities Review:**

The Vinton War Memorial is a unique facility in the Roanoke Valley in that it was built by the community to provide meeting and event space expressly for use by local groups and individuals. While none of the surrounding localities operate a meeting / event facility that is directly comparable in size and amenity, there are competing facilities.

Roanoke City Parks & Recreation operates two historic mansions that may be rented for meetings and events. Mountain View, located on 13<sup>th</sup> Street near Memorial Bridge, was donated to the City in 1955 by the Fishburn family. It is principally used as a Senior Center during weekdays. While Mountain View is very large, its configuration as a house makes it awkward as a site for large events. The two largest rooms, originally the living and dining rooms, will hold 40-50 people each. The original kitchen has been modified to accommodate outside caterers. While the site is four acres in size, parking is very limited. The City also operates Buena Vista in Jackson Park. Buena Vista houses offices for the regional offices of the Virginia Department of Historic Resources. There is one room that will hold perhaps 40 people. Kitchen facilities are limited.

The City of Salem has a large meeting facility attached to its Civic Center. It consists of one large meeting room that will seat 350-400 and three smaller “parlors” that seat 70-80. The large room may be subdivided into thirds. The meeting facility is in a wing of the Civic Center with its own entrance and toilets and ample parking. While the meeting rooms are primarily used to support events that also utilize the Civic Center’s arena, the rooms are also used by community groups such as Rotary and the Sports Club. The facility is also marketed to the general public for meetings, receptions and parties. An “in-house” operation, Salem Catering and Concessions, is the sole provider of food service at the Civic Center. Complete event planning information, including rental rates and sample menus, is provided on the facility’s excellent website at [www.salemciviccenter.com](http://www.salemciviccenter.com).

The Jefferson Center, built as a public / private partnership between the City of Roanoke and the Jefferson Center Foundation, has number of meeting / event spaces available for rent. The largest is Fitzpatrick Hall, which will hold 300 for a seated dinner or 240 for a dinner-dance. Fitzpatrick Hall has its own entrance, lobby, toilets and catering kitchen. The Fralin Atrium is primarily used as the lobby for the Shaftman Performance Hall, but it is also available for rental on nights when the performance hall is dark. It seats 90 for dinner and has a small catering kitchen and a large bar area. In its first several years of existence, Jefferson Center operated with a group of about six outside caterers who were “approved” to work events within the building. In the last year, Jefferson Center has experimented with having a single caterer working exclusively within the main building, but still allowing other caterers to work in Fitzpatrick Hall. During this experimental period, Jefferson Center also received a kitchen use fee, which was a percentage of the catering charges. Jefferson Center has now gone back to their original approach of having a number of approved caterers and has dropped the separate kitchen use fee in favor of higher room rental rates.

## **B. Financial Strategies:**

Each of the three competing operations has different financial strategies. Roanoke City Parks & Recreation does not actively promote the rental of Mountain View and Buena Vista and provides only security and cleanup services. City Council recently raised the rental rates so that rental of the facility will approximately cover the City's operating costs with City residents receiving a modest discount on the standard rate.

Salem takes a different approach and operates its facility in an unapologetically for-profit manner. The Salem Civic Center is viewed as an economic engine that can attract business to the City and promote a positive image for Salem. The City aggressively seeks out opportunities to host events such as the Salem Fair, the Roanoke Valley Horse Show, softball tournaments, the Amos Alonzo Stagg Bowl and other NCAA playoffs. Both Salem Catering and the Salem Civic Center run in the black as separate operating units and require no taxpayer subsidy.

In the most recent fiscal year, Salem Catering turned a modest profit on food sales of just over \$1 million. Salem Catering also pays the Civic Center a substantial percentage of its sales -- over \$200,000 in the last fiscal year. The Civic Center operates its meeting rooms just like a hotel or motel operates theirs. There is a basic room rental rate that includes setup and cleanup. The rental rate, which is 20% higher on Saturdays, is discounted with the purchase of food. Security or other staffing, use of audio-visual equipment, and other services are available at an extra charge. Rental and food rates are adjusted annually to keep pace with rising costs.

The Civic Center charges market rate for most events. This allows local civic groups such as Rotary and Kiwanis Clubs to receive discounted prices. The Civic Center also has a liquor license and handles liquor sales at the majority of events. This is a profitable enterprise and allows the Civic Center to minimize any potential problems.

The Jefferson Center operates somewhere in between. While the Jefferson Center Foundation is a non-profit organization, Fitzpatrick Hall is designed to generate an operating surplus to help underwrite the costs of operating the Performance Hall. Fitzpatrick Hall is very popular and is booked for over 200 events per year, generating a substantial operating surplus. (Jefferson Center would not release exact figures.) Room rental includes setup, cleanup, one security person, and use of the facility's sound system and portable stage are included. Valet parking, extra security and other special services are available at extra charge. The rental rate is higher on Fridays and Saturdays.

Of the four facilities examined, the War Memorial is the least successful financially. While the facility hosted approximately 376 meetings and events in fiscal year 2002-2003, it required a taxpayer subsidy in excess of \$80,000 to cover its operating loss. This study will suggest ways that the War Memorial can be renovated and expanded, while at the same time minimizing this operating loss.

## Part Three – Recommendations

### A. Advisory Committee

An Advisory Committee was established to work with the Architects to identify the shortcomings of the building and suggest ways to improve it. The committee members are:

- Jane Stephenson  
Former Director, Jefferson Center
- Patricia Bruce  
Wedding Planner
- Mark Frye  
Creative Occasions Florists
- Barbara Dillon  
Vinton Historical Society
- Harriett Childress  
Vinton Resident
- Carolyn Fidler  
Vinton Resident
- Carolyn “Sue” Campbell  
Vinton Resident
- Mary Beth Layman  
Town of Vinton
- Bethany Hall  
Vinton Resident
- Kevin S. Boggess  
Town of Vinton
- Carolyn S. Ross  
Town of Vinton

The first meeting of the Advisory Committee was a brainstorming session to solicit everyone’s input. The Committee was first asked to list some of the positive aspects of the War Memorial:

- The facility’s pricing structure is affordable.
- The food is good quality and a good value.
- The interior provides a very nice ambiance for the events held there.

The Committee was then asked to list areas in which the building’s current layout (*See Figure 1*) could be improved:

- Kitchen should be enlarged.
- The large meeting room’s capacity of 100 people is too small for many events.
- The toilets are small and not ADA compliant.
- Kitchen access to the small meeting room is through the lobby.
- Second floor would be used more if an elevator were available.
- Need better separation of the public entrance and service entrance.
- Heating and cooling systems are often inadequate.
- Lighting systems are inadequate in some areas.
- The building’s communications systems are not up to date.
- Some rooms are too “live” acoustically.

The Committee also had suggestions for improvements to the site:

- Need more parking during larger events.
- Traffic patterns on the site are confusing.
- Need better parking layout and ramps for handicapped drivers.
- The landscaping is overgrown in some areas and inadequate in others.
- Electrical outlets in the lawn area are needed to support festival uses.
- A gazebo would be nice as a setting for wedding photos.
- Modifying the front lawn for amphitheatre use would be great.

The Committee feels strongly that with the proper expansion and renovation the facility could see a significant increase in its usage, particularly for wedding receptions and business meetings and seminars. The Committee sees a very strong demand in the Valley for moderately priced places to host wedding receptions. They feel the War Memorial could double or triple its billings for wedding business if the facility was expanded to accommodate receptions of 200-300 people. The majority of wedding receptions in the Valley are in the 200-300 size range; the large room's capacity of 100 excludes it from consideration for the majority of this market segment.

Conversations with Mrs. Jane Stephenson, retired Director of the Jefferson Center Foundation, confirm this opinion. While meeting with prospective brides about booking Fitzpatrick Hall for their weddings, she often heard comments that the War Memorial was very nice but "just too small." Fitzpatrick Hall is a much larger facility that holds about 300 for dinner or 240 in a dinner/dance setup. Fitzpatrick Hall is booked every Saturday in 2003, mostly for weddings. The Saturday rental rate, room only, is \$1,100.

War Memorial management perceives that their wedding business is their most profitable and an analysis of last year's billings supports that feeling. The facility hosted approximately 31 weddings during fiscal year 2002-2003, generating total billings of \$49,873. While weddings were only 8.2% of the total number of bookings, they produced 28.9% of the facility's total income. The average wedding bill was \$1,609. In contrast, the average bill for an event in the large meeting room was \$444; the small meeting room average bill was \$224.

This report recommends that the War Memorial be expanded so it can increase its wedding business even further. Managers at both the Jefferson Center and Salem Civic Center agree that weddings are a very desirable (and lucrative) market niche for this type of facility. They point out that there is generally little price resistance for what is perceived by the hosts as a one-time event. This perception is supported by an analysis of War Memorial billings. The average wedding that used the entire facility cost over twice what a non-wedding event cost.

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**War Memorial Usage in fiscal year 2002-2003**

	“Entire Facility”	Large Meeting	Small Meeting	Upstairs Rooms	Totals
Total Sales:	\$ 61,254	\$ 79,959	\$ 30,734	\$ 866	\$ 172,813
No. Events	47*	180	137	12	376
Avg. Sale	\$ 1,303*	\$ 444	\$ 224	\$ 72	\$ 460

\*Weddings were 31 of the 47 events booking the entire facility. The average bill for a wedding was \$1,609. The average bill for a non-wedding event was \$711.

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**B. Initial Building Renovation / Expansion Recommendations**

B.1 Architectural Recommendations: A second meeting of the Advisory Committee was held on July 22, 2003. The Architects and Engineers presented preliminary plans (*See Figure 2*) to implement the changes suggested by the committee during its first meeting:

- Expand the Ballroom toward the rear to add 1760 new square feet of area to the current 1290 sf. This will increase the room’s seating capacity to a maximum of 250. A new terrace would be added along the north side of the room to add an outdoor area to the facility. French doors would open onto the terrace. The south wall of the ballroom addition would have a series of storage rooms for tables, chairs, etc.
- The kitchen would be expanded by 500 sf and the current 300 sf renovated.
- The areas under the expanded ballroom and kitchen would have a full basement for storage use.
- The women’s and men’s toilets would be expanded and made handicapped-accessible. Each would have three toilet fixtures and two lavatories.
- The current room containing the walk-in cooler and freezer would be completely reworked to allow the addition of an elevator and a rear service corridor that would allow the small meeting room to be serviced directly from the kitchen without going through the lobby.
- The elevator would serve all three floors. Public travel would be limited to the main and second floors. By use of a key control, staff could access the storage areas in the basement.
- The second floor meeting rooms would be renovated and upgraded. The small upstairs room would lose some space due to the elevator. The existing women’s powder room would be renovated into two handicapped-accessible toilets, one for each gender.

- All of the new spaces are designed so as to not be visible from Washington Avenue so the historic front façade of the War Memorial would not be affected. The exit door from the ballroom on the front façade would be removed and replaced with a window that matches the other windows on that façade. This will restore an architectural symmetry to the building and make it more historically correct.

B.2 “Basic Approach” Site Renovation Plans: The Engineers presented a plan (*See Figure 3*) to reorganize the site to improve vehicular flow and increase the quantity of parking. This plan is a “Basic Approach” that includes items that have been determined to be necessary to improve the basic function of the site. (A second, “Full Build Approach”, was later developed that expands the features of the Basic Approach, improves the drainage system, and changes the image and ambience of the site dramatically.) It was emphasized that all of the facilities on the site would benefit from these proposed improvements, not just the War Memorial:

B.2.1 Entrance, Exit and Parking Facilities: In general, all parking lot areas, the exit drive, the rear building parking, basketball court, and batting cages’ pavement will be removed and replaced. The entrance drive will be topped. A two-way entrance onto the property from Washington Street will be established, with a slight adjustment to the alignment of Blue Ridge Lane, which branches off the entrance to the property. Vehicles exiting onto Washington Avenue will be limited to making right turns only. The entrance road will lead to a new expanded parking lot to the east, and around the War Memorial, exiting onto Meadow Street. The current basketball court and batting cages will be demolished and the entire area will be regraded and configured for parking. The pavement around the Senior Center, including the gravel parking lot, will be replaced and incorporated into the main parking lot. The parking lot and the exit drive at the rear side of the War Memorial will be regraded and lowered to relieve the flood risks to the War Memorial basement. Generally traffic flow will be greatly improved and vehicle safety leaving the site will be improved.

As part of the parking lot improvements, handicap parking and access to the Senior Center and War Memorial will be greatly improved. Handicapped parking with two new handicapped ramps will be located beside the War Memorial as well as additional spaces adjacent to the Senior Center. A new rear service entrance was shown for the rear of the War Memorial. This would allow deliveries into the basement level or up the rear steps into the kitchen. There will be approximately 12 spaces behind the War Memorial designated for employee use.

A gazebo was shown as a structure that would add to the ambience of the park and provide an attractive place for wedding photos to be taken. Minor landscaping will be included in the parking areas to improve the overall aesthetics. An area will be provided for an optional War Memorial monument adjacent to the main parking area, near the War Memorial Building.

B.2.2 **Underground Drainage:** This has been a very wet season and numerous underground springs of water were discovered during site inspections. This wet season has provided an opportunity to better identify these potential damaging sources of water and take steps to correct the problems in the current plan. We understand these streams have always been problematic to the pavement and front lawn areas, and this year the problems have only been magnified.

Multiple underground springs daylighting on site have also been identified on the south end of the Senior Center and each side of the main entrance drive. These streams have severely deteriorated areas of paving and have created a marsh area in the front lawn. The wet (marshy) area in the front lawn limits the usability of the lawn at times, creating a mosquito breeding ground and requiring an unsightly barricade at events.

At the main parking lot, all known existing streams will be captured by way of gravel drain cutoff walls or edge drains and will be piped to a curb inlet. The pavement base will be designed with filter fabric above and below uniformly graded stone. This system will create a channel for any unknown springs or other subsurface water to flow to an edge drain placed in front of the curb and gutter. Once in the edge drain, the water will flow to a curb inlet in the main parking lot.

B.2.3 **Surface Drainage:** The area of watershed creating drainage across the site is substantially greater than the site itself. There is a large sloped area to the east side (behind the Senior Center) that drains onto the main site area. The extensive amount of runoff is currently handled by a few small onsite drain pipes that mostly daylight down stream. The majority of the surface drainage during heavy weather events exits the site by surface flow without any restrictions, overloading the downstream neighborhoods. Generally, the onsite surface drainage, along with the previously discussed underground drainage will be captured and detained on site to minimize the risk of flash flooding downstream.

To prevent surface water from the area above the site from flowing onto, and under the pavement, another edge drain will be installed behind the curb and gutter on the southeast side. This will drain to a curb inlet located along the entrance road. Installing the gravel drains and edge drains should prevent deterioration of the subsoils and freeze/thaw problems during the winter that could adversely affect the pavement.

The yard area in front of the War Memorial and the grassed area to the east of the entrance road does not drain well and use is very limited during wet weather.

From the curb inlets along the entrance road and in the main parking lot, the water will flow into a 48" diameter perforated pipe that will act as a large gravel drain across the front lawn allowing the water to slowly seep into the surrounding soil. This oversized pipe will also serve as the stormwater detention for a portion of the flow from the front portion of the site.

From another curb inlet in the main parking lot, across from the Senior Center, water will flow into an existing pipe that flows beneath the ballfield to the drop inlet on

Meadow Street. This existing pipe will be intercepted before it reaches the Meadow Street drop inlet and redirected into an underground detention system. The detention system will then slowly release the water into the Meadow Street drop inlet. This system will also detain the water that is collected in drop inlets from a major portion of the site.

The subsurface detention systems will be sized to detain 150% of the required surface flow based upon the site area. The upsizing of a more standard site detention capacity has been requested by town personnel in an effort to further minimize the impacts of stormwater drainage on the downstream residents.

**B.3 Advisory Committee Building Design Review Comments:**

While the Committee was generally very pleased with the building plans as presented, they had the following comments and suggestions:

- The expanded ballroom, terrace and kitchen are very nice and meets the needs of the wedding users well. We need to add another door from the kitchen into the ballroom to provide better access for servers.
- Coat space is inadequate. We need to make both storage rooms off the lobby into coat rooms.
- A pergola or trellis over the terrace would make the space more attractive and offer some protection from the sun.
- There are two columns in between the new and added areas of the ballroom. The group felt the room would be more usable if these could be removed. The Engineers agree, but are not sure at this point if the roof can be adequately supported without keeping the columns. This would be studied further as the project progresses.

**B.4 Advisory Committee “Basic Approach” Site Design Review Comments:**

The Committee was generally enthusiastic about the site plan, but had the following comments:

- The group felt that the main drive from Washington Avenue should be two-way traffic. They did not feel this would be a safety problem if cars exiting onto Washington were restricted to “right turn only”.
- There was a suggestion to add a loop drive around the building and many committee members felt this would improve traffic flow and handicapped access. The Architects and Engineers agreed to look at this alternative and present some options.
- The handicapped ramps are awkwardly placed and it is a long path from the handicapped parking areas to the front door. There were also concerns that the ramps would detract from the appearance of the front of the building. The Architects said they would look into an alternative layout.
- There were mixed feelings about the gazebo. Some felt it was a nice addition; others felt it might be out of character with the War Memorial’s style of architecture.
- The facility needs better signage on Washington Avenue.

- There was considerable discussion about placing more emphasis on the “memorial” aspects of the facility and finding some way to draw more attention to the memorial plaques, etc. The creation of a memorial garden was one suggestion. It was also pointed out that it would be good to have some separation between any new or expanded memorial area and the main part of the building so that the memorial area could be a “quiet” or contemplative place a bit removed from the activities in the building.

B.5 The third Advisory Committee meeting was held on August 28, 2003. Slightly revised building plans were presented to incorporate the committee’s previous review comments. In response to the Committee’s previous comments on the site plan, Rod Meador, a Landscape Architect, was added to the study team and asked to reconsider our approach to the design of the site. This evolved into the “Full Build Approach” that was presented to the Committee (*See Figure 4*)

B.6 “Full Build Approach” Site Plan: The “Full Build Approach” includes all items listed in the “Basic Approach”, as well as improvements that will completely transform the existing site from a traditional, multi-use municipal facility to an exciting, warm, inviting park-like facility. The general change will be dramatic and will add flexibility to the uses of the front lawn area, improving the wedding and general events capabilities of the War Memorial facility, plus adding additional parking facilities for the library, and providing additional drainage improvements.

B.6.1 Entrance, Exit and Parking Facilities: The main entrance drive off Washington Avenue will be re-aligned to create a sweeping, dramatic entrance into the site. The proposed parking lot will be modified from a traditional approach to a more curvaceous, landscape friendly approach. A circular drive will be added around the War Memorial allowing limousine drop-off and pickup for weddings and other events. This drive will incorporate additional handicap parking stalls close to the building and will incorporate a landscape island at the rear side of the building, improving the character of the facility at the main exit. The existing parking lot adjacent to the Library will be modified to accommodate the circular roadway around the War Memorial.

A new parking lot will be added across the War Memorial exit drive from the current library parking lot and will mainly serve the library, but can also accommodate overflow from the other facilities if needed. The main underground detention would be located below this parking lot.

Handicap accessible walks at the War Memorial will be upgraded from standard concrete to a decorative type path, adding to the aesthetics of the facility. General site lighting will be upgraded using decorative light units that will fit with the new site image being created.

B.6.2 Additional Drainage Improvements: The front lawn area should be slightly regraded to improve its drainage. The regrading can incorporate very mild slopes that create the feel of an informal amphitheatre, while preserving the lawn for current uses. The

revised lawn area may also be used for certain outdoor events, such a concerts and weddings. The drainage of the front lawn will be further improved by adding ADS Advanedge pipes in the lawn area on a maximum of twenty foot spacing, perpendicular to the main storm drain pipe. These flat pipes would feed into the main 48" storm drain pipe and are easily installed in a two-inch trench and come with fittings that will allow direct attachment to the pipe. They will help to drain the lawn area quickly in heavy rains and can be used to better drain the spring area near the memorial stone along the entrance road. This system will allow the front lawn to be used much more often during the wet season.

**C. Summary, Conclusion and Recommendations:**

To Follow

Final Cost Estimates: To Follow

*(Draft Estimates – Our cost estimating is still being finalized)*

## **Vinton War Memorial**

### **“Basic Approach”: \$1.5 - \$1.7 Million Construction Cost**

#### **Building Improvements:**

- Renovate / Expand First Floor Only
- Add Elevator, but no other second floor renovations

#### **Site Improvements:**

- Remove tennis courts and batting cages
- Rework / Expand parking areas
- Improve traffic flow entering and exiting Site
- Basic Storm Drainage System for the Site

### **“Full Build Approach”: \$1.8 - \$2.0 Million Construction Cost**

#### **Building Improvements:** “Basic” Improvements Plus

- Renovate / Expand Entire Building
- Rework handicapped ramps so no railings needed

#### **Site Improvements:** “Basic” Improvements Plus

- Realign Entrance Drive from Washington Avenue to Accentuate Building
- Add Loop Drive Around Building and Electrical outlets
- Regrade and add drainage system to front lawn
- Expand Library Parking Areas
- Extensive Storm Drainage System
- Decorative Site Lighting
- Heavy Landscaping

Second Advisory Committee Meeting  
Review Comments

Building Plan Comments:

- Generally very positive about the plans and felt they addressed needs well
  - Expanded ballroom, terrace and kitchen meet the needs of the wedding users well.
  - Add another door from the kitchen into the ballroom for better access.
  - Make both storage rooms off the lobby into coat rooms.
  - Add pergola or trellis over the terrace.
  - Remove the two columns in between the new and added areas of the ballroom.

Site Plan Comments:

- Increased parking capacity great.
- Reorganization of traffic flow an improvement.
- Main drive from Washington Avenue should be two-way traffic. Make it “right turn only”.
- Handicapped ramps are awkward and a long path from parking areas to the front door. Also concerns that the ramps would detract from the appearance of the building.
- Add a loop drive around the building to improve traffic flow and handicapped access.
- Need better signage on Washington Avenue.
- Mixed feelings about the gazebo. Some felt it was a nice addition; others felt it was out of character.
- Considerable discussion about placing more emphasis on the “memorial” aspects of the facility. Possible creation of a memorial garden was one suggestion.
- Add a loop drive around the building to improve traffic flow and handicapped access.

***Figure 1***  
***Existing Building Plans***

***Figure 2***  
***Proposed Floor Plans***

***Figure 3***  
***“Basic Approach” Site Plan***

***Figure 4***  
***“Full Build Approach” Site Plan***

## **ADVISORY COMMITTEE COMMENTS**

### ***Positive Aspects of the War Memorial:***

- The facility's pricing structure is affordable.
- The food is good quality and a good value.
- The interior provides a very nice ambiance.

### ***Suggestions for Building Improvements:***

- Kitchen should be enlarged.
- The Large Meeting Room's capacity of 100 people is too small for many events.
- The toilets are small and not ADA compliant.
- Kitchen access to the small meeting room is awkward.
- Second floor use would increase with an elevator.
- Need better separation of the public and service entrances.
- Heating and cooling systems are often inadequate.
- Lighting systems are inadequate in some areas.
- The building's communications systems are out of date.
- Some rooms are too poor acoustically.

### ***Suggestions for Improvement to the Site:***

- Parking is tight during larger events.
- Traffic patterns on the site are confusing.
- Better parking layout and ramps for handicapped drivers.
- The landscaping is overgrown in some areas and inadequate in others.
- Lawn Area needs Electrical outlets for festival uses.
- A gazebo would be nice as a setting for wedding photos.
- Modify the front lawn for ampitheatre use.