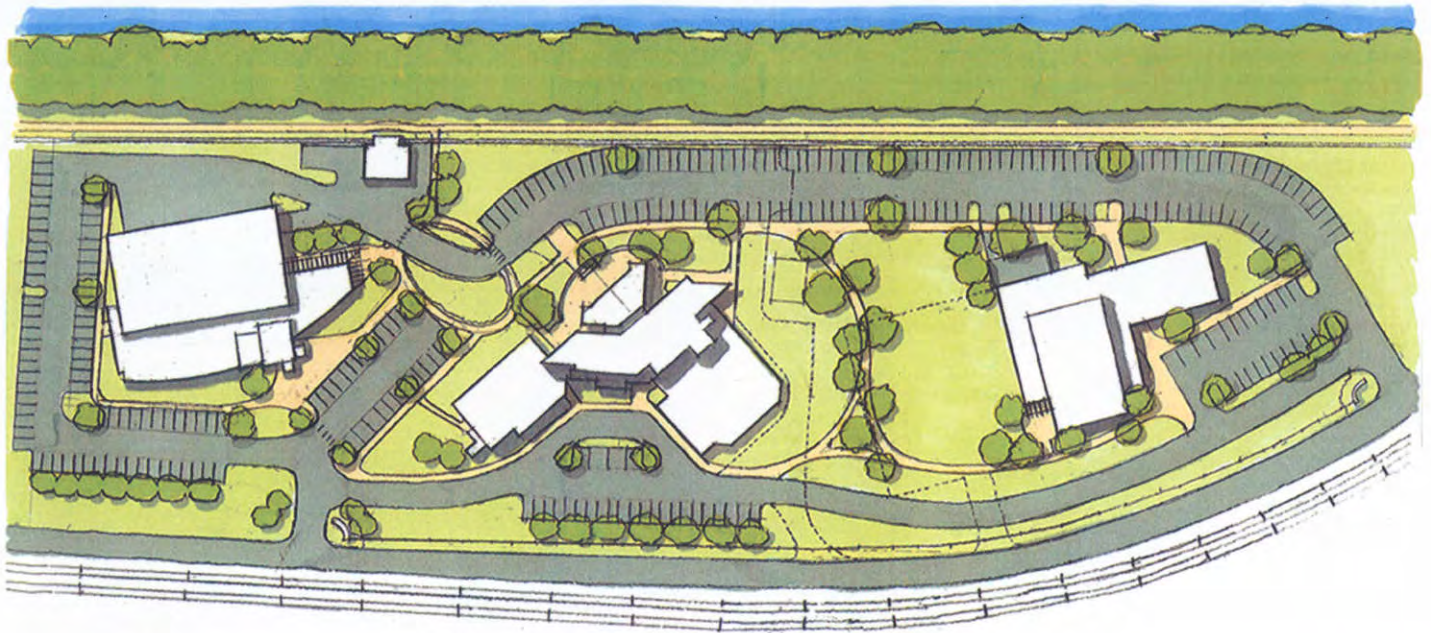


Southern

West Virginia Community and Technical College
www.southernwv.edu



Master Plan

May 5, 2014



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Southern West Virginia Community and Technical College embarked on a campus master planning process to establish a framework for the orderly development of all capital improvements that support the mission, vision, values, and strategic initiatives of the College. The successful master planning process included a comprehensive look at the physical environment of the multiple campuses and how that environment helps the College succeed in its educational mission. The Campus Development Plan was prepared with support and input from the administration, as well as the faculty, staff and students and members of the local community of each campus. The consultant team acknowledges this important input, and provides our thanks to the following:

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EXECUTIVE SUMMARY

Southern West Virginia Community and Technical College (Southern) began the campus master planning process in the Fall of 2013. The process commenced with visits by the design team to all of the campuses and sites:

Logan Campus
Williamson Campus
Boone Campus/Lincoln Site
Wyoming/McDowell Campus

Following these campus visits, the ZMM/BSP team conducted stakeholder meetings at each location. At the meetings stakeholders discussed positive attributes, challenges, and needs for each facility and campus. Following the stakeholder meetings, an Executive Steering Committee was convened to review the outcomes of the stakeholder meetings, and to assist in developing an overall strategy and framework for the plan. Based upon these meetings several themes emerged that helped guide the development of the Master Plan:

- Overall Southern's facilities are clean, organized, and well maintained. While there is some consistency on the interior of the facilities, there is little to no consistency between the exterior facilities or signage between campuses. Standards for signage, lighting, and exterior finishes for future projects should be considered.
- The master plan needs to be a realistic document that reflect the current status of the school. Local high school enrollment is declining; however, Southern projects flat enrollment. The declining high school enrollment will be offset with a focus on non-traditional students, and workforce retraining. Due to the projected flat enrollment, the Master Plan will not focus on the development of additional facilities, but rather focus on deferred maintenance, required upgrades, and maximizing the functionality of the existing buildings.
- Although a significant expansion of facilities is not envisioned, the Master Plan will include the potential development of a new facility on property that has already been acquired adjacent to US 119. This new facility will replace the Boone County Campus, which is currently located in a shared facility with the Boone County Career and Technical Center. The new facility would serve as a gateway to Southern's other facilities, and the location on US 119 will give the College the opportunity to draw additional students from the greater Charleston area. Due to the scope of the development of this new facility, the Master Plan includes a strategy to address improvements both with and without the new Boone County Campus.
- A significant need exists to update Southern's two largest facilities – Building 'A' on the Logan Campus, and the Main Building on the Williamson Campus. The renovations will be comprehensive, and will

include improvements to the ceilings, lighting, electrical, mechanical, and building life safety systems. Improvements will also be made the interior environment, as well as to various exterior systems that are failing (spalling concrete in Williamson). These facilities serve as the central education facilities on their campuses, and require improvement so that they may continue to function adequately. Due to the size of the facilities, it is understood that this will require a significant capital investment.

- Across all campuses there is a need for additional Internet Classrooms (ICR's). The recommendation will be for the ICR's to be developed in various sizes to improve the efficiency of the existing facilities.
- The Master Plan will include the creation of "Student Success Centers" on all campuses (starting in Logan). These will include space for tutoring, testing, advising, financial aid, counseling, a space for small workshops on careers and other topics, and free space for staff who will travel from one campus to another.
- Due to the number of adjunct faculty and the distance between facilities, shared open office space for adjunct faculty will be developed.
- Other critical areas by campus include:

Logan

There is no hierarchy between the three buildings when arriving at the campus. In fact, Building 'C' is the most prominent, even though Building 'A' is the primary academic facility. The Master Plan will address this by developing an improved entry to Building 'A' to make the hierarchy more clear. Parking, as well as the lack of landscaping in the parking area, is also a problem on the Logan Campus. The Master Plan will include a proposal for improving the main parking area.

Williamson

As the new Logan-Mingo Readiness Center is under construction, the Armory adjacent to the campus will soon become available. The Master Plan will consider the future integration of the facility into the campus. Wayfinding and parking are also a concern on the Williamson Campus.

Wyoming/McDowell

A new roof for the lone facility at the Wyoming Campus is a high priority. The student services area requires improvement, and other minor interior improvements are required.

Boone

The Boone Campus is challenged by the fact that it is located in a shared facility. The current configuration does not allow the Southern space to be secured while still providing access to Boone County Schools honors program. The varying levels of security for the K-12 versus Southern's goal of creating open campuses has also been a challenge. The existing partition construction is poor, and the moveable partitions need to be

replaced. Additional ICR spaces, smaller than a full classroom, are required. A 'Commons' area and food service would help improve the student experience. If a new facility is not constructed, space will need to be developed for the Nursing program.

Lincoln Site

The main challenges of the Lincoln Site also relate to shared facilities. Lincoln County High School currently utilizes several of the Southern classrooms during the day, which creates a security concern for Lincoln County Schools. Control of the public address and HVAC systems also need to be addressed.

The attached Master Plan document indicates the strategy to implement the vision noted above. Existing facilities were evaluated to determine and quantify the existing needs. All of the needs were then prioritized, and a timing, phasing, and cost analysis for the plan were developed. The outcome of this process is a realistic strategy to guide the development of Southern in a manner that supports the priorities and vision of the College.

Logan Campus

General Features



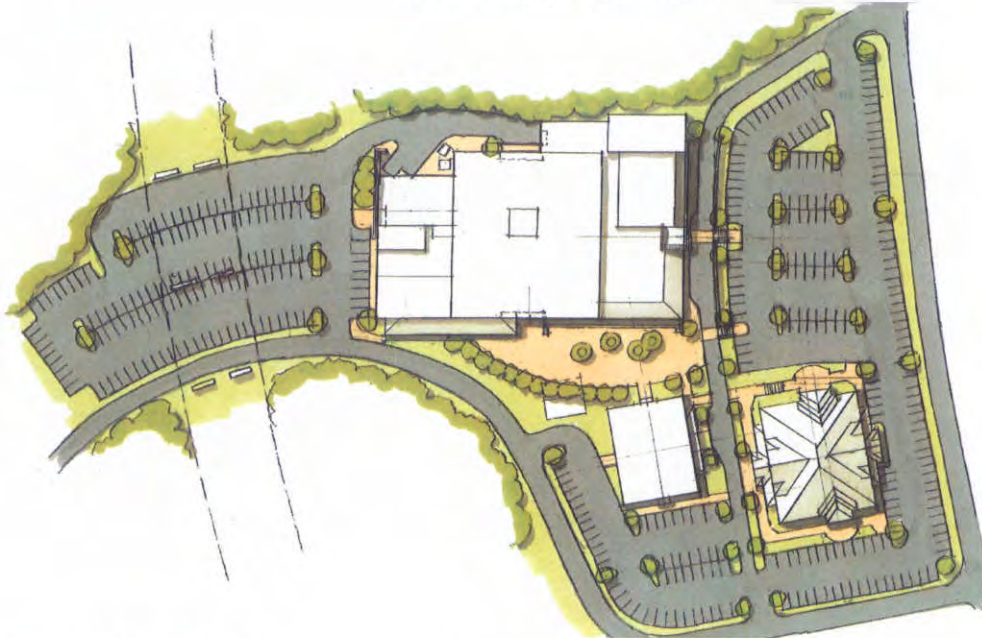
Logan Campus

DESCRIPTION

The Logan Campus includes three buildings with multiple independent parking areas. The buildings are identified as 'A', 'B', and 'C'. Building 'A' is the Main Academic Building, Building 'B' is the Workforce Building, and Building 'C' is Allied Health, and also includes Southern WVCTC's main administrative functions. In addition to the main campus on State Route 5, there is a Mine Academy located in downtown Logan.

The three campus buildings do not share an architectural language other than the use of hip metal roof entrances. Exterior materials include multiple brick colors, and various other exterior finishes. The buildings also sit at various elevations, creating a disjointed campus. Building 'C' is currently in the process of receiving improvements to protect the facility from future flooding of the lowest level. One of the challenges of the campus is that there is no hierarchy on the campus. The main entry to Building 'A' should be improved to provide clarity.

As noted above, there are several parking areas. The most prominent parking area is the large parking lot that connects the three facilities. The paving for this parking lot is inadequate. Students often park in the only green area of the main parking lot, which was left unpaved to prevent parking over a large culvert that was not designed to support vehicular loads. This main parking area need to be redesigned to include landscaping, pedestrian circulation, and a reduced density of parking. The improvement of this area would be a cost effective way to improve the overall image of the campus.



Proposed Improvements to Logan Campus

Other, smaller parking areas are located around the perimeter of Buildings 'B' and 'C'. These parking areas are in better condition than the main front lot. The other significant parking area is located in the rear of Building "A," the main academic building – and extends under the connector to US Route 119. This area also contains no landscaping, and little striping. This location is the only portion of campus where property acquisition may be entertained to expand the parking capacity. As identified in the previous master plan, the rear of Building 'A' should be improved to create a student entry from this area.

Building 'A' Assessment

Logan Campus



Building 'A'



Deteriorated Steel

BACKGROUND

Building 'A' is the original building located at Southern WVCTC's Logan Campus. The building contains 93,104 SF of space, and was originally constructed in 1979. The original building was 47,449 SF. The building underwent a significant improvement in 1987 when additions (45,655 SF) were made to both the front and the rear of the structure. The rear addition expanded the library and classroom space, while the front addition included a large theater space. Building 'A' is the main academic building on the campus, and improved signage/prominence would assist in identifying the structure's importance.

STRUCTURAL

The overall structural system consists of load bearing masonry walls with structural steel and open web steel joist framing. The foundations were not visible and there were no structural drawings available to verify the foundation construction. There are some signs of soil erosion around the building perimeter. A concrete pad located on the northeast side of the building beside the garage door is showing signs of undermining.

The exterior walls consist of masonry block with brick veneer and the interior walls mainly consist of masonry block. The ground floor is a concrete slab on grade and the elevated floor is a concrete slab on metal decking. Above the stage area there are elevated steel platforms with a metal grating floor system. The loads applied to the floors appear to be consistent with typical educational and administrative loadings.

The roof structure consists of open web steel bar joists with metal decking. There are various leaks in the roof that have contributed to some minor deterioration of the metal roof deck in some areas. The rear storage structure roof consists of wood framing with metal corrugated roof decking. There are some signs of water damage to the wooden roof members in the storage area. The building structure falls under a seismic design category B according to the current 2012 International Building Code which West Virginia has adopted. While the structure can withstand some seismic loads, it is not clear if the design accommodates loads according to the current building codes.



Soil Erosion



Existing Rooftop Air Handling Unit

Recommendations

1. Clean and repair any deteriorated roof structure members that have been subjected to water damage.
2. Repair any exterior concrete that has been subjected to soil erosion.

HVAC

This building is heated and cooled with a combination of rooftop air handling units, split dx systems, exterior wall unit ventilators and water-source heat pump units throughout the building. The rooftop units have dx-cooling coils and gas-fired heating coils. A Baltimore Air Coil cooling tower conditions the water for the water-source heat pump loop, and the pumps for the heat pump loop are in the adjacent Mechanical Room. Most of the equipment has reached the end of its service life. As heat pump units have failed, the maintenance staff has replaced them with similar units. Outside contractor performs water testing and chemical management of cooling tower and condenser loop water. Maintenance is performed by Logan Campus personnel.

Most of the building does not have ventilation air. Only the exterior wall unit ventilators and the rooftop units provide ventilation air. The building automation system (BAS) is from Trane, and only controls the rooftop unit serving the Theater and three rooftop units serving the upstairs. There is no standardization to the controls – there are thermostats from at least six different manufacturers throughout the building. All of the roof mounted equipment shows signs of corrosion, and most of the ductwork exposed on the roof has insulation that is either damaged or covered in mold growth. Plenum return air ceilings are being utilized and not everything within the plenum was plenum rated. Exhaust was not working or not provided in most of the toilet rooms. Large classrooms were capable of dividing into smaller classrooms with moveable walls but only controlled by one thermostat.

PLUMBING

There is no backflow preventer on the domestic water service entrance. The building has several domestic hot water heaters, none of which have an expansion tank installed. There are no thermostatic mixing valves installed at the water heaters, or at any of the plumbing fixtures requiring hot water. The restrooms in the building are not ADA-compliant, nor are the water coolers. Most of the restroom fixtures throughout the building are functional, but are in need of replacement. The records room is protected by a Sinorex 227 waterless fire suppression system that is in good condition. There are no overflow roof drains or scuppers installed on the roofs.

FIRE PROTECTION/LIFE SAFETY

The building is fully sprinklered. The fire protection system has a valve with tamper switch.

Mechanical Recommendations

1. The HVAC and plumbing systems throughout the building are in need of replacement.
2. Restrooms and water coolers need to be updated to meet ADA requirements. As the restrooms are renovated for ADA compliance, ensure the resultant number of fixtures will meet code requirements based on building occupancy.
3. A new HVAC system is needed that will replace the current equipment and provide ventilation air to all spaces: cooling would include the addition of a second air cooled chiller on the pad next to Building "B" in order to have a central chilled water system for the entire campus; heating would include the addition of high efficiency hot water boilers; airside systems would consist of variable volume air handling units with VAV boxes for individual spaces.
4. A central building automation system (BAS) is needed to provide more efficient operation of the entire HVAC system, allow scheduling of the system based on building occupancy and provide the maintenance staff a more reliable means of troubleshooting and maintaining the system. Some consideration should also be given to integrating the controls systems for all three buildings. Currently each building has a different controls manufacturer.
5. Proper exhaust air is also needed in the science labs, art rooms and restrooms.
6. The elevator equipment room should have a dedicated cooling unit.
7. Install backflow preventer on the domestic water service entrance.
8. Install ASSE 1070 rated point-of-use thermostatic mixing valves at each plumbing fixture requiring hot water.
9. Install one overflow roof drain for every 2 roof drains that serve the same area. Overflow roof drain piping shall discharge to grade and shall be insulated.

ELECTRICAL

Life Safety

All of the campuses fire alarm systems are tied into one main fire alarm control panel located on the first floor corridor wall of Building A. The fire alarm control panel is an Edwards General Signal with a Honeywell Silent Knight backup battery. The Computer Center room, located on the first floor, uses a dry fire suppression system. All emergency lighting and the data center are on a Kohler 80kW, 3 phase, 480/277V natural gas generator. The elevator does not have backup power. The Exit signs



Fire Alarm Control Panel

throughout the building are older incandescent lamp style with green or red laminated lenses.

Life Safety Electrical Recommendations

1. New complete addressable fire alarm system. This system is to include:
 - a. A main fire control panel with building and zone indications
 - b. A copper phone line connection
 - c. A separate campus fire control room
 - d. Remote annunciator
2. New audio horn/strobe devices
3. New manual fire alarm pull stations
4. New emergency lighting for path of egress integral to new lighting for both interior and exterior fixtures with emergency ballast.
5. New exit signs throughout with directional arrows as needed.

Electrical Power Systems

The electrical service for the building is fed underground via a pad mounted transformer to the service meter located in the main electrical room. With the moving of the TV station to the Williamson campus the overall electrical load has been lightened. The electric service is 1200 amps which appears adequate for the buildings need. Some panels that have had loads removed do not have updated panel schedules and taped covers were breakers are removed. The MDP (Main distribution panel) was rebuilt after an internal electrical fire caused by the old service transformer two years ago. The MDP is in fair condition with no notable damage. In the modular classroom the power poles that are utilized in some of these locations are falling apart making them unsafe.

Electrical Power Systems Recommendations

1. Create new accurate panel schedule labeling all loads, spare breakers and available space.
2. Install blank space covers on panels where breakers have been removed.
3. Install weather covers on all exterior receptacles.
4. Replace all power poles with new a dual channeled portable power poles for both data and electric connections.

Electrical Lighting Systems



Panel 'C' Main Electric Room

The exterior lighting for the building consists of large wall mounted Metal Halide fixtures that are used for area and walkway lighting. Recessed metal halide fixtures are used at the entrance. The exterior lighting for the parking lot areas and all walk ways throughout the campus are not adequately lite according to the IES standards. The exterior lighting is controlled by mechanical time switches. Interior lighting throughout the building consist of 2x2 U-shaped T8 fixtures in the corridors, T12 and T8 fixtures in the classrooms and offices and Metal Halide recessed and spotlight fixtures in the commons areas.

Electrical Lighting Systems Recommendations

1. Complete fixture replacement of all existing interior and exterior lighting with LED fixtures. Lighting selections for each area are to be based on IES recommended foot candle levels and the fixture aesthetics for given locations.
2. Occupancy sensors for all classrooms, restrooms and offices.
3. Digital lighting controls for exterior lighting, corridors, foyer and commons area.
4. Photo cell integral to the lighting controls for exterior lighting.
5. Install new and replace existing parking lot and walk way lighting with new LED fixtures.
6. Follow EPA regulations and procedures for disposing of lighting fixtures, lamps, drivers and ballasts.

Data/Communications Systems

The buildings A,B and C central data is tied into the first floor Computer Center room. The phone system is a VoIP Cisco system.

Data/Communications Systems Recommendations

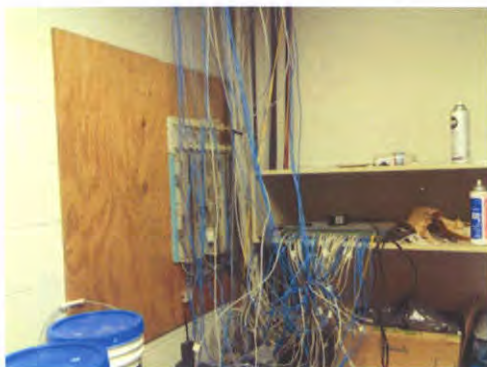
1. A PONs fiber system is recommended for data and communications distributions to all the buildings on campus. This system would eliminate the need for large quantity data cabling and switching.

Security –Electrical

The campus has a mass notification system in place. The building does not have a security system. The CCTV system consists of ceiling mounted analog dome cameras connected to a central DVR and monitor.

Security –Electrical Recommendations

1. Install security systems including card access, door contacts, motion detectors, front end system and remote monitoring by monitoring service.



Data Cabling

2. New CCTV system integrated into the security system with motion activated event capture and digital cameras.

Environmental Concerns - Electrical

The fluorescent ballasts may contain PCB's. The T12 fluorescent lamps are not environmentally friendly low mercury lamps. Lamps for the T12 fixtures will not be available in the near future.

Building 'B' Assessment

Logan Campus



Building 'B'

BACKGROUND

Building 'B', the Workforce Building was the second building located at Southern WVCTC's Logan Campus. The building contains 16,494 SF of space, and was constructed in 1999. Due to the relatively recent construction of the facility, the building is in generally good condition. There are two skylights on the second level which have been problematic and require replacement. Control of the HVAC system has also been a challenge.

STRUCTURAL

The overall structural system consists of structural steel framing with open web steel bar joists and reinforced masonry stair and elevator shaft walls. According to the structural drawings, the foundation system consists of shallow spread footings designed for an allowable soil bearing pressure of 2500psf. The reinforced masonry shaft walls serve the purpose of resisting the lateral loads for the building. The perimeter walls consist of metal stud framing with brick veneer and the interior partition walls consist of metal stud framing.

The ground floor is a concrete slab on grade and the elevated floor is a concrete slab on metal decking. The loads applied to the floors appear to be consistent with typical educational and administrative loadings. The roof structure consists of open web steel bar joists with metal decking.

The building structure falls under a seismic performance category B according to the 1996 edition of the Boca International Building Code. The seismic information was found on structural drawing S2 dated April 1st, 1998. The structure does appear to have been designed to accommodate the seismic loads according to the governing building code at the time of design and construction.

Recommendations

1. There are no immediate structural recommendations at this time.

MECHANICAL



DX Condenser

The HVAC system consists of a central YORK Variable Air Volume (VAV) Air Handling Unit (AHU) with a split system DX refrigerant cooling coil and a hot water heating coil. The split DX condenser is located directly outside the mechanical room and has been experiencing operational issues. There is a return air fan drawing from return air from the ceiling plenums on each of the two (2) floors. Everything within the return air plenum appeared to be plenum rated and code compliant. There are zone level VAV boxes with hot water reheat coils. There are two (2) Lochinvar Copper Fin boilers and two (2) base-mounted TACO pumps located in the mechanical room for the AHU heat coil and VAV reheat coils. The heating hot water contains glycol and has an appropriate glycol feeder.

Sufficient fresh, outdoor ventilation air is provided to the AHU through a louver in the mechanical room. Proper exhaust air was provided to all toilet rooms. All ductwork and hot water piping is provided with external insulation and appeared to be in good condition. There were only a few areas of the building that appeared to be fire-rated as the wall penetrations were fire-caulked, no fire dampers in the ductwork were observed or appeared to be needed. There is a Johnson Controls central Building Automation System (BAS). Maintenance for the mechanical system is performed by the Logan Campus personnel.

PLUMBING

The main water service to the building was not provided with a backflow preventer. There was a central, gas-fired, power vent A.O. Smith water heater that was not provided with an expansion tank or a thermostatic mixing valve. Recirculation piping and pump were provided; all domestic water piping and equipment appeared operational and in good condition. ADA compliant toilet rooms were provided on each floor, all toilet rooms contained flush valve type fixtures. All fixtures appeared operational and in good condition. A mop basin was provided in the mechanical room.

FIRE PROTECTION/LIFE SAFETY

The building has a complete, code compliant fire protections system with all appropriate valves, sensors and flow meters. Information was not attained on any recent testing. There were no issues observed or reported with the fire protection system.

Mechanical Recommendations

Replace the existing split DX refrigerant condensing unit and cooling coil for the AHU. The refrigerant system and components have been experiencing operational issues that need to be addressed. There is a Carrier Aquasnap, approximately 125 ton chiller located outside building 'B' that currently serves only building 'C'. During the construction of Building C and the installation of that chiller, underground chilled water piping was provided to Building 'B.' It is suggested to investigate the chiller and its capacity related to Building 'B' and 'C', provide chilled

water flow to Building 'B', new chilled water pumps, and a new chilled water cooling coil within the AHU. The AHU requires further investigation to determine if the coils could be changed out or if a completely new AHU needs to be provided based upon cost, efficiency, age and ease of installation.

The chiller and chiller platform was constructed to provide chilled water to Building 'B' and Building 'C', with the ability to provide an additional, future chiller for Building 'A'. The existing chilled water piping could be coupled to any new chiller and chilled water piping for Building 'A' to provide campus wide redundancy to all three buildings.

ELECTRICAL

Life Safety

The buildings fire alarm control panel is located on the first floor and is tied into the main fire alarm control panel located in Building A. The fire alarm control panel is a Simplex 4010 with a Honeywell Silent Knight backup battery. The elevator does not have backup power.

Life Safety Electrical Recommendations

1. Provide emergency controls backups systems for elevator.

Electrical Power Systems

The electrical service for the building is fed underground to the building. The service coming into the building is 120/200 Amp 3 Phase service. The MDP (Main distribution panel) is in good condition with no notable damage. Panel schedules in the first floor Mechanical room are missing. The Mechanical room is very cluttered with storage items placed in front of the electrical panels (picture 1).

The hydraulic elevator system located in the second floor Elevator room 202 is abnormally loud and has a very strong odor of hydraulic fluid. No leaks were noted.

Electrical Power Systems Recommendations

1. Confirm existing loads on panels and put new schedules together, place inside panels.
2. Remove all storage in front of electrical panels per NEC.
3. Replacement or repair of the elevator's hydraulic system is recommended.

Electrical Lighting Systems

The exterior lighting for the building consists of large wall mounted metal halide fixtures that are used for area and walkway lighting and recesses Metal Halide fixtures at the entrance. The exterior lighting is controlled



Storage in Front of Electrical Equipment

by mechanical time switches. Throughout the building the lighting fixtures are T8s and metal halide type.

Electrical Lighting Systems Recommendations

1. Complete fixture replacement of all existing interior and exterior lighting with LED fixtures. Lighting selections for each area are to be based on IES recommended foot candle levels and the fixture aesthetic for given locations.
2. Provide occupancy sensors for all restrooms and offices.
3. Provide digital lighting control to control exterior lighting, corridors and foyer area.
4. Photo cell integral to the lighting controls for exterior lighting.
5. Follow EPA regulations and procedures for disposing of lighting fixtures, lamps, drivers and ballasts.

Data/Communications Systems

The phone system is a VoIP Cisco system. Data and phone cabling is very cluttered in Communication closet.

Data/Communications Systems Recommendations

1. Install PONs fiber systems throughout campus. This system would eliminate the need for large quantity data cabling and switching

Security –Electrical

The campus has a mass notification system in place. The building does not have a security system. The CCTV system consists of ceiling mounted analog dome cameras connected to a central DVR and monitor.

Security –Electrical Recommendations

1. Install security systems including card access, door contacts, motion detectors, front end system and remote monitoring by monitoring service.
2. New CCTV system integrated into the security system with motion activated event capture and digital cameras.

Building 'C' Assessment

Logan Campus



Building 'C'

BACKGROUND

Building 'C' is the newest building on the campus, and has been designated as the Allied Health and Technology Center. The 54,838 SF facility is constructed with a light brick veneer and exterior finish system that does not match the other buildings on campus. The building has two main entries on different levels. One entry faces Building 'B', while the other faces the main road. The lower level of the facility has previously sustained flood damage, and the entry is in the process of being retrofitted to protect against future flood damage.

STRUCTURAL

The overall structural system consists of structural steel framing with composite steel floor beams and reinforced masonry stair and elevator shaft walls. According to the structural drawings, the foundation system consists of 36 inch diameter drilled caissons that are embedded six feet into the underlying bedrock and are designed for an allowable end bearing value of 50,000psi. There is a reinforced concrete retaining wall that resists the soil loads around the rear and side sections of the structure. The retaining wall extends from the ground floor up to the first elevated level of the building. The reinforced masonry shaft walls serve the purpose of resisting the lateral loads for the building in the north-south direction and steel moment frames have been provided to resist lateral loads in the east-west direction. The above grade perimeter walls consist of metal stud framing with brick veneer and the interior partition walls consist of metal stud framing. The ground floor is a concrete slab on grade and the elevated floors are concrete slabs on metal decking. The loads applied to the floors appear to be consistent with typical educational and administrative loadings. The roof structure consists of metal deck on structural steel framing members arranged to create a hip type roof structure with various angles and slopes. The building structure falls under a seismic design category C. The seismic information was found on structural drawing S1 dated January 24th, 2006. The structure does appear to have been designed to accommodate seismic loading.

Recommendations

1. There are no immediate structural repair recommendations at this time.

MECHANICAL

The HVAC system consists of approximately 40 Carrier Fan Coil Units (FCU) located throughout the building in mechanical closets. Each FCU is provided with an Electric Duct Heater (EDH), chilled water piping, a fully ducted return air and fresh, outdoor ventilation air. The ventilation air

was varied by a duct-mounted CO2 sensor and control damper that enters the building through wall-mounted intake louvers.

Two (2) base-mounted chilled water pumps are located in the basement mechanical room and a Carrier, Aquasnap approximately 125 ton chiller is located outside near Building 'B' with underground piping to Building 'C' and Building 'B'. The chilled water contains glycol and an appropriate glycol feeder is located near the pumps.

Several electrical/data closets as well as the elevator equipment room were too warm from a lack of exhaust and make-up air. Proper exhaust airflow appeared to be provided to all toilet rooms and the Hair and Nail Salon. All ductwork and chilled water piping is provided with external insulation and appeared to be in good condition. All mechanical equipment is new, operational and in good condition. Fire-caulking was observed on all floor piping penetrations. Fire-rated walls were not observed.

There is an Andover central Building Automation System (BAS). The building was constructed in 2005 and the maintenance is performed by the Logan Campus personnel.

PLUMBING

The incoming water service was provided with a backflow preventer. Electric water heaters and mop sinks were provided in the Janitor closets on each floor without expansion tanks or thermostatic mixing valves. Solids interceptors were not provided on the hair washing sinks in the Salon. ADA compliant toilet rooms were provided on each floor, all toilet rooms contained flush valve type fixtures. Public water fountains were located outside the large Men's/Women's toilet rooms on each floor. All fixtures appeared operational and in good condition.

FIRE PROTECTION/LIFE SAFETY

The building has a complete, code compliant fire protections system with all appropriate valves, sensors and flow meters. Information was not available regarding any recent testing. There were no issues observed or reported with the fire protection system.

Recommendations

The entire facility is approximately 9 years old and no major issues were found with the mechanical, plumbing, or fire protection equipment and systems.

1. Investigate electrical/data closets and elevator equipment rooms to determine if additional cooling can be provided.
2. Provide solids interceptors on hair washing sinks.

ELECTRICAL

Life Safety

The buildings fire alarm control panel is a Faraday system that ties back into the main fire alarm control panel located in Building 'A'. The emergency lighting fixtures are recessed tungsten-halogen type. LED type exit sign are located at all exits and in corridors.

Life Safety Electrical Recommendations

1. A remote annunciator with zone indications and a school zone map mounted beside the annunciator.
2. New emergency lighting for path of egress integral to new lighting for both interior and exterior fixtures with emergency ballast.

Electrical Power Systems

The electrical service for the building is fed underground via a pad mounted transformer. The electric service is 2000 amps, which may not be adequate for the building's need. Newly installed CT imaging and x-ray machines loads have been added that impact the capacity of the electrical service.

Receptacles and switches in room 112 and 113 were not installed correctly after flood damage(Picture 2).

Electrical Power Systems Recommendations

1. Conduct a full load analysis to ensure panels are not overloaded.
2. Create new accurate panel schedule labeling all loads.
3. Label newly installed breakers for equipment.
4. Install new receptacles and switches with junction boxes mounted at correct distance from the drywall to ensure cover plates can be installed correctly.

Electrical Lighting Systems

The exterior and entry way lighting consists of Wall mounted MR16 type fixtures. The exterior lighting is controlled by mechanical time switches. Interior lighting throughout the building is comprised of 2x4 54 Watt T5HO fixtures and 6" round metal Halide. The construction of baskets on the T5HO fixtures has allowed bugs and debris to be trapped inside. As a result the light levels have depreciated and the fixtures have become discolored. This is typical throughout the building.

Electrical Lighting Systems Recommendations

1. As required replace existing interior and exterior lighting with LED fixtures. Lighting selections for each area are to be based on IES

recommended foot candle levels and the fixture aesthetics for given locations.

2. Provide occupancy sensors for all classrooms, restrooms and offices.
3. Provide digital lighting control to control exterior lighting, corridors, foyer and commons area.
4. Install photo cell integral to the lighting controls for exterior lighting.

Data/Communications Systems

The phone system is a VoIP Cisco system. Data and phone cabling is very cluttered in Communication closet.

Data/Communications Systems Recommendations

1. A PONs fiber system is recommended for data and communications distributions to all the buildings on campus. This system would eliminate the need for large quantity data cabling and switching.

Security –Electrical

The campus currently has a mass notification system. The building has security components in place but there is not an operating system. The CCTV system consists of ceiling mounted analog dome cameras connected to a central DVR and monitor.

Security –Electrical Recommendations

1. Install a security operating system include additional card access, door contacts, motion detectors, and remote monitoring by monitoring service. Connect systems to all buildings on campus.
2. Integrate existing CCTV into the security system.

Note: The current flood wall protection installed after the flood that took in 2012 is not sufficient for the timed response needed for a flash flood. The first floor of building C has electrical equipment and CT imaging and X-ray machines. An electric flood wall system is recommended to replace manual flood wall.

Academy for Mine Training and Energy Technologies

Downtown Logan



Academy for Mine Training



Temporary Shoring

BACKGROUND

The Academy for Mine Training and Energy Technologies is located in downtown Logan away from the Logan Campus. The facility is located in a renovated building.

STRUCTURAL

The overall structural system consists of perimeter multi-wythe brick masonry walls with an interior heavy timber framing system. The perimeter walls are load bearing and the interior timber framing is also supported by timber columns. There appears to have been an addition to the west end of the structure that consists of similar wall construction with lighter wood floor and roof framing members.

The foundation system was not visible and there are no structural drawings available to verify the foundation construction. There does not appear to be any major signs of foundation settlement that is currently affecting the structure. The brick support at the foundation level on the north side of the structure appears to be deteriorated in some locations leaving the brick suspended above the ground. The perimeter brick walls are likely serving as the main lateral load resisting elements of the structure. The interior partition walls are mainly wood framed. The ground floor basement level is a concrete slab on grade and the elevated floors are constructed with 4X4 tongue and groove floor members that span between the heavy structural timber girder beams.

The general loads applied to the floors for the mine training areas seem reasonable for the type of floor systems. However, there are some areas where concrete masonry blocks have been stacked from the floor to the ceiling to simulate a mine wall. While the floor system is currently supporting these blocks, it should be noted that wood members experience long term deflections that increase over time and therefore the wood members below should be monitored for movements. The connection points of the floor members supporting the block walls should also be monitored for signs of fatigue and distress.

The roof structure consists of wood framing members with wood plank decking. The roof structure for the addition on the west end of the building shows signs of water damage and deterioration with one truss in particular already experiencing failure. The damaged truss has been modified with some temporary supporting members. The building structure falls under a seismic design category B. While the structure can withstand some seismic loads, there is no evidence that it was originally designed to withstand the effects of seismic loading. Overall the structure is in fair condition given its age.

Recommendations

1. Provide permanent structural repairs to the roof truss and roof system above the addition on the west end of the building.
2. Structural analysis and monitoring of any floor members supporting significant loads resulting from block walls or other heavy types of loading.
3. Structural evaluation of the stair system and provide better handrail members.
4. Provide structural repairs to any member that shows signs of water damage and deterioration.
5. Perform a structural analysis of the entire building to verify all member load carrying capabilities including lateral loadings.
6. Repair any perimeter brick supporting structures.

MECHANICAL

The HVAC system consists of two (2) DX refrigerant split condensers and gas-fired furnaces. The condensers are located on platforms attached to the building approximately 15 feet above the side street/alley which might deter from regular maintenance. Each system was provided with a programmable thermostat on the first floor which created only two zones for the first and second floors. The ductwork was provided with wrap insulation, and each furnace had a single return grille off the main corridor on the first floor. The second floor classroom had window air conditioners to supplement the cooling.

The mechanical equipment is operating without issue and appears to be in fair condition. The mechanical equipment is possibly undersized or the airflow is not balanced properly. Combustion air to the gas-fired furnaces was not correctly provided. Fresh, outdoor ventilation air was not provided to the furnaces or separately to the building. Heating, cooling or ventilation air was not provided to the basement mine training area. Exhaust air was not provided to the toilet or shower rooms. Maintenance of the mechanical equipment is performed by Winters Heating and Cooling.

PLUMBING

The main water service to the building was not provided with a backflow preventer. Most of the sanitary pipe was PVC, appeared to be new and had adequate clean-outs. Bathrooms were unisex and appeared not to be ADA compliant. The toilets were flush-tank type and in decent condition. The quantity of fixtures was sufficient for the occupants. The gas-fired water heater appeared to be in good condition but did not have an expansion tank. The system did not have a thermostatic mixing valves. A mop basin or water fountains were not observed at the facility.



Inoperable Sprinkler System

FIRE PROTECTION/LIFE SAFETY

There was an existing dry-pipe fire protection system which is no longer operational. Further investigation is required to determine if system could be recommissioned. There didn't appear to be any fire-rated designations for the walls or floors as the ductwork and pipe did not have fire dampers or fire caulking at penetrations. Return air is being transferred back to the furnaces through stairwells and exit corridors. The freight elevator and elevator equipment was original to the building, operational, did not have life safety controls and new parts for major equipment are no longer available.

Recommendations

1. Fire protection is important for the timber framed structure. Investigate the existing system and recommission or replace.
2. Investigate existing heating and cooling system, rebalance airflow to all rooms, including the second floor classroom. Add zone dampers for additional control. Add a ductless split refrigerant system for the classroom to increase cooling efficiency.
3. Provide code required mechanical ventilation for all occupiable spaces.
4. Correctly install the combustion air to the furnaces.
5. Provide an expansion tank for the domestic hot water system.
6. Address using stairwells and exit corridors for return air paths. Provide return air ductwork or plenum ceilings and confirm plenums do not contain non-plenum rated materials.

ELECTRICAL

Life Safety

The building does not have a fire alarm system. There are two battery operated smoke detector on the second floor. The building does not have exit signs or emergency lighting.

Life Safety Electrical Recommendations

1. Provide a complete addressable fire alarm system. This system is to include:
 - a. A main fire control panel with building and zone indications
 - b. A copper phone line connection
 - c. Remote annunciator with zone indications and a school zone map mounted beside the annunciator.
 - d. Horn/strobe devices
 - e. Manual fire alarm pull stations

f. New Smoke detectors

2. Emergency lighting for path of egress integral to new lighting for both interior and exterior fixtures with emergency ballast.
3. Exit signs throughout with directional arrows as needed.

Electrical Power Systems

The electrical service for the building is fed overhead from pole mounted transformers to the meter on the second floor. Beside the service meter on the second floor is an open exposed panel with exposed wiring running through the floor and to receptacles on that floor. Residential grade Romex wiring is used throughout with exposed connections in some locations.

Electrical Power Systems Recommendations

1. Install all new electrical wiring and panels throughout the building.

Electrical Lighting Systems

The exterior lighting is limited to one flood fixture with 18W CFL lamping. For the rear and ally way parking city street lighting is used. The entry way lighting and the lighting on the second floor are 1x8 T12 exposed bulb type fixtures. The first floor hallway and class rooms are 2x4 T12 fixtures. There are no lighting controls.

Electrical Lighting Systems Recommendations

1. Install new exterior LED lighting fixtures for parking areas and the front and side entrances.
2. Complete fixture replacement of all existing interior lighting with LED fixtures. Lighting selections for each area are to be based on IES recommended foot candle levels and the fixture aesthetics for given locations.
3. Occupancy sensors for all classrooms, restrooms and offices.
4. Photo cell lighting controls for exterior lighting.
5. Follow EPA regulations and procedures for disposing of lighting fixtures, lamps, drivers and ballasts.

Data/Communications Systems

The Mining Academy does not have a VoIP phone system. Their internet is provided by DSL.

Data/Communications Systems Recommendations



Exposed Panel/Exposed Wiring

1. Redesign of data/communications distribution to provide VoIP phone system and a data structure with broadband internet.

Security - Electrical

The campus does not have a mass notification system in place. The building does not have a security system. The CCTV system consists of ceiling mounted analog dome cameras, wall mounted analog and digital cameras and special night vision cameras for the mine training simulation area. These cameras are connected to a central DVR and monitor.

Security - Electrical Recommendations

1. Install mass notification and security systems including card access, door contacts, motion detectors, front end system and remote monitoring by monitoring service.

Williamson Campus

General Features



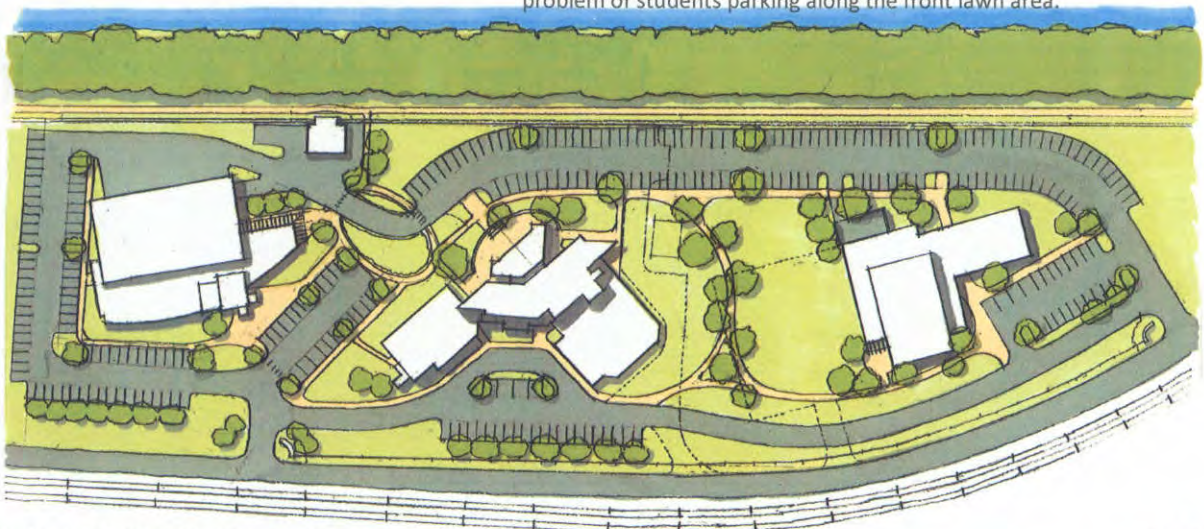
Williamson Campus Approach

DESCRIPTION

The Williamson Campus has undergone a significant recent upgrade, and additional improvements are anticipated in the near future. All of the buildings are constructed on deep foundations, and the Campus is bordered on one side by a flood wall. Until recently the original Main Building was the only facility on Campus. The building was constructed in 1971 and contains approximately 67,202 SF. The original structure contained 32,015 SF, and was constructed for Marshall University. A 4 story Southern Addition (24,828 SF) was added in 1978, which nearly doubled the size of the facility. A 1 story (with a mezzanine) library addition containing 10,359 SF was constructed in 2001. With the exception of the Library Addition that conveys a postmodern style, the building conveys a relatively modern aesthetic with sharp masonry edges. One challenge presented by the Main Building is that the primary entrance faces the floodwall, not the entry road.

In 2013 a new Applied Technology Center was added to the Campus. The Applied Technology Center includes administrative, classroom, and high-bay training areas. The ATC was positioned to address the main entry of the Main Building, and reflects a very contemporary style. The addition of the ATC also began to implement a long-term strategy for the development of the Campus.

The next step in the development of the Williamson Campus is the acquisition of the adjacent West Virginia Army National Guard Armory. ZMM/BSP has developed a strategy for implementing this facility into the Campus in a manner that keeps vehicular circulation and parking at the perimeter of the Campus, allowing for safe pedestrian circulation between the facilities. The plan also calls for a fence along the entry road to force the use of the developed parking areas, and eliminate the problem of students parking along the front lawn area.



Main Building Assessment

Williamson Campus



Main Building

BACKGROUND

As noted above, the Main Building at Williamson was built in three phases. The original building containing 32,015 SF was constructed in 1971. The southern addition containing 24,828 SF was constructed in 1978, and the most recent addition (the library) included 10,359 SF of new construction, and was completed in 2001.

While partial improvements have been made to the building over time, the facility is in need of an overall renovation. Several areas of the building including the library addition have leaking roofs, exterior concrete is spalling and failing in a dangerous manner, many windows are single pane, and due to their age have a non-existing thermal shading coefficient, which may contribute to some of the HVAC control issues being experienced. Additionally, ceilings, lighting, and general improvements to the interior and classroom environments are required for the building to remain functional.

STRUCTURAL

The building structure consists of an original main building with two additions. The first addition is located on the southern end of the main building. The second addition is a library area that is located on the north east end of the main building.

Original Main Building

The overall structural system for the original main building consists of cast in place concrete framing. The foundations were not visible and there are no structural drawings available for the original main building. The architectural drawing sections suggest that the foundations consist of concrete piles, pile caps, and concrete grade beams.

The exterior walls consist of concrete masonry block infill between the concrete floor framing members with brick veneer. The concrete floor framing is exposed at the perimeter creating a concrete strip around the building at each level that interrupts the brick veneer. There are also exposed concrete balconies located next to the main entrance on the east side of the building. **The exposed perimeter concrete strip and balcony concrete is deteriorated in several places and has fallen off in some locations leaving the steel reinforcing exposed. These areas of deteriorated concrete pose a safety threat to anyone standing below them in the event that the concrete would break loose and fall.**

The interior walls consist of masonry block infill between the concrete structural framing. The cast in place concrete structure likely serves the purpose of resisting the lateral loads for the building. There are various cracks in the masonry walls throughout the structure.



Exposed Reinforcing Steel

The ground floor is a concrete slab on grade. Various cracks in the concrete slab on grade were observed in the areas where it was visible and in the bathrooms where the tile is cracked and broken. The elevated slabs consist of cast in place concrete that is monolithic with the concrete framing and columns. The elevated concrete slabs are exposed from below in many locations and serve as the ceiling. Several minor cracks were observed in the concrete slab ceiling when observed from the floors below. The loads applied to the floors appear to be consistent with typical educational and administrative loadings.

The roof structure also appears to be a cast in place concrete slab that is monolithic with the concrete framing and columns. There were several locations in the roof where cracks and signs of water leaks were observed. The building structure falls under a seismic design category B according to the 2012 International Building Code which West Virginia has adopted. While the structure can withstand some seismic loads, it is not clear whether it can resist seismic loads according to the current building code.

Recommendations

1. Clean and repair any deteriorated roof structure elements that have been damaged by roof leaks.
2. Repair and seal any cracks in the masonry walls and concrete slabs.
3. Remove and repair cracked floor tiles and verify the degree of underlying slab cracks.
4. Repair all exterior concrete that is cracked or deteriorated.

Southern Addition

The overall structural system for the addition on the southern end of the building is structural steel framing with open web steel joists. According to the structural drawings, the foundations for the southern addition consist of drilled concrete piles, pile caps, and concrete grade beams. The exterior walls consist of masonry block with brick veneer. The interior partition walls consist of masonry block. There are various cracks in the masonry walls throughout the structure.

According to the structural drawings, the ground floor slab consists of precast concrete planks that bear on the foundation grade beams. The elevated floor systems consist of concrete slab on metal deck. The roof structure consists of metal deck on open web steel bar joists. The building structure falls under a seismic performance category B according to the 2012 International Building Code which West Virginia has adopted. While the structure can withstand some seismic loads, it is not clear whether it can resist seismic loads according to the current building code.

Recommendations

1. Repair and seal any cracks in the masonry walls.

Library Addition

The overall structural system for the library addition on the northeast end of the building is a combination of load bearing concrete masonry block walls and structural steel framing. According to the structural drawings, the foundation consist of shallow concrete spread footings. The exterior walls consist of masonry block with brick veneer. There are various cracks in the masonry walls throughout the structure. The interior walls consist of concrete masonry block and metal stud framing.

The ground floor consists of a concrete slab on grade. The elevated mezzanine floor system consists of a concrete slab on metal deck that is supported by composite steel beams. There were several signs of cracking in the drywall around the perimeter of the mezzanine. The roof structure consists of metal deck on open web steel bar joists with a large skylight area. There are several signs of water leaks in the roof area. The building structure falls under a seismic performance category B according to the 2012 International Building Code which West Virginia has adopted. While the structure can withstand some seismic loads, it is not clear whether it can resist seismic loads according to the current building code.

Recommendations

1. Repair and seal any cracks in the masonry walls.
2. Clean and repair any deteriorated roof structure elements that have been damaged by roof leaks.

MECHANICAL

This building has been constructed in three primary phases: the original 5-story building in 1971, a 4-story addition in 1978 and the Library addition in 2001. Each portion of the building has a different HVAC system.

The 1971 building has multiple air handling units (ACU-2, AHU-4, AHU-5, AHU-6 and AHU-7). ACU-2 is a roof mounted dx-cooled unit, and the other four units serving the 1971 building are located in mechanical rooms and have chilled water cooling coils and hot water heating coils. The heating hot water is produced by two Bryan boilers located in Mechanical Room 507. The chilled water is produced by a York chiller located on the roof. The hot water pumps are located in Mechanical Room 507 and the chilled water pump is located in Mechanical Room 409.

The 1978 addition is primarily served by AHU-1, a cooling-only Trane air handling unit in Mechanical Room 409. This air handling unit has a chilled water cooling coil. There is also a roof mounted unit, AHU-3, that



Rooftop Mechanical Equipment

served only the TV Studio but is no longer functioning. Throughout the 1978 Addition electric radiant heating panels have been installed in the ceiling.

The Library addition has a cooling only York air handling unit in Mechanical Room L111, with its condensing unit located on the roof. Heating for the library is through electric reheat coils throughout the Library.

The chiller, boilers, hot water pumps and air handling units AHU-4, -5, -6 and -7 were replaced in 2003. At that time a new Building Automation System (BAS) from RDS Controls was installed as well. Much of the building is insufficiently heated, and several classrooms cannot be used during the winter. Most of the ceiling tiles throughout the building show signs of cupping, which typically indicates humidity control concerns. The Library AHU is very loud, and transmit noise to the adjacent spaces. Sound attenuation measures should be added to this unit and/or room to limit the noise transmitted through the Mechanical Room walls.

PLUMBING

The building has several domestic hot water heaters, none of which have an expansion tank installed. The two restrooms in the Library addition are ADA-compliant, but none of restrooms in the remainder of the building are ADA compliant. The only ADA-compliant water cooler is in the Library addition; all other water coolers in the building are not ADA-compliant. Most of the restroom fixtures in the 1971 and 1978 buildings are functional, but are in need of replacement.

FIRE PROTECTION/LIFE SAFETY

The building is fully sprinklered. There are two services to the building, one located in the 1971 building and one in the 1978 addition. The Library addition is served by the 1971 system. Each fire protection system has a valve with tamper switch, and there is an additional valve with tamper switch for the Library.

Recommendations

1. The HVAC and plumbing systems throughout the building are in need of replacement.
2. Restrooms and water coolers need to be updated to meet ADA requirements. As the restrooms are renovated for ADA compliance, ensure the resultant number of fixtures will meet code requirements based on building occupancy.
3. The HVAC systems need to be replaced to address the numerous heating issues throughout the building, ensure the building is properly ventilated, and ensure building relative humidity is properly controlled.

4. Proper exhaust air is also needed in the science labs, art rooms and restrooms.
5. The elevator equipment rooms should each have dedicated cooling units.

ELECTRICAL

Life Safety – Electrical

The main Fire Alarm Control Panel (FACP) is a Simplex 4005 with backup batteries internal to the unit. The FACP is located just outside of the library, mounted on the wall in the corridor on the first floor.

The emergency lighting in the majority of the building is dual-head remote halogen. The emergency lighting fixtures in the literary area are recessed tungsten-halogen type. There are exit signs located at each exit and in some of the corridors.

Life Safety Electrical Recommendations

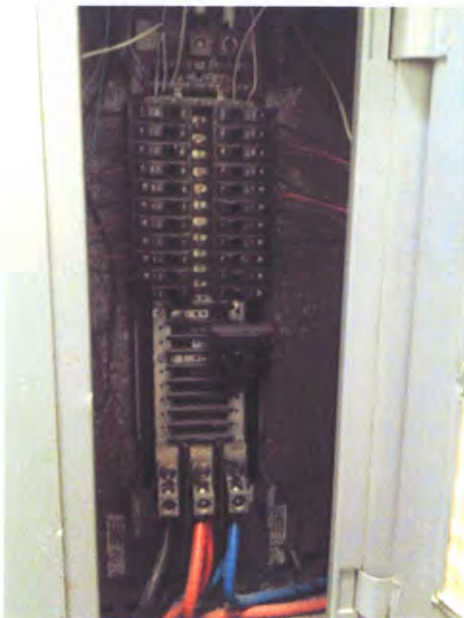
1. Remote annunciator with zone indications and a school zone map mounted beside the new annunciator located near the front entrance.
2. Replace all horn/strobe devices excluding library devices.
3. Replace all manual fire alarm pull stations excluding library devices.
4. New emergency lighting for path of egress integral to new lighting for both interior and exterior lighting.
5. Install additional emergency exit signs in corridors with directional arrows excluding library signs.

Electrical Power Systems

The electrical service for the building is fed underground via a pad mounted transformer. The overall condition of the MDP (Main distribution panel) is in fair condition with no notable damage. The janitor's closet, room 211 has a recessed style electrical panel that is installed as a surface mount. The panel has open punch outs on the top and the buss bars is exposed. The data closet on the first floor has a panel with large gage exposed wire having bare ends. This room also has storage placed in front of the electrical panels.

Throughout the building the panels are not fully labeled for the loads are on them. Additional electrical items of note include:

- Broken ADA exterior side door controls.
- Ceiling panel heaters used throughout.
- Overloaded circuits in the TV studio.
- Specialty receptacles not used on first floor.



Exposed Panel Wiring

- Taped off electrical underground run in conduit in yard.
- Damaged floor receptacles in computer lab.

Electrical Power Systems Recommendations

1. Conduct a complete building electrical load analysis to determine adequacy of the electric service.
2. Create new accurate panel schedule labeling all loads, with spare breakers and available space.
3. Replace damaged panels and wiring.
4. Remove all unused and damaged electrical power runs and receptacles.
5. Create necessary spacing around all electrical panels per NEC.
6. Install fire protection for all wall penetration.

Note: In some of the office locations they are using old temporary walling system that has been in the same location for over 10 years. If these locations are installed with permanent walls then all data and receptacles need to be recessed. Most of these locations have extension cords connected to the power poles with loads including personnel space heaters, small refrigerators computers and printers.



4th Level Open Stairwell Landing Lighting

Electrical Lighting Systems

Exterior metal halide lighting fixtures for the parking lot area and walk ways are below required foot candle level prescribed by IES. The exterior lighting is controlled by mechanical time switches. The interior lighting is comprised of T12, T8, metal halide and MR16 with no noted controls including the library addition. Some locations have exposed wiring and connections.

Electrical Lighting Systems Recommendations

- a. Complete fixture replacement of all existing exterior and interior lighting with LED fixtures. Lighting selections for each area are to be based on IES recommended foot candle levels and the fixture aesthetics for given locations.
- b. Provide occupancy sensors for all classrooms, restrooms and offices.
- c. Provide digital lighting control to control exterior lighting, corridors, foyer and commons area.
- d. Include photo cell integral to the lighting controls for exterior lighting.

- e. Follow EPA regulations and procedures for disposing of lighting fixtures, lamps, drivers and ballasts.

Data/Communications Systems

The building has VoIP phone system. The majority of the cables connected to the phones have been run exposed. On the majority of the floors, in the corridors are the old phone punch down panels that are not in use. None of the cable in the plenum spaces are plenum rated cable. Fire stop material has not been used on the through wall penetrations. The majority of cable runs coming out of wall, ceilings and floors are not in conduit. It was also noted that the maintenance personnel had a difficult time communicating across campus.

Data/Communications Systems Recommendations

- a. Complete redesign of data/communications distribution to provide wire management and optimal space for all equipment.
- b. Remove old phone punch down panels.
- c. AC unit or supply duct work for heat management in data/communications distribution room.
- d. Install data ports with in the wall or wire mold type cable runs for all phones and needed areas where cabling is exposed.
- e. New plenum rated cables and fire stop wall penetrations were needed.
- f. Provide wireless communication for maintenance personnel.

Security –Electrical

The facility does not have a mass notification system. There is also not a security system for this building. The CCTV system is comprised of ceiling mount analog dome cameras connected to a central DVR and monitor.

Security –Electrical Recommendations

- a. Develop a mass notification system including phone, email and social media site contacts.
- b. Install security systems including card access, door contacts, motion detectors, front end system and remote monitoring by monitoring service. Integrate system with the Applied Technologies building.
- c. New CCTV system integrated into the security system with motion activated event capture and digital cameras.

Applied Technology Center Assessment

Williamson Campus



Applied Technology Center



Applied Technology Center - Interior

BACKGROUND

The Applied Technology Center (22,965 SF) was completed in 2013. It is currently occupied; however, improvements are being made to the high bay training areas to accommodate the proposed programs. The entire facility will be occupied by the fall of 2014.

STRUCTURAL

The overall structural system consists of a combination of load bearing masonry walls with structural steel and open web steel joist framing. Concrete columns are also provided as part of the framing system. The foundations consist of concrete auger cast piles and concrete grade beams. The exterior walls mainly consist of masonry blocks with brick veneer and metal panel veneer. The interior walls consist of masonry blocks and metal stud partitions. A combination of concrete masonry shear walls with steel and concrete moment frames serve the purpose of resisting the lateral loads for the building.

The ground floor is a concrete slab on grade. Some minor cracks were observed in the concrete slab. There were some signs of water infiltration at the garage doors in the large assembly area. The loads applied to the floors appear to be consistent with typical educational and administrative loadings. The roof structure consists of open web steel bar joists with metal decking. The building structure falls under a seismic design category B. The building has been designed to withstand seismic loads according to the applicable building code during design and construction.

Recommendations

1. There are no immediate structural recommendations at this time.

MECHANICAL

This building was constructed within the past year, and does not require significant HVAC modifications at this time. Some additional work is pending for the work bay areas.

PLUMBING

The plumbing systems are adequate for the anticipated occupancy of the building. The restrooms have an adequate number of ADA compliant fixtures.

FIRE PROTECTION/LIFE SAFETY

The building is fully sprinklered. The existing system is new and adequately sized for the facility.



High Bay Space

Recommendations

Other than the pending HVAC work for the work bay areas, no HVAC, Plumbing or Fire Protection modifications are recommended at this time.

ELECTRICAL

Life Safety – Electrical

The facility has an EST Edwards main fire alarm control panel system a fire alarm. The emergency lighting is integral to the fixtures with emergency ballast for the path of egress. The exit signs throughout are edge lit LED style.

Life Safety Electrical Recommendations

Based on the current condition of the overall system and its recent installation there are not any recommendations to improve the electrical components of the system.

Electrical Power Systems

Electrical/Mechanical room is in excellent condition. Panels have been laid out and installed neatly and efficiently optimizing space. The transformers mounted above the appropriate distanced panels allowing for clean conduit paths connecting the MDP.

Electrical Power Systems Recommendations

See note at end of assessment.

Electrical Lighting Systems

Overall the lighting is in good condition. The exterior and interior spaces are illuminated to correct levels according to IES standards. Lighting controls are utilized through the entire building

Electrical Lighting Systems Recommendations

1. Ensure all lighting controls are set correctly to maximize efficiency.
2. Create a re-lamping schedule.
3. Only re-lamp fixtures with energy efficient lamp types.
4. Follow EPA regulations and procedures for disposing of lighting fixtures, lamps, drivers and ballasts.

Data/Communications Systems

The data and communications distribution systems have excellent cable management. Plenum rated cables are utilized and penetrations have fire stop protection throughout. The phone system is VoIP.

Data/Communications Systems Recommendations

See note below.

Security - Electrical

There is not a mass notification system. There is a security system in place but it was not operational at the time of my visit. The security system installer is waiting on Frontier to provide them the necessary service to fully connect the security system. CCTV systems consist of digital IP cameras connected to a central DVR and monitor.

Security - Electrical Recommendations

1. Develop a mass notification system including phone, email and social media site contacts.
2. Integrate security system to Main building systems once systems is installed.
3. See note below.

Note: The center Director has moved offices. The new office has the receptacles and data ports behind the large desk furniture. The furniture manufacture has no internal bussing connection for power or data. There are not any receptacles along the wall between the old office and new. The Director would like to put a large CCTV monitor on that wall, the Director is having one of the receptacles from the old office removed and reinstalled on the other side of the wall. A data connection will also be needed for the CCTV monitor.

Wyoming/McDowell Campus

General Features



Wyoming County Facility

DESCRIPTION

The Wyoming/McDowell Campus includes two primary facilities, the Main Academic Building for Southern West Virginia Community and Technical College and a nearby modular building that houses a child development center. The building is sited on top of a hill, and a narrow entry drive that was excavated through rock leads you to a sloping parking area. Although accessible spaces are provided at the building entry, they do not meet the cross slope requirements of ADA, and the accessible entry condition requires improvement. Building and directional signage also require improvement. Aside from the steeply sloped parking area, the campus is in generally good condition. The access road is narrow in the curve, and the site lighting could be improved.

Main Academic Building Assessment

Wyoming/McDowell Campus

BACKGROUND

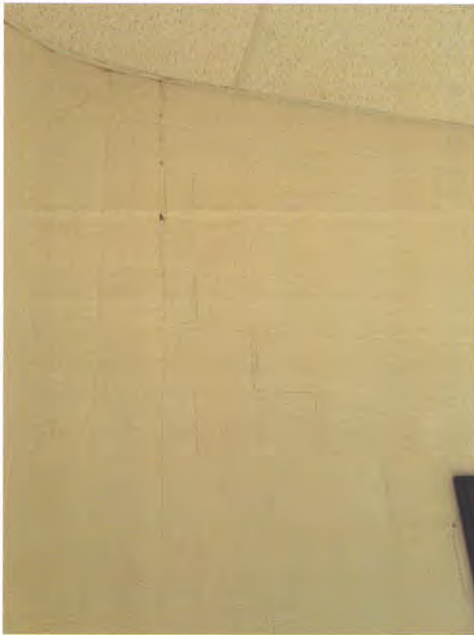
The Main Academic Building contains 20,743 SF of space, and was constructed in 1988. A 2,240 SF classroom addition was later added to the facility. The building is generally well maintained and well utilized. Although the previous master plan envisioned a second level addition, due to the current level of enrollment, the current leadership of the Wyoming Campus recommends focusing on increasing the efficiency of the current space, and undertaking deferred maintenance projects such as the deteriorated roof – which requires replacement.

As with all of the campuses, the student services space requires improvement to maximize the efficiency for students. This space should include on site financial aid. Other recommended improvements include designating space for the medical assisting program, improving electrical distribution throughout the building, the creation of a designated testing area, as well as a lockable storage area for student files. Additionally chalk/whiteboards and the public address system require upgrades.

The Wyoming Campus has a large student commons area, however this space should be improved due to the lack of any nearby amenities.

STRUCTURAL

The overall structural system consists of load bearing masonry walls with structural steel and open web steel joist framing. According to the structural drawings, the foundations consist of shallow concrete spread footings that bear on sandstone bedrock with an allowable bearing strength of 6000psf. The exterior walls consist of masonry blocks with fluted block veneer and the interior walls mainly consist of concrete



Masonry Damage

masonry blocks. The masonry walls also serve the purpose of resisting the lateral loads for the building. There are various cracks in the masonry walls throughout the structure. The ground floor is a concrete slab on grade. Various cracks in the concrete slab on grade were observed in the areas where it was visible. The floor tiles in several locations were cracked indicating the underlying concrete slab may also be cracked. The loads applied to the floors appear to be consistent with typical educational and administrative loadings. The roof structure consists of open web steel bar joists with metal decking. There were several locations in the roof where signs of water leaks were observed.

Recommendations

1. Clean and repair any deteriorated roof structure elements that have been damaged by roof leaks.
2. Repair and seal any cracks in the masonry walls.
3. Remove and repair cracked floor tiles and verify the degree of underlying slab cracks.

MECHANICAL

The HVAC system consists of a single rooftop mounted central Variable Air Volume (VAV) Air Handling Unit (AHU) with DX refrigerant coil and gas heat. The return air is drawn from each room thru plenum return light fixtures. There are zone level fan powered VAV boxes with hot water reheat coils. There are two (2) boilers located in the mechanical room for the VAV reheat. The Building Automation System is a Trane Tracer System. The facility has an HVAC Maintenance Agreement Contract with Casto Technical Services currently in place to service the air handling unit, boilers, hot water heating pumps, VAV boxes, building automation system (BAS), hot water controllers, exhaust fans, and filters.



Exhaust Fan

All ductwork is provided with external wrap insulation. Fresh, outdoor ventilation air is provided by the rooftop mounted air handling unit (AHU). The chemical containment exhaust hood located in the Science Lab was exhausted by a roof mounted exhaust fan. The Lab chemical Prep rooms did not appear to have proper exhaust. Automatic gas shut-off valves were installed in the correct location. The AHU was replaced in 2009 and appears to be in very good condition. All exhaust fan are past their expected service life (15-20 years). Proper exhaust airflow is provided to toilet rooms and the custodian closet. Conditioned air is brought into the gang toilets by way of transfer grilles located in the corridor.

PLUMBING

The main water service to the building provided with a backflow preventer. This backflow preventer has tamper switches on the valves that are tied into the fire alarm control panel. There is a domestic booster pump installed to increase the city water pressure, this system

will need to be replaced. Bathrooms were ADA compliant. The toilets were manual flush-valve type and in good condition. The quantity of fixtures was sufficient for the occupants. The domestic hot water system is served by a gas fired instantaneous water heater with a recirculation system. The hot water recirculation loop temperature is maintained by 6 gallon, 2 KW electric water heater. The gas-fired water heater, electric water heater and recirculation pump appeared to be in good condition. This system does not have any thermostatic mixing valves installed.

FIRE PROTECTION/LIFE SAFETY

The facility is not fully sprinklered. The only rooms that are sprinklered throughout the facility are the closets. They are fed from a branch domestic water line with a flow switch. The existing backflow preventer serving the domestic water service has tamper switches installed on the os&y valves. Both the tamper switches and the flow switch is tied into the fire alarm control panel.

Recommendations

1. Replace all exhaust fans.
2. Install point of use thermostatic mixing valves on all plumbing fixtures requiring hot water.
3. Replace domestic water booster pump.
4. Install sprinkler system to fully sprinkler facility.
5. Install exhaust fan and associated ductwork to exhaust Lab Chemical Prep Room.

ELECTRICAL

Life Safety – Electrical

The main fire alarm control panel is a GE Fireworx with an internal backup battery system. The panel is located in the front foyer and has a building zone map. There are no smoke detectors through the building. Three temporary CO detectors are used to detect gas emissions, one in the commons kitchen sales area, a second in the science classroom and a third in the mechanical/electrical room. There are different styles of horn/strobe and fire alarm pull stations throughout the building. The interior emergency lighting fixtures are recessed tungsten-halogen type. The exterior lighting did not have emergency battery test button thus there were no exterior emergency fixtures noted. There are exit signs located at each exit.

Life Safety Electrical Recommendations

1. Provide smoke detectors.

2. Provide permanent CO detector in needed locations. Hard wired CO detectors with battery backup are recommended in all locations on SWVCTC campuses where gas equipment with open flames are located. The CO detectors should be connected to the fire alarm control panel.
3. Replace older horn/strobe devices.
4. Replace older manual fire alarm pull stations.
5. Emergency lighting for path of egress integral to new lighting for both interior and exterior lighting.
6. Install additional emergency exit signs in corridors with directional arrows.

Electrical Power Systems

The electrical service to the building is fed underground via pole mounted transformers. The electrical service for the building is 480/277V, 3 phase, 4 wire, 600 Amp. The child development center next to the college also gets their power from this service. The overall condition of the MDP (Main distribution panel) is in good condition with no notable damage. The panels are not fully labeled for the loads. Damaged floor GFI and code violating receptacles were noted.

Electrical Power Systems Recommendations

1. Conduct a complete building electrical load analysis to determine the adequacy of the electric service.
2. Create new accurate panel schedules labeling all loads, spare breakers and available space.
3. Replace damaged non code compliant devices and wiring.
4. Install fire protection for all wall penetration.

Electrical Lighting Systems

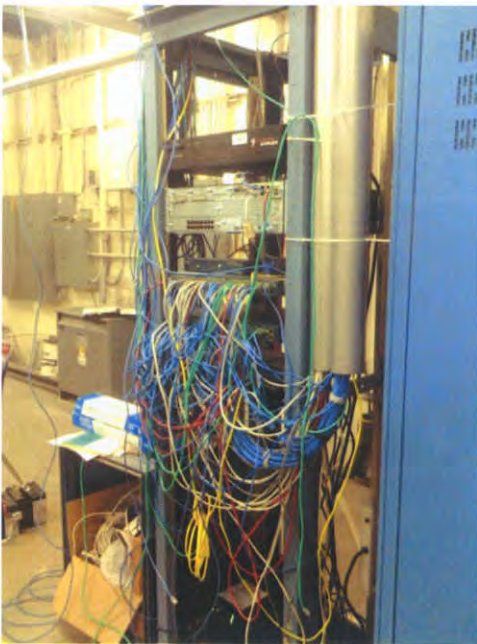
Metal halide exterior flood type fixtures are mounted on the roof parapet, and there are similar pole mounted fixtures in the parking lot area. The exterior lighting is on mechanical timers. Connections to pole lights at the bottom of the roadway have been damaged and are inoperable.

The basketball court does not have lighting. There is not a fixture on the flag pole or on the building signage. This sign, mounted on the rear of the building, also needs new lettering (or removal) as the damaged or missing letters have been replaced with painted plywood. Throughout the interior the lighting consist of T12, incandescent and metal halide type fixtures. There were no interior lighting controls noted.

Electrical Lighting Systems Recommendations

1. Complete fixture replacement of all existing interior and exterior lighting with LED fixtures, with additional fixtures placed as needed. Lighting selections for each area are to be based on IES recommended foot candle levels and the fixture aesthetics for given locations.
2. Provide occupancy sensors for all classrooms, restrooms and offices.
3. Provide digital lighting control to control exterior lighting, corridors, foyer and commons area.
4. Provide photo cell integral to the lighting controls for exterior lighting.
5. Illuminate or remove the building signage.
6. Follow EPA regulations and procedures for disposing of lighting fixtures, lamps, drivers and ballasts.

Note: Parking lot needs to be restructured for proper ADA access. New walkway fixture and parking lot fixtures will be needed.



Lack of Cable Management

Data/Communications Systems

The data backbone for the building is a one gig fiber connection. The main data rack is located in the mechanical/electrical room. This room contains boilers and other heat generating systems. The data rack has multiple switch connections and the runs are very difficult to distinguish. The phone system is a VoIP Cisco system. For all the phone locations, the cables are direct CAT5e drops from the ceiling. Some drops are in PVC conduit but the conduit does not connect to the ceiling. Cabling in the ceilings is not plenum rated and there are not fire stop wall penetrations for through wall routing. There is an abandoned large antenna on the rooftop.

Data/Communications Systems Recommendations

1. Provide a separate data/communications distribution room with an AC unit for heat management.
2. Provide wire management and plenum rated cables were needed.
3. Install data ports within the wall or wire mold type cable runs for all phones and needed areas where cabling is exposed.
4. Fire stop wall penetrations were needed.

Security - Electrical

The campus does not have a mass notification system. The building does not have a security system. The CCTV system has been up graded to all digital IP cameras that all tie into a new central DVR and monitor. The College has a central video broadcast location.

Security - Electrical Recommendations

1. Develop a mass notification system including phone, email and social media site contacts.
2. Install a security system including card access, door contacts, motion detectors, front end system, and remote monitoring by monitoring service.

Boone Campus/Lincoln Site

General Features

DESCRIPTION

The Boone Campus is located in a shared facility with Boone County Schools. Boone County Schools operates a Career and Technical Center and an Honors Academy at the site. There is minimal daily interaction between Boone County Schools and Southern West Virginia Community and Technical College at the facility. The shared use of the facility creates some problems. The Southern portion of the building is unable to be secured as students enter the Honors Academy through the College, and because the large classroom/gathering area is shared.

Main Academic Building Assessment

Boone Campus



Main Academic Building



Large Classroom Space

BACKGROUND

The 17,000 SF addition to the Boone County Career and Technical Center was constructed in 1997. The building was designed as a seamless expansion of the existing facility. Some of the challenges of the existing facility include less than ideal partition construction, a need to create additional (potentially smaller) ICR's, the need for two additional classrooms, additional space is required for the nursing program, as well as a need for space for adjunct faculty.

To address the challenges identified above the previous master plan recommended multiple additions (including a second level) to the facility. One area identified for a proposed two level addition has already been utilized by Boone County Schools. Current plans call for the construction of a new Main Academic Building for the Boone Campus. The site for the facility has already been procured, and is located adjacent to US 119. The location of the building will be prominent, and will serve as a gateway building for Southern West Virginia Community and Technical College.

The new facility will expand program offerings (nursing and education), and will increase enrollment by drawing from the Charleston metropolitan area. The facility will allow for the needed ICR expansion, a larger lab for microbiology, as well as space for an SUV and Power Sports Program. The intent is for the architectural style of the building to be modern, permanent, and eye catching. As noted above the building will be a 'gateway' building that needs to reflect the mission of Southern.

STRUCTURAL

The overall structural system consists of load bearing masonry walls with structural steel and open web steel joist framing. The foundations were not visible and there were no structural drawings available to verify the foundation construction, however the architectural section drawings



Ceiling Damage

seem to indicate the presence of shallow spread footings under the load bearing walls.

The exterior walls consist of masonry block with brick veneer and the interior walls mainly consist of masonry block. The masonry walls also serve the purpose of resisting the lateral loads for the building. There were small cracks observed in the masonry walls at various locations within the structure.

The ground floor is a concrete slab on grade. There are some signs of cracking in the floor tile throughout the building that could indicate some settlement of the concrete floor slab. The loads applied to the floors appear to be consistent with typical educational and administrative loadings.

The roof structure consists of open web steel bar joists with metal decking. There are various leaks in the roof that have contributed to some minor deterioration of the metal roof deck in some areas.

The building structure falls under a seismic design category B according to the current 2012 International Building Code which West Virginia has adopted. While the structure can withstand some seismic loads, it is not clear if the design accommodates loads according to the current building codes.

Recommendations

1. Clean and repair any deteriorated roof structure members that have been subjected to water damage.
2. Repair and monitor any cracks in the masonry walls.
3. Remove cracked floor tiles and evaluate the underlying concrete slab.

MECHANICAL

The HVAC system consists of TRANE roof top units (RTUs), zone control dampers in the supply ductwork, and fully ducted return air. The central Building Automation System (BAS) was not provided for major mechanical equipment. All ductwork is provided with external wrap insulation and in several locations was seen to be ripped or not sealed. Fresh, outdoor ventilation air is provided by the RTUs, but outdoor air dampers appeared to have been adjusted or closed because outdoor air intake was minimal. The quantity of supply air zone dampers provides fair controllability for the classrooms, but office spaces often have complaints.

The two (2) chemical containment exhaust hoods located in the front Science Lab had up-to-date inspection/approval stickers. The Science Lab chemical storage rooms did not appear to have proper exhaust and ventilation. Automatic gas shut-off valves were installed in the correct



1997 Rooftop Unit

location. The RTUs were installed in 1997 and appear to be reaching the end of their expected service life (15-20 years). The Science Lab exhaust fans for the containment hoods also appear to be reaching the end of their service life.

The small computer lab off the main corridor, which is served by a mechanical system not controlled by SWVCTC, often experiences cooling issues. The large computer classrooms at the back of the facility also suffer from a lack of cooling. Proper exhaust airflow is provided to toilet rooms and the custodian closet. There was a BARD HVAC unit relocated during a recent remodel of Classroom 119 that appeared to be loud, but operating correctly. Maintenance of the mechanical equipment is provided by the Logan campus personnel.

PLUMBING

The incoming water service was located in a part of the Boone campus not controlled by SWCTC, confirming the existence of a back flow preventer was not accomplished and determined to be the responsibility of the neighboring occupant.

There is an on-site sanitary treatment facility for the entire campus. The treatment facility is operating without any issues or deficiency reports. The existing underground sewage and storm water piping appeared to be clay; above ground piping was PVC and appeared to have sufficient clean-outs. The single gas-fired water heater was fairly new and provided with an expansion tank. The water heater appeared to be operating correctly and in good condition.

The hot water recirculation pump was not running. The entire hot water recirculation system has not been operating correctly for some time. A thermostatic mixing valve was located in the custodian closet. Toilet rooms appeared to be ADA compliant and provided with flush valve fixtures. The quantity of toilet fixtures is sufficient for the building classification and the fixtures appeared to be in decent condition. A mop sink was located in the custodian room. There was several water fountains provided, operational and appeared to be in good condition. There appeared to be a leak from one of the roof drains and/or storm piping in Classroom 119. There is an overflow roof drain installed above an exterior light.

FIRE PROTECTION/LIFE SAFETY

The building has a complete sprinkler system with the correct sensors and valves. A recent BRIM report noted that all sprinkler heads need to be replaced as they are rusted and were recalled by the manufacturer. Ductwork and piping appeared to be fire caulked and sealed at all fire-rated walls and partitions.

Recommendations

1. Budget for the replacement of the existing major equipment - Roof Top Units and Exhaust Fans.
2. Provide a central Building Automation System (TRANE Tracer) as the RTUs are replaced.
3. Investigate the hot water recirculation pump and piping, determine operational issues and recommission or replace.
4. Fix any roof drain and overflow drain issues.
5. Provide additional zone control dampers for the office areas to mitigate heating and cooling complaints.
6. Replace all sprinkler heads as required by BRIM.

ELECTRICAL

Life Safety - Electrical

The facility has a fire alarm that is interconnected to the whole building. The main fire alarm control panel is a Honeywell IntelliKnight with a backup battery system and is located at the Boone Career Technical Center's Mechanical Room 11. The fire alarm system for the Southern CTC area consists of a remote annunciator, alarm strobes, smoke detectors and fire alarm pull stations.

The emergency lighting fixtures are recessed tungsten-halogen type but there is an insufficient amount for the path of egress. There are no exterior emergency lighting fixtures for the Southern portion of the building for the path of egress. There are exit signs located at each exit and one located in the corridors but corridors sign do not have directional arrows.

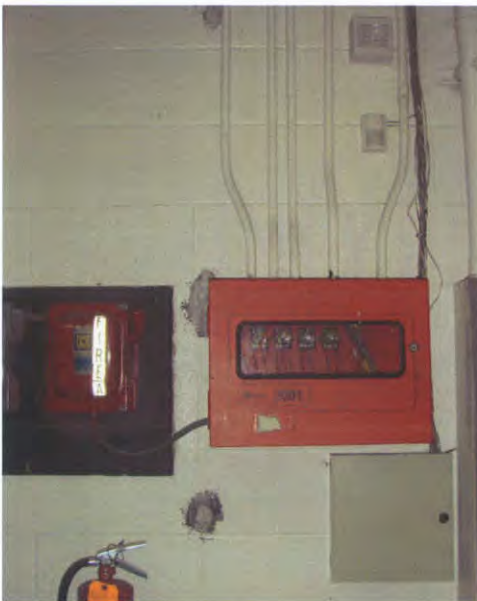
Life Safety - Electrical Recommendations

1. Provide a new complete addressable fire alarm system. This system is to include:

Provide an independent main fire control panel for the Southern CTC side with connections to Boone Career Technical Center's Fire Control Panel.

Provide a new remote annunciator with zone indications and a school zone map mounted beside the annunciator.

2. Provide new horn/strobe devices.
3. Provide new manual fire alarm pull stations.
4. Provide new emergency lighting for path of egress integral to new lighting for both interior and exterior.



Fire Alarm Panel

5. Provide and install additional emergency exit signs in corridors with directional arrows.

Note: Contacted Mike Means with Robinson & Son the fire alarm system service company (ph. 304.757.8063). He stated that all of the smoke detectors are going to be replaced and that all of the strobe indicators will be replaced with new horn/strobe units.

Electrical Power Systems

The electrical service for the whole building is fed underground via a pad mounted transformer, to the service meter located in the Boone Career Technical Center's Mechanical Room 11. The overall condition of the MDP (Main distribution panel) is in fair condition with no notable damage. The electrical distribution for the Southern CTC side of the building is in good condition than the older MDP. These panels contain spares and blank space available for future loads. The panels are not fully labeled for the loads that are on them. A complete load assessment per panel and per circuit is required to determine the adequacy of the electric service shared throughout the buildings three schools.

Some locations were noted to have exposed wiring and improper wire connections. Damaged floor receptacles and audio equipment ports, corroded electrical raceways and wall penetration without fire protection were also noted.

Electrical Power Systems Recommendations

1. Conduct a complete building electrical load analysis to determine adequacy of the electric service.
2. Create new accurate panel schedule labeling all loads, with spare breakers and available space.
3. Replace damaged wiring, exposed and M/C wiring with correct sized wire in conduit.
4. Replace damaged and corroded raceways.
5. Install fire protection for all wall penetration.
6. Damaged floor receptacles need to be replaced or removed and patched.

Electrical Lighting Systems

The exterior lighting for the building consists of large wall mounted metal halide fixtures that are used for area and walkway lighting. Recessed metal halide fixtures are used at the entrance. The exterior lighting is controlled by mechanical time switches. The offices and main classroom have 2x4 T8 recessed egg crate fixtures. The corridors, main entrance



'Yellowing' Lenses

and some classrooms have 2x4 T12 recessed troffers. Most of these troffers have yellow stained parabolic lens. The commons area lighting has both suspended indirect fixtures and recessed fixtures both lamped with metal halide bulbs.

Electrical Lighting Systems Recommendations

1. Undertake a complete fixture replacement of all existing interior and exterior lighting with LED fixtures excluding stage LED lighting in the large lecture room 110. Lighting selections for each area are to be based on IES recommended foot candle levels and the fixture ascetics for given locations.
2. Provide occupancy sensors for all classrooms, restrooms and offices.
3. Provide digital lighting control to control exterior lighting, corridors, foyer and commons area.
4. Provide photo cell integral to the lighting controls for exterior lighting.
5. Follow EPA regulations and procedures for disposing of lighting fixtures, lamps, drivers and ballasts.

Data/Communications Systems

The data and communications systems are on a shared service for the whole building. The data and communications come into and are distributed from a room just off from the Boone Career Technical Center's Mechanical Room 11. The room is only cooled by one small window style air conditioning unit. Transformers and electrical panels are also located in these rooms. The wire management for the data and communications in this room is in poor condition. The overall space for the data and communications distribution systems is cluttered. The portable wheel based cabinets are placed in front of each other. The power supplies for these cabinets are lying on the floor.

The phone system is a VoIP Cisco system. For all the phone locations, the cables are direct CAT5e drops from the ceiling running exposed to the Cisco phones. Some data drops in the front office in the Science Lab are also drops from the ceiling running exposed in the space. The majority of this cabling is not plenum rated and penetrations are not fire stopped.

Data/Communications Systems Recommendations

1. Complete redesign of data/communications distribution room to provide wire management and optimal space for all equipment.
2. Provide a new AC unit for heat management in data/communications distribution room.

3. Install data ports with in the wall or wire mold type cable runs for all phones and needed areas where cabling is exposed.
4. New plenum rated cables and fire stop wall penetrations were needed.

Security - Electrical

The Cisco phone system serves as inner communications but there is not a mass notification system in place. The only security for the building is controlled access to the data/communications distribution room. The CCTV system is comprised of ceiling mount analog dome cameras connected to a central DVR with a monitor for the Southern CTC side.

Security - Electrical Recommendations

1. Develop a mass notification system including phone, email and social media site contacts.
2. Security systems including card access, door contacts, motion detectors, front end system and remote monitoring by monitoring service.
3. Provide a new CCTV system integrated into the security system with motion activated event capture and digital cameras.

Note: The Boone campus director Bill Cook stated that they are installing new cameras and a new DVR for the CCTV system.

Lincoln Site Building Assessment

Hamlin, WV



Lincoln Site

BACKGROUND

The Lincoln site is a wing of Lincoln County High School (11,202 SF), which was constructed in 2004. Many of the challenges observed at the Lincoln Site are operational, and can be solved with minimal improvements. Currently LCHS utilizes Southern's space during the day. This leads to security issues, and was not the intent of the design. Providing security between Southern's open campus and the secure high school is achievable with some modifications to existing doors and security systems.

Other challenges include the shared PA system that disrupts College classes, as well as the control of the HVAC system.

STRUCTURAL

The overall structural system consists of load bearing masonry walls with structural steel and open web steel joist framing. The foundations consist of shallow concrete spread footings. The exterior walls consist of masonry block with brick veneer and the interior walls mainly consist of masonry block. The masonry walls also serve the purpose of resisting the lateral loads for the building. The ground floor is a concrete slab on grade. The loads applied to the floors appear to be consistent with typical educational and administrative loadings. The roof structure consists of open web steel bar joists with metal decking. The building structure falls under a seismic design category B. The structure was designed to withstand seismic loads according to the applicable building code during design and construction.

Recommendations

1. There are no immediate structural recommendations at this time.

MECHANICAL

The HVAC system serving the SWVCTC section of the Lincoln County High School consists of three (3) single zone Constant Air Volume (CAV) Air Handling Units (AHUs) which serve individual classrooms, one (1) CAV AHU and four (4) Constant Volume Boxes (CVB) with hot water reheat coils serving four individual classrooms and one (1) Variable Air Volume (VAV) AHU and VAV boxes and hot water reheat coils serving the Administration area. The heating hot water and chilled water is provided by a central plant with two (2) 270 ton chillers and two (2) 4300 MBH combustion boilers. Proper fresh, outdoor ventilation air is provided to the facility through the AHU intakes on the roof. All ductwork, chilled water and hot water piping is provided with wrap insulation which was in good condition.

There was a chemical containment exhaust hood located in the Physics/Chemistry Lab that did not have an up-to-date inspection/approval sticker on it. There is a return air plenum utilized throughout the facility, everything located within the plenum appeared to be plenum rated and compliant. Proper exhaust airflow was provided to all toilet rooms, Janitor closets and Labs. Adequate fire dampers, and fire caulking was observed for penetrations through fire-rated walls. The occupancy schedules for the entire facility and central plant equipment operation is controlled by the main Building Automation System (BAS) located in the High School. Therefore, HVAC issues arise when the SWVCTC is using their facilities and the High School is not. The building was constructed in 2004 and all of the mechanical equipment is operational and in good condition. Maintenance is performed by the Lincoln County High School maintenance personnel.

PLUMBING

The incoming water service is located in the High School portion of the facility and was provided with a code compliant backflow preventer. Domestic hot water is provided to the fixtures within the SWVCTC facility by a 7 KW Domestic Electric Water Heater (DEWH) with an expansion tank located in the Janitor Closet. Hot water recirculation piping and pump were also present. All hot water equipment was operational and appeared to be in good condition. Although there were only two (2) toilet rooms located within the SWVCTC portion of the building, shared facilities with the High School provide adequate services. The toilet rooms were ADA compliant and contained flush valve type fixtures with vandal resistant lavatories; everything was operational and in good condition. There was a mop basin and a thermostatic mixing valve located in the Janitors Closet. There were not any water fountains within the SWVCTC portion of the building, but multiple units were located within the High School. Storm piping was insulated and provided with clean-outs.

The Physics/Chemistry Lab stations were provided with natural gas, vacuum, compressed air, domestic hot and cold water. The air compressor and vacuum pump were located within the Janitors Closet. The equipment appeared to be in good condition, but we were told it is never used. All appropriate valves, regulators and emergency shut-offs were provided and appeared to be in good condition.

FIRE PROTECTION/LIFE SAFETY

The building has a complete, code compliant fire protections system with all appropriate valves, sensors and flow meters. Information was not attained on any recent testing. There were no issues observed or reported with the fire protection system.

Recommendations

The entire facility is approximately 10 years old and no major issues were found with the mechanical, plumbing, or fire protection equipment and systems.

The one issue addressed to ZMM/BSP was providing a BAS system override capability to the SWVCTC Administration personnel for the HVAC system when they are occupying the facility but the High School is not. Further investigation into the main chiller and boiler plants is required to determine the efficacy of running a single chiller or boiler just for the five (5) AHUs serving SWVCTC. The equipment and its efficiency might be affected by such a small heating and cooling load.

ELECTRICAL

Life Safety - Electrical

The facility has a fire alarm that is interconnected with the High School. The main fire alarm control panel is an EST Edwards system that was last tested in July of 2013 and is located in the High School Data room. The emergency lighting fixtures are recessed tungsten-halogen type.

Life Safety Electrical Recommendations

Based on the current condition of the overall system and its recent installation there are not any recommendations to improve the system at this time.

Electrical Power Systems

The electrical distribution panel (MDP 1) serving the Southern CTC section of the building is located in a large shop class room in a locked fenced in area. Due to amount of dust generated in the class room the MPD is very dirty. This dust may disrupt internal electrical connections in the MDP over time.

Electrical Power Systems Recommendations

1. Clean the MDP both internally and externally.
2. Erect a walled enclosure around the MDP to keep shop dust off the equipment.

Electrical Lighting Systems

Overall the lighting is in good condition. The exterior and interior spaces are illuminated to correct levels according to IES standards. Lighting controls are utilized through the entire building. Some of the lighting technologies currently used in the building are becoming obsolete. The installed lamping of the High pressure sodium, Halogen Quartz Tungsten, MR16 and the florescent T8 appear to be the top energy efficient lamps of their types.

Electrical Lighting Systems Recommendations

1. Ensure all lighting controls are set correctly to maximize efficiency.
2. Create a re-lamping schedule for the entire Southern CTC area.
3. Only re-lamp fixtures with energy efficient lamp types. When energy efficient lamps become unavailable change lamping with LED retro fit kits or replace fixture with LED type.
4. Follow EPA regulations and procedures for disposing of lighting fixtures, lamps, drivers and ballasts.

Data/Communications Systems

The data and communications distribution systems have excellent cable management. Plenum rated cables are utilized and penetrations have fire stop protection throughout. The phone system is VoIP. Only the office phones are on the Southern CTC system, the Southern classrooms are on the High School's system.

Data/Communications Systems Recommendations

1. Connect all Southern CTC classroom phones to the Southern CTC phone system.

Security - Electrical

Currently the Southern CTC does not have a mass notification system in place. There is a security system in place but it is controlled by the High School. There is an intercom button at the Southern CTC entrance but the door must be manually open if access is granted after normal school hours. The CCTV system consists of ceiling mount analog dome cameras connected to a central DVR and monitor for the Southern CTC side.

Security - Electrical Recommendations

- a. Develop a mass notification system including phone, email and social media site contacts.
- b. Install a separate security systems using existing card access, door contacts and motion detectors.
- c. Install new A-Phone type video call system for afterhours entrance request.
- d. New CCTV system integrated into the security system with motion activated event capture and digital cameras.

Note: The Lincoln campus director, Bill Cook stated that they are installing new cameras and a new DVR for the CCTV system.

ENROLLMENT and DEMOGRAPHIC ASSESSMENT

BACKGROUND

The area that Southern West Virginia Community and Technical College serves is currently struggling due to a decline in the coal industry. The population is declining, as reflected by a declining number of graduates from the high schools that Southern serves. In AY09-10 there were 1,781 seniors in the 13 high schools, and that number decreased to 1,698 in AY11-12.

Recent enrollment at Southern West Virginia Community and Technical College peaked in 2004 at 3,424 students. The Fall 2013 enrollment was 2,012, a nearly 42% decline from the recent peak. The current enrollment of 2,012 equates to approximately 1,500 FTE's.

In the last several years the High Schools that Southern serves has shown a relatively flat rate of students attending college (44-46%). The rate of students from these schools that attend Southern has also remained steady (18.4-20.7%). The percentage of students attending college that have gone on to attend Southern has also remained steady (41.8-45%).

OPPORTUNITIES

There is a tremendous opportunity to increase enrollment at Southern by working to increase the college going rate from the 13 high schools. In 2009 the college going rate for high school seniors in the State of West Virginia was 61.5%. If that percentage of the high schools seniors at the 13 high schools in Southern's service area attended college in 2013, and Southern maintained the same percentage (45%) of those students, it would have meant a one year increase of 117 students, which would translate to several hundred additional students over multiple years. To this end, Southern should continue working closely with the local schools to increase overall college attendance rates.

ADDITIONAL GROWTH AREAS

Due to the changing economic opportunities for area residents, Southern envisions a greater need for workforce retraining. The College anticipates that this need will make up for the challenge of the declining population. Southern also anticipates that a new facility located on US 119 in Boone County will assist in drawing more students from the Charleston Metropolitan Area.

PROJECTION

This master plan was developed based a projection of minimal growth. As the existing facilities previously handled a significantly higher student load, few new facilities and/or additions are included in the plan.

DEFERRED MAINTENANCE PROJECTS

Below is a comprehensive list of deferred maintenance projects at Southern West Virginia Community and Technical College for each campus by building or facility.

Logan Campus

Building 'A'

- ☐ Replace the existing roof.
- ☐ Clean and repair any deteriorated roof structure members that have been subjected to water damage.
- ☐ Repair any exterior concrete that has been subjected to soil erosion.
- ☐ Replace the HVAC and plumbing systems throughout the building.
- ☐ Restrooms and water coolers need to be updated to meet ADA requirements.
- ☐ Provide a Building Automation System (BAS).
- ☐ Provide proper exhaust for science labs, art rooms, and restrooms.
- ☐ Provide a dedicated cooling unit for the elevator equipment room.
- ☐ Install a backflow preventer on the domestic water service entrance.
- ☐ Install roof overflow drains.
- ☐ Install a new addressable fire alarm system.
- ☐ Replace all lighting and lighting control.
- ☐ Replace all data cabling.
- ☐ Install a security system.

Building 'B'

- ☐ Repair or replace the existing split DX refrigerant condensing unit and cooling coil for the AHU.
- ☐ Improve the lighting/controls.
- ☐ Fix or eliminate the skylights.
- ☐ Install a CCTV and security system.

Building 'C'

- ☐ Investigate the electrical/data closets and elevator equipment rooms to determine if additional cooling can be provided.
- ☐ Provide solids interceptors on hair washing sinks.
- ☐ Install a flood protection system appropriate for a flash flood.

Academy for Mine Training and Energy Technologies

- ☐ Provide permanent structural repairs to the roof truss and roof system above the addition on the west end of the building.
- ☐ Structural analysis and monitoring of any floor members supporting significant loads resulting from block walls or other heavy types of loading.
- ☐ Structural evaluation of the stair system and provide better handrail members.
- ☐ Provide structural repairs to any member that shows signs of water damage and deterioration.

- ❑ Perform a structural analysis of the entire building to verify all member load carrying capabilities including lateral loadings.
- ❑ Repair any perimeter brick supporting structures.
- ❑ Provide an automatic fire suppression (sprinkler) system.
- ❑ Rebalance the HVAC system and provide code required mechanical ventilation for all occupiable spaces.
- ❑ Correctly install the combustion air to the furnaces.
- ❑ Provide an expansion tank for the domestic hot water system.
- ❑ Address using stairwells and exit corridors for return air paths. Provide return air ductwork or plenum ceilings and confirm plenums do not contain non-plenum rated materials.
- ❑ Provide a complete addressable fire alarm system.
- ❑ Provide an emergency lighting for path of egress integral to new lighting for both interior and exterior fixtures with emergency ballast.
- ❑ Provide exit signs throughout with directional arrows as needed.
- ❑ Install all new electrical wiring and panels throughout the building.
- ❑ Replace exterior and interior light fixtures and controls.
- ❑ Provide a CCTV and security system.

Williamson Campus

Main Academic Building

- ❑ Replace the existing roof.
- ❑ Clean and repair any deteriorated roof structure elements that have been damaged by roof leaks.
- ❑ Repair and seal any cracks in the masonry walls and concrete slabs.
- ❑ Remove and repair cracked floor tiles and verify the degree of underlying slab cracks.
- ❑ Replace the HVAC and plumbing systems throughout the building.
- ❑ Restrooms and water coolers need to be updated to meet ADA requirements.
- ❑ Provide proper exhaust air for the science labs, art rooms and restrooms.
- ❑ Provide a dedicated cooling unit the elevator equipment room.
- ❑ Provide a remote annunciator with zone indications and a school zone map mounted beside the new annunciator located near the front entrance.
- ❑ Replace all horn/strobe devices excluding library devices.
- ❑ Replace all manual fire alarm pull stations excluding library devices.
- ❑ Provide new emergency lighting for path of egress integral to new lighting for both interior and exterior lighting.
- ❑ Install additional emergency exit signs in corridors with directional arrows excluding library signs.
- ❑ Conduct a complete building electrical load analysis to determine adequacy of the electric service.
- ❑ Replace damaged panels and wiring.
- ❑ Remove all unused and damaged electrical power runs and receptacles.
- ❑ Create necessary spacing around all electrical panels per NEC.

- ☐ Install fire protection for all wall penetrations.
- ☐ Replace all exterior and interior light fixtures.
- ☐ Provide new data, CCTV, and security systems.

Applied Technology Center

- ☐ No recommendations.

Wyoming Campus

Main Academic Building

- ☐ Replace the existing roof.
- ☐ Clean and repair any deteriorated roof structure elements that have been damaged by roof leaks.
- ☐ Repair and seal any cracks in the masonry walls.
- ☐ Remove and repair cracked floor tiles and verify the degree of underlying slab cracks.
- ☐ Replace all exhaust fans.
- ☐ Install point of use thermostatic mixing valves on all plumbing fixtures requiring hot water.
- ☐ Replace domestic water booster pump.
- ☐ Install automatic fire suppression (sprinkler) system to fully sprinkler facility.
- ☐ Install exhaust fan and associated ductwork to exhaust Lab Chemical Prep Room.
- ☐ Provide smoke detectors.
- ☐ Provide permanent CO detector in needed locations.
- ☐ Replace older horn/strobe devices.
- ☐ Replace older manual fire alarm pull stations.
- ☐ Emergency lighting for path of egress integral to new lighting for both interior and exterior lighting.
- ☐ Install additional emergency exit signs in corridors with directional arrows.
- ☐ Remove external dust and debris from electrical components.
- ☐ Replace lighting fixtures and lighting control.
- ☐ Illuminate or remove the building signage.
- ☐ Provide a separate data/communications distribution room with an AC unit for heat management.
- ☐ Provide wire management and plenum rated cables were needed.
- ☐ Provide a security and mass notification system.

Boone Campus

Main Academic Building

- ☐ Replace the existing roof.
- ☐ Replace inadequate partitions.
- ☐ Clean and repair any deteriorated roof structure members that have been subjected to water damage.
- ☐ Repair and monitor any cracks in the masonry walls.
- ☐ Remove cracked floor tiles and evaluate the underlying concrete slab.

- ❑ Budget for the replacement of the existing major equipment - Roof Top Units and Exhaust Fans.
- ❑ Provide a central Building Automation System (TRANE Tracer) as the RTUs are replaced.
- ❑ Investigate the hot water recirculation pump and piping, determine operational issues and recommission or replace.
- ❑ Replace all sprinkler heads as required by BRIM.
- ❑ Provide a new complete addressable fire alarm system.
- ❑ Provide new emergency lighting for path of egress integral to new lighting for both interior and exterior.
- ❑ Provide and install additional emergency exit signs in corridors with directional arrows.
- ❑ Replace damaged wiring, exposed and M/C wiring with correct sized wire in conduit.
- ❑ Replace damaged and corroded raceways.
- ❑ Damaged floor receptacles need to be replaced or removed and patched.
- ❑ Replace all exterior and interior light fixtures.
- ❑ Complete redesign of data/communications distribution room to provide wire management and optimal space for all equipment.
- ❑ Provide a new AC unit for heat management in data/communications distribution room.
- ❑ New plenum rated cables and fire stop wall penetrations where needed.
- ❑ Provide new mass notification, CCTV, and security system.

Lincoln Site

Main Academic Building

- ❑ Eliminate HS paging system in SWVCTC spaces.
- ❑ Replace doors to provide adequate secure separation of the High School and Southern's space.

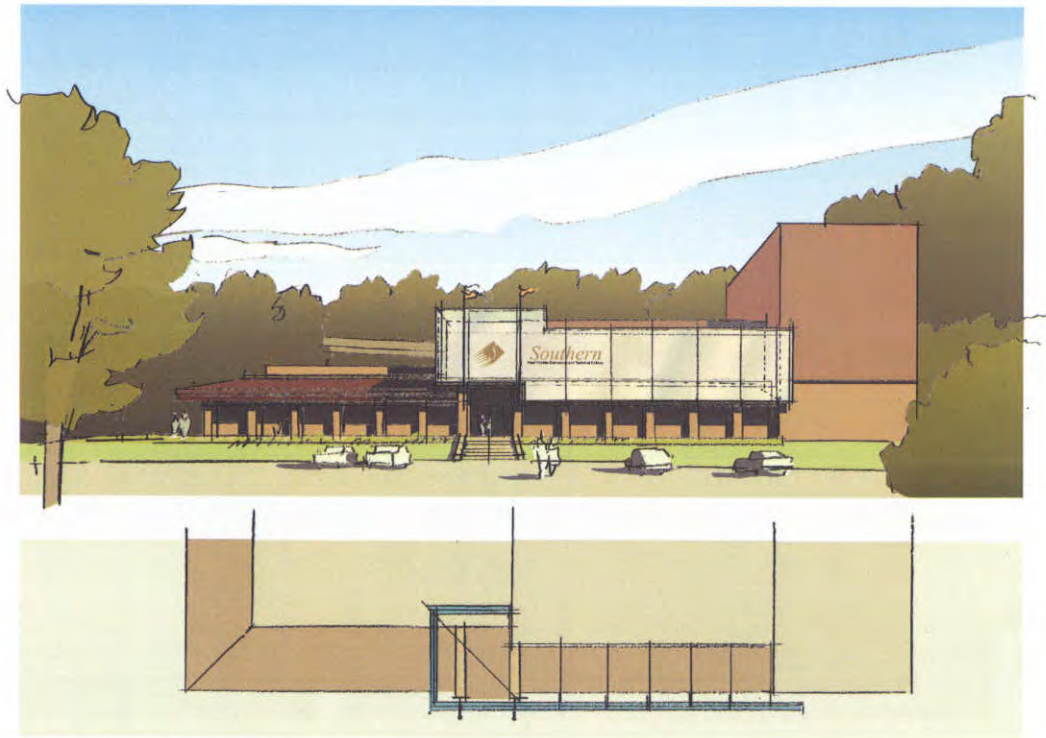
EXISTING BUILDING NEEDS

Below is a list of existing buildings and facilities at Southern West Virginia Community and Technical College in need of renovations, additions, demolition or any combination thereof.

Logan Campus

Building 'A'Renovation

- ☐ Major Building Renovation
 - Improve Front and Rear Entry Conditions
 - Replace HVAC, Plumbing, Electrical, Lighting Systems, and Ceilings
 - Replace Roof
 - Reconfigure Student Services Area
 - Infill Recessed Slab in Commons Area and Space Above on 2nd Level



Improved Front Entry Building 'A' – Logan Campus

Williamson Campus

Main Academic BuildingRenovation

- ☐ Major Building Renovation
 - Repair Exterior Walls (Concrete Failing)
 - Replace Exterior Doors and Windows
 - Replace Roof
 - Replace HVAC, Plumbing, Electrical, Lighting Systems, and Ceilings
 - Reconfigure Student Services Area

Williamson Armory.....Renovation

- ☐ Major Building Renovation

The extent of the renovation is to be determined once the building is acquired.

Wyoming Campus

Main Academic BuildingRenovation

- ☐ Major Building Renovation
 - Replace Roof
 - Reconfigure Student Services Area
 - Install Fire Suppression (Sprinkler) System, Ceiling Replacement, Lighting Improvements, Electrical Distribution Improvements, HVAC (Exhaust) Improvements
 - Replace or Remove Building Signage

Boone Campus

Main Academic Building Renovation/Addition

- ☐ Major Building Renovation
 - Replace Sprinkler Heads (BRIM)
 - Reconfigure Student Services Area
 - Replace the Roof and HVAC Equipment
 - Install New Lighting
 - Replace or Remove Building Signage
 - Additional Space for:
 - 2 Small ICR's
 - 2 Additional Classrooms
 - Nursing
 - Adjunct Faculty

or

Main Academic Building New Construction

- ☐ The program and conceptual design for the proposed facility is contained in Section 8 – New Facilities and Building Sites.

MAJOR SITE IMPROVEMENTS

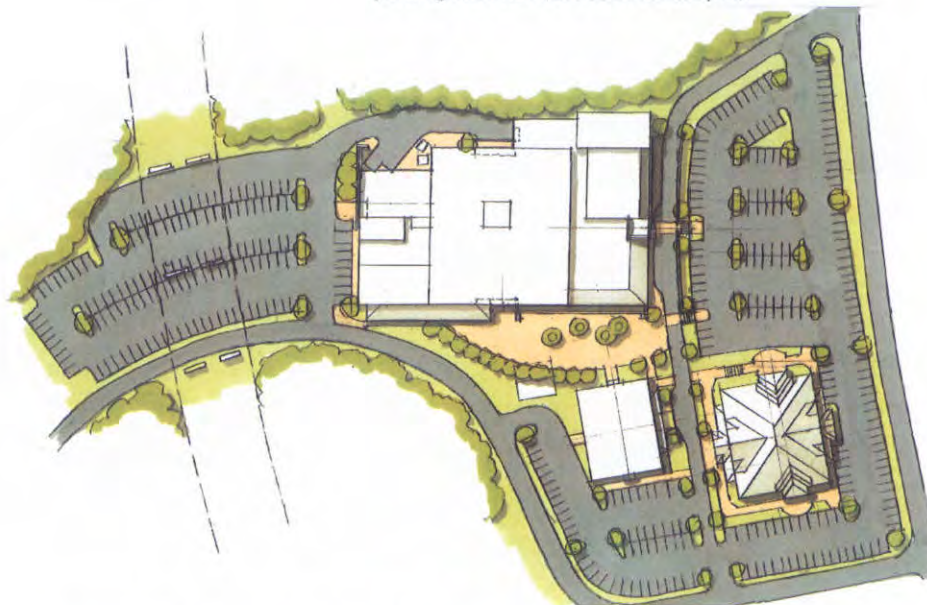
Major site improvements are anticipated to occur at the Logan and Williamson campuses. The other campuses each contain only one facility, and while minor improvements are warranted, the general configuration is acceptable for their continued use. A proposal for the development of the new Boone Campus is included in Section 8. All of the campuses require improved signage and wayfinding. The Wyoming campus requires widening of the access road, as well as improvements to the accessible parking to meet the cross slope requirements. Recommended improvements to the Logan and Williamson Campuses are identified below:

Logan Campus

The main parking areas at the Logan Campus require improvements. The campus is not pedestrian or vehicular friendly, and the main parking lot is overly dense with no landscaping. The lot also does not have any base paving, and is rapidly deteriorating. Students are currently parking over the only 'green' space, which was left undeveloped because it is located over a culvert. This parking should be immediately restricted.

Parking areas for Buildings 'B' and 'C' seem independent of the main parking area, while there is little signage to the large overflow parking area located behind Building 'A'. The parking area behind Building 'A' is not (visibly) striped, and parking appears to be random.

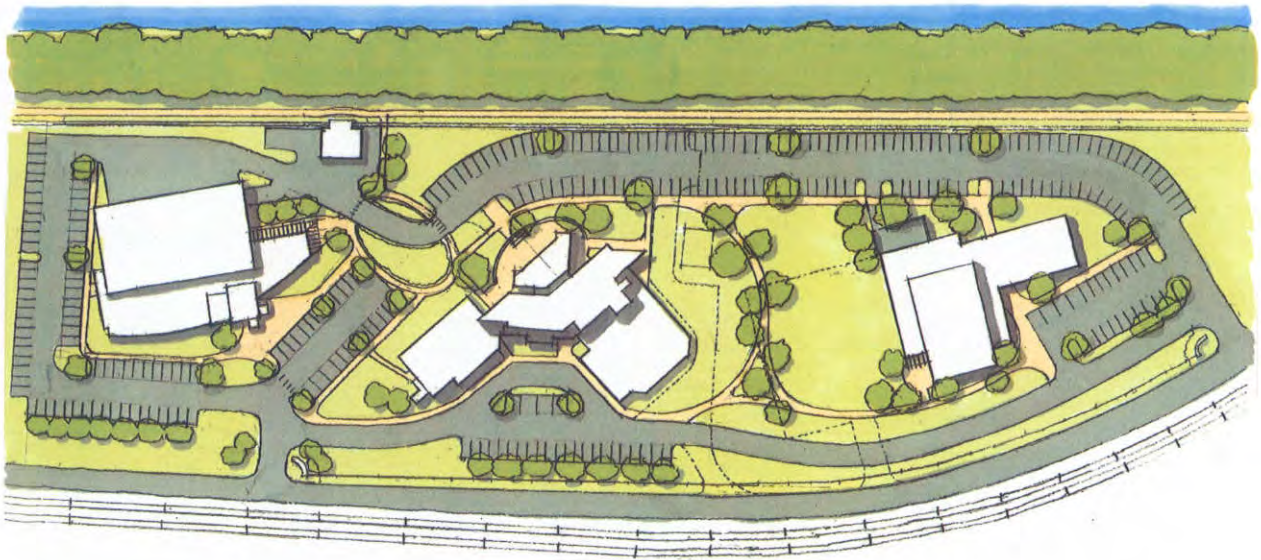
Below, please find a proposed rendering of improvements to the Logan Campus. The plan provides for an improved front parking area, as well as improved pedestrian circulation for the entire campus. Both the front and rear entry to Building 'A' are accentuated, and a central green space is developed on the campus. A proposed development plan for the rear parking area has also been developed.



Williamson Campus

As part of the master plan process, the ZMM/BSP team has developed a strategy to bring the existing Armory into the Williamson Campus. Where previous strategies for this effort included reutilizing the existing Armory parking lot – which led to a very disjointed campus - the current plans recommend pushing all of the vehicular circulation to the perimeter, and opening the interior of the campus to pedestrians.

The plan also includes the addition of fencing to eliminate the current situation where students park on the grass area near the entry road as opposed to in the developed parking areas.



The first phase of this implementation occurred when the Applied Technology Center was constructed. The next phase will include pushing the access points to the new edges of the campus, removing the parking area and road between the Armory and the Main Academic Building, and then adding parking as a buffer between the buildings and the flood wall. This approach greatly improves the pedestrian connection between the buildings, and maximizes the available green space and outdoor recreation areas.

INFRASTRUCTURE IMPROVEMENTS

As the existing campuses are not scheduled for expansion, the infrastructure is currently in place for the College. Additionally, the data infrastructure is in place to permit an expansion of online learning and additional ICR classes being generated or received at any campus. The following infrastructure items require additional investigation:

- Examine the condition of the existing culvert on the Logan Campus.
- Investigate the availability of utilities at the proposed site for the new facility in Boone County.

PROPERTY ACQUISITION

As the existing campuses are not scheduled for expansion, limited property acquisition is anticipated. The property for the proposed Boone Campus has already been acquired (see below).



The only other anticipated property acquisition would be the Williamson Armory. A new Armory is being constructed at the James "Buck" Harless Wood Products Industrial Park. The project is scheduled for completion in the Summer of 2015, at which time the property will become available.



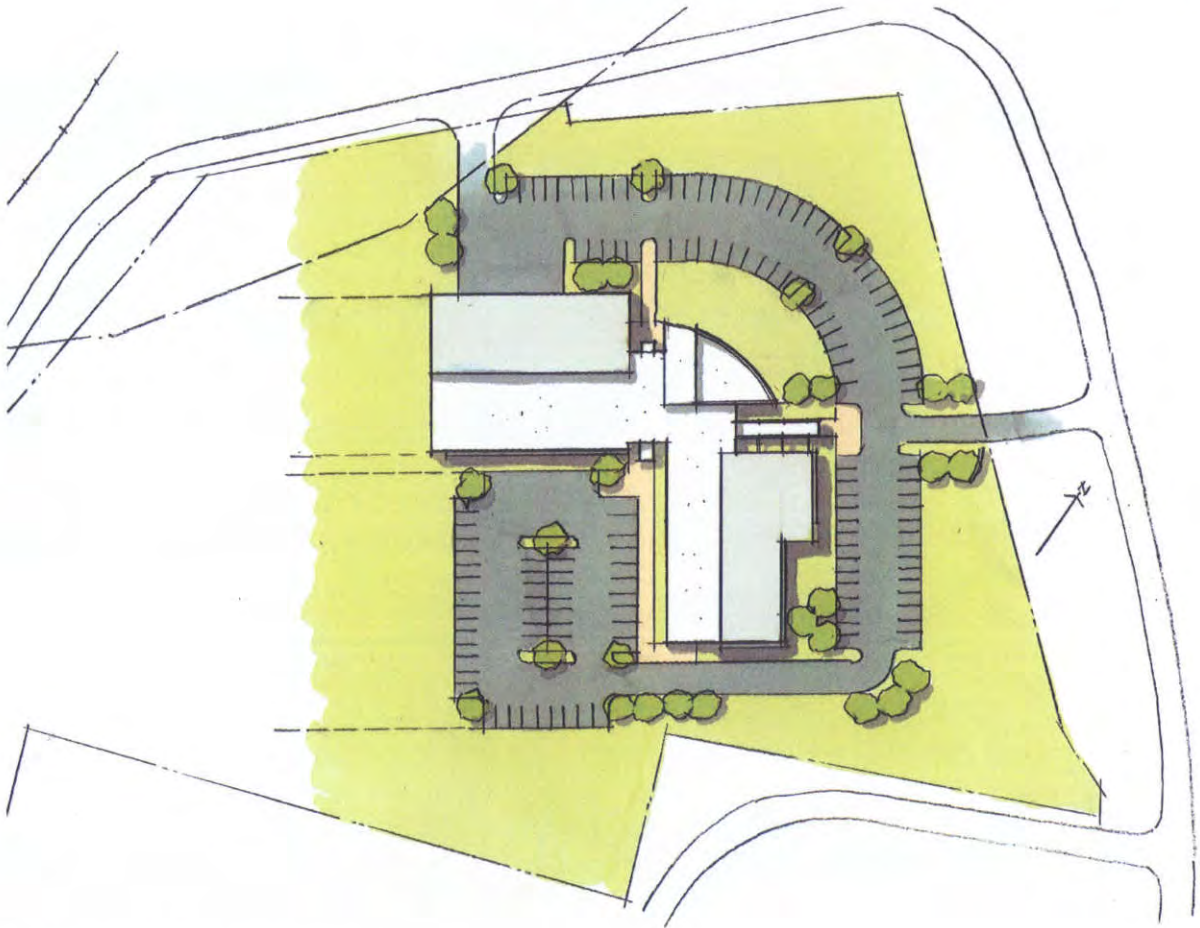
NEW FACILITIES and BUILDING SITES

The only new facility envisioned as part of the current planning process is a new Main Academic Building for the Boone Campus. The facility will replace the spaces located in the current facility, but will also provide additional classroom and ICR space, space for the nursing program, as well as some high bay training areas for an ATV/Recreational Vehicle Repair program. Based upon the input received, the following program for the facility was developed:

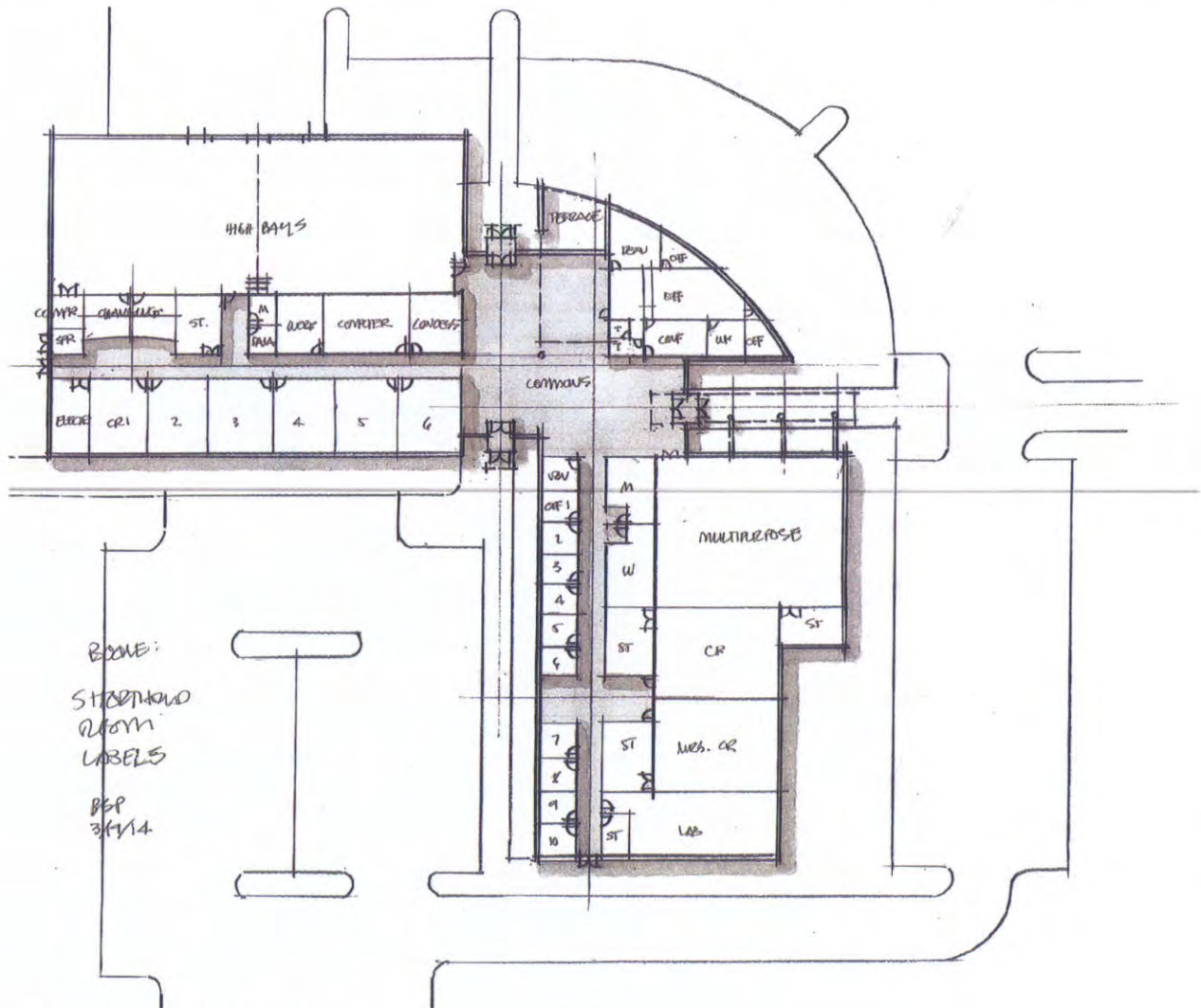
Space	Nominal Dim		Nominal		Total	Subtotal	Subtotal	Notes:
	Feet	Feet	NSF	Qty	NSF	NSF	GSF	
Classroom						19,004	24,706	
Classroom - Std	20	25	500	6	3,000			Existing
Storage	-	-	-	-	-			N/A
Classroom - Lrg	30	40	1,200	1	1,200			Existing
Storage	10	20	200	1	200			Existing
Class Lab & Storage	50	20	1,000	1	1,000			Existing including storage
Storage	-	-	-	-	-			N/A
Nursing Classroom	30	40	1,200	1	1,200			Proposed
Storage	10	20	200	1	200			Proposed
Multipurpose	60	50	3,000	1	3,000			Existing
Storage	8	20	160	1	160			Existing
High-Bay Flex	55	60	3,300	2	6,600			Proposed
Staff Work Room	15	20	300	1	300			Proposed
Locker/Toilet (M/V)	15	30	450	1	450			Proposed
Compressor Rm	10	15	150	1	150			Proposed
Storage	10	20	200	1	200			Proposed
ICR - Std	12	16	192	1	192			Proposed
ICR - Sm	12	12	144	2	288			Proposed
Computer Lab	24	36	864	1	864			Proposed (14 spaces+Instructor)
	-	-	-	-	-			
Support						2,850	3,705	
Staff Offices	10	10	100	8	800			Existing
Commons	30	50	1,500	1	1,500			Existing
Food Service	10	30	300	1	300			Existing
General Storage	10	25	250	1	250			Existing
Restrooms (M/F)	-	-	-	-	-			(Grossing Factor)
Janitor/Storage	-	-	-	-	-			(Grossing Factor)
	-	-	-	-	-			
Administration						1,444	1,878	
Dean's Office	12	20	240	1	240			
Conference Room	12	20	240	1	240			Existing (Enlarged)
Reception	10	10	100	1	100			Existing
Open Office	20	25	500	1	500			Existing
Storage/Work	10	13	130	1	130			Existing
Counselor Office	8	13	104	1	104			Existing
Financial Aid Office	10	13	130	1	130			Existing
Restroom	-	-	-	-	-			(Grossing Factor)
	-	-	-	-	-			
Totals						23,298	30,289	
						NSF	GSF	

The initial evaluation indicates the need for a new facility of approximately 30,289 SF of space.

Once the program was developed, the ZMM/BSP team investigated the project site to determine the optimal location for the development of the new Boone Campus. The building was located in a manner that allowed for the parking to be distributed in smaller lots around the building perimeter. This allowed for the site to be developed with adequate parking without the effect of a large parking lot in front of the facility. This strategy is consistent with the improvement plans for the Williamson Campus. The building was also sited to maximize the exposure to US119, allowing the building to serve as a 'Gateway' to Southern's service area.



Proposed Boone Campus Layout



Proposed Boone Building Layout

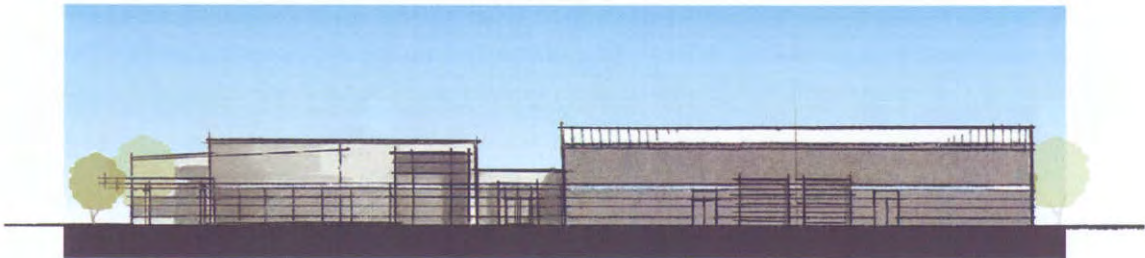
Once the layout was developed, ZMM/BSP began to look at a design concept that had an architectural style that conveyed the following desired attributes:

- ☐ Modern (Like New ATC)
- ☐ Permanent
- ☐ Eye Catching
- ☐ Sense of Purpose
- ☐ Well Established
- ☐ Convey Mission - Education
- ☐ Gateway Building

Based upon the input received above, the following preliminary exterior elevation sketches were developed:



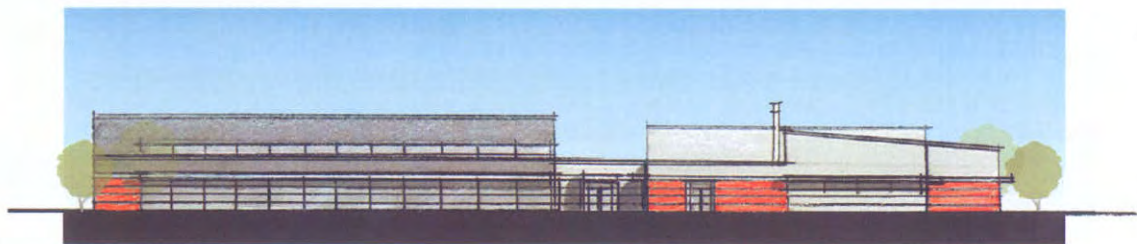
East



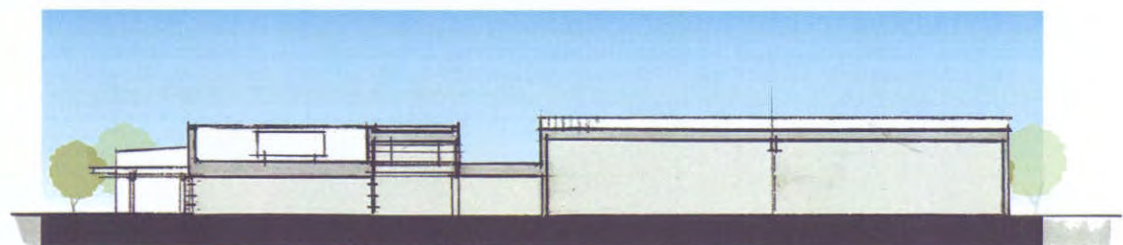
North



West



South



Section



Proposed Boone Campus and Facilities

LIST of CAPITAL PROJECTS

Southern has identified the following list of capital improvements and new projects necessary to enable continued growth and success of the College. These projects represent the immediate, near term (5 years) and long term (10 years) needs and are listed in order of priority. Please refer to Section 10 for timing estimates and projected costs associated with individual projects. Please note the most pressing need is to address life safety (fire alarm, automatic fire suppression (sprinklers), and exit signage) at the Academy for Mine Training and Energy Technologies facility. Those improvements are not included in this list since it is a leased facility.

1. Renovate Building 'A'

Logan Campus

- ☐ Replace Roof
- ☐ Complete Above Ceiling Renovation (Ceilings, Lighting, HVAC, Sprinkler Heads, Data)
- ☐ Renovate/Improve Entrance and Rear Entry
- ☐ Renovate Restroom for ADA Compliance
- ☐ Infill 'Pit' In Commons Area, Infill Second Level
- ☐ Renovate Student Services Area
- ☐ Paint/Improve Interior Finishes
- ☐ Provide Security System

2. Renovate Main Academic Building

Williamson Campus

- ☐ Replace Roof
- ☐ Replace Exterior Windows and Doors
- ☐ Complete Above Ceiling Renovation (Ceilings, Lighting, HVAC, Sprinkler Heads, Data)
- ☐ Repair Deteriorated Exposed Concrete Slabs and Masonry Veneer
- ☐ Renovate Student Services Area
- ☐ Paint/Improve Interior Finishes
- ☐ Provide Security System

3. Acquire Williamson Armory

Williamson Campus

- ☐ Acquire Property

4. New Main Academic Building

Boone Campus

- ☐ Develop a New 29,165 SF Main Academic Facility
- ☐ Develop Site Improvements to Support the New Facility

or

Renovation/Addition to Main Academic Building

Boone Campus

- ☐ Build 4,000 SF Addition for New ICR's, 2 Classrooms, and Space for Nursing Program
- ☐ Replace Roof
- ☐ Replace Existing Partitions
- ☐ Replace HVAC Equipment

- ☐ Replace Sprinkler Heads
- ☐ Provide a New Fire Alarm System
- ☐ Replace Emergency Lighting and Exit Signage
- ☐ Replace Lighting
- ☐ Provide Security System

5. Renovate Main Academic Building

Wyoming/McDowell Campus

- ☐ Roof Replacement
- ☐ Replace Exhaust Fans
- ☐ Partial Above Ceiling Renovation (Install Automatic Fire Suppression System, New Lighting, New Fire Alarm)
- ☐ Improve Site Accessibility (Parking Area)
- ☐ Repair or Remove Building Signage
- ☐ Plumbing Improvements

6. Logan Campus Improvements

Logan Campus

- ☐ Improve/Landscape Front Parking Area
- ☐ Improve Rear Parking Area

7. Williamson Campus Improvements

Williamson Campus

- ☐ Demolish Existing Access Road and Parking Lot
- ☐ Extend Parking and Access Road at Site Perimeter
- ☐ Develop Pedestrian Links
- ☐ Install Fencing at Front of Campus

TIMING, PHASING and PROJECTED COSTS

In order for the Master Plan to be appropriately implemented and funded over time, timing estimates with associated costs were identified. These estimates provide a sequence of construction, allowing capital projects to be built to accommodate the ongoing needs of Southern West Virginia Community and Technical College. The planned projects have been identified starting with immediate needs and include proposed construction through FY2025. The estimated scheduling for capital projects assume that funding strategies will begin in FY2015. The estimated scheduling also assumes that the Master Plan will be implemented in multiple steps, and that the steps may be adjusted as needs and enrollment changes. The proposed sequencing reflects current needs (rehabilitation of existing buildings), as well as the findings regarding projected enrollment and programmatic needs. Identified below are the list of capital projects in order of priority and their associated order of magnitude costs.

Phase 1: 2015-2018		Cost Projection
1.	Renovate Building 'A' (Logan)	\$9,600,000
2.	Renovate Main Academic Building (Williamson)	\$7,900,000
3.	Acquire Williamson Armory (Williamson)	\$250,000
Phase 2: 2019-2022		
4a.	New Main Academic Building (Boone)	\$8,650,000
	or	
4b.	Renovation/Addition to Main Academic Building (Boone)	\$2,450,000
5.	Renovate Main Academic Building (Wyoming/McDowell)	\$1,450,000
Phase 3: 2022-2025		
6.	Logan Campus Improvements (Logan)	\$1,400,000
7.	Williamson Campus Improvements (Williamson)	\$750,000
Total Ten Year Master Plan Projections:		\$23.8-30.0M

CAMPUS INTERACTION and SUPPORT

The physical location of the Southern's facilities provide access to the College's programs for the majority of residents in the area served. One of the challenges is the required number of facilities and locations due to the low population density. To meet this challenge, Southern generates and receives classes through the ICR's at each campus. Due to the large geographic area covered, as well as the transportation challenges, the ICR's allow for improved program access without duplicating classes.

The Logan and Williamson campuses are the largest based upon enrollment, courses offered, and available facilities. The Wyoming Campus and Logan site provide access to more remote areas, while the proposed new location for the Boone Campus will provide access to Southern's programs for the immediate area, while also reaching to the greater Charleston area, and the growth that is being experience South of Charleston on US 119.

Facilities at all locations, when built or renovated, should reflect the Southern West Virginia Community and Technical College brand in some aspect of the design. Signage should be improved to provide consistency at all campus locations and leased facilities, as there is not a uniform appearance for the existing buildings.

The proposed Boone Campus facility, as described in Section 8, will reflect architecture and design compatible with the new Applied Technology Center at the Williamson Campus. As most of the existing facilities are remote, the proposed new campus in Boone County will help reinforce the brand, and reflect the quality of Southern West Virginia Community and Technical College to the general public.

IMPACT on LOCAL COMMUNITY

The implementation of the Master Plan will benefit many Southern West Virginia communities. Input was afforded local and regional government entities, local school systems, and the public through the initial planning meetings at each campus. Open meetings were held, publications outlined plans, and public speaking events were used to communicate the vision to multiple constituencies.

Due to the remote nature of several of the campuses and sites, a direct impact on local communities is difficult to quantify beyond the access to education that Southern provides. However, the following specific impacts are noted:

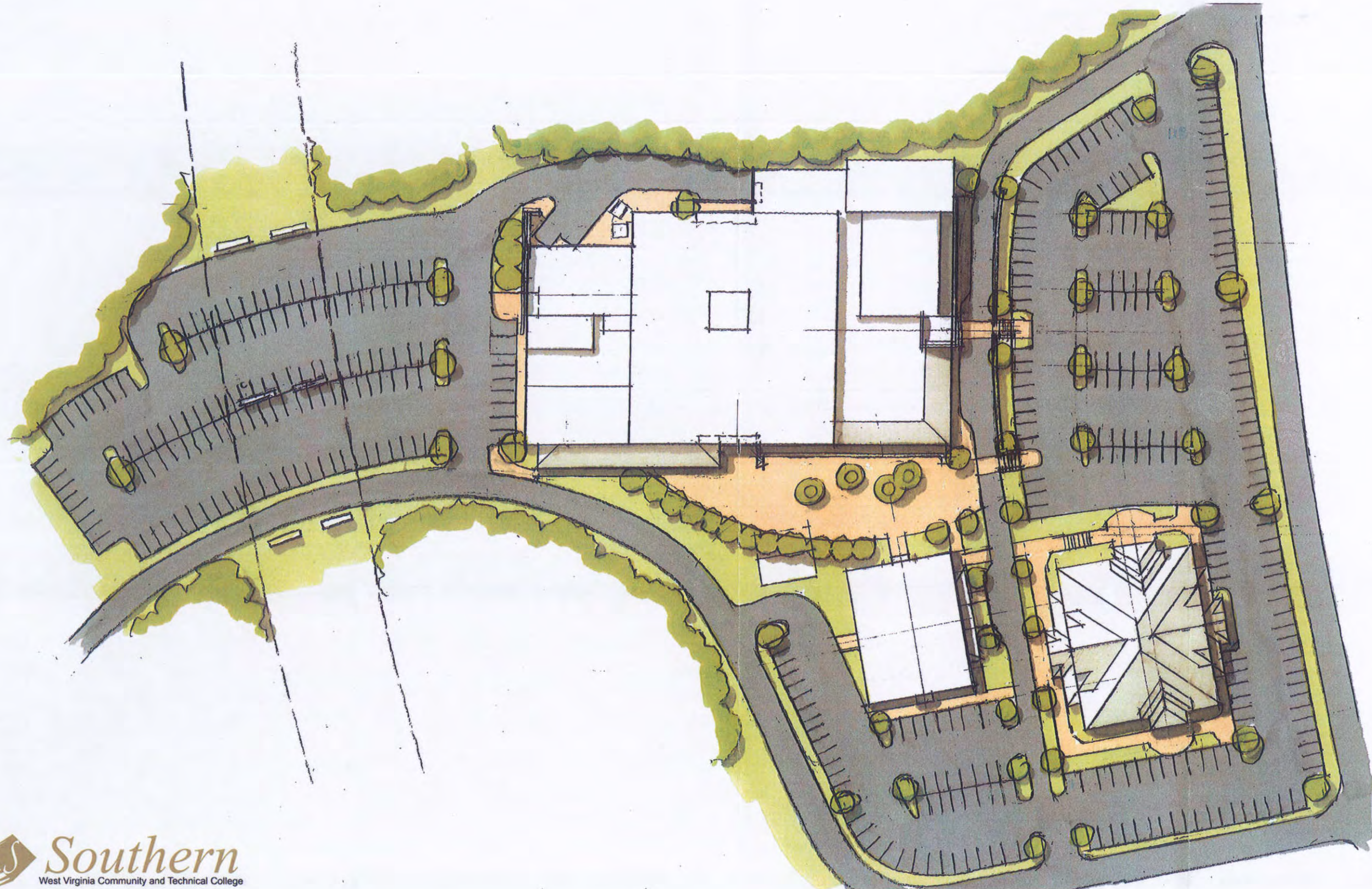
The proposed new campus in Boone County will provide increased access to education programs and opportunities for both residents of Boone County as well as residents residing South of the Charleston metropolitan area along US 119. The campus will also serve as a gateway facility for the school.

Although no new facilities are planned, the improvements to the Logan Campus will help ensure that the tremendous investment made in the Logan area remains functional. Without the investment in the Main Academic facility (Building 'A'), the facility will soon become obsolete. Reinvestment in the facility and the campus will allow Southern to continue to deliver services in this area.

The improvements planned to the main building in Williamson will also have a similar affect as the improvements to Building 'A' on the Logan Campus noted above. The existing facility is over 40 years old, and requires a significant renovation to remain functional. Expanding the campus to include the Armory will benefit Williamson by immediately repurposing a building that may otherwise fall into a state of disrepair/neglect. This approach benefits both Southern and the overall Williamson community.

Southern West Virginia Community & Technical College

Logan Campus Master Plan



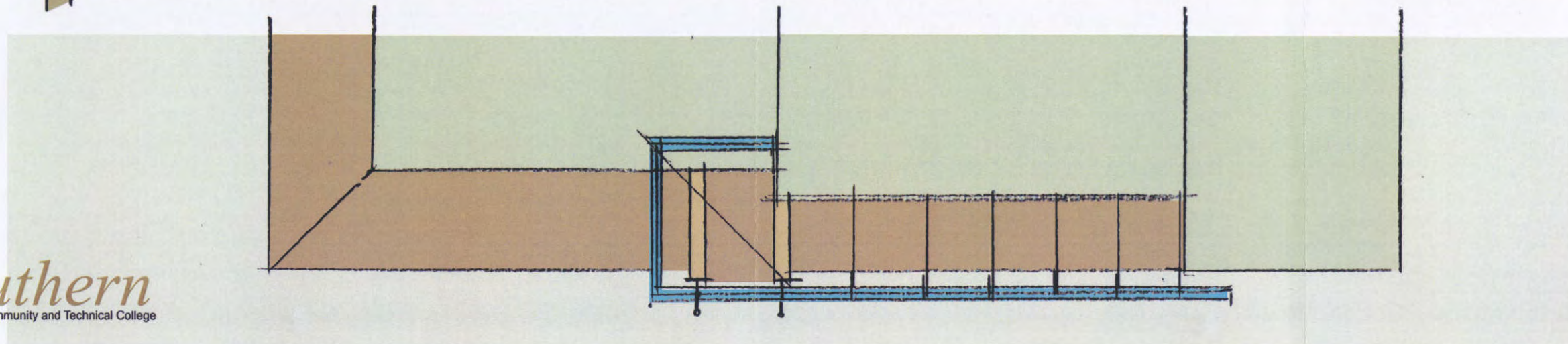
Southern West Virginia Community & Technical College Logan Campus



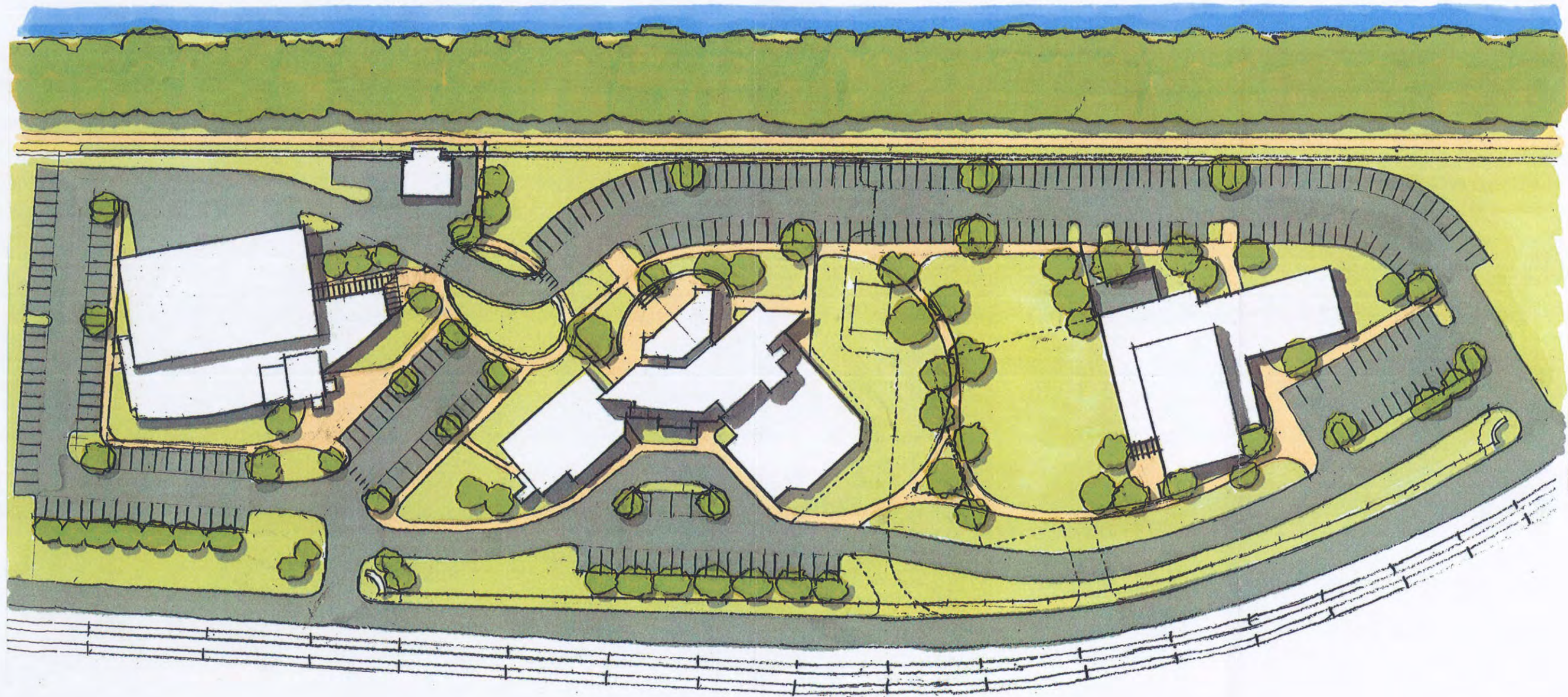
Rear Entry



Main Entry

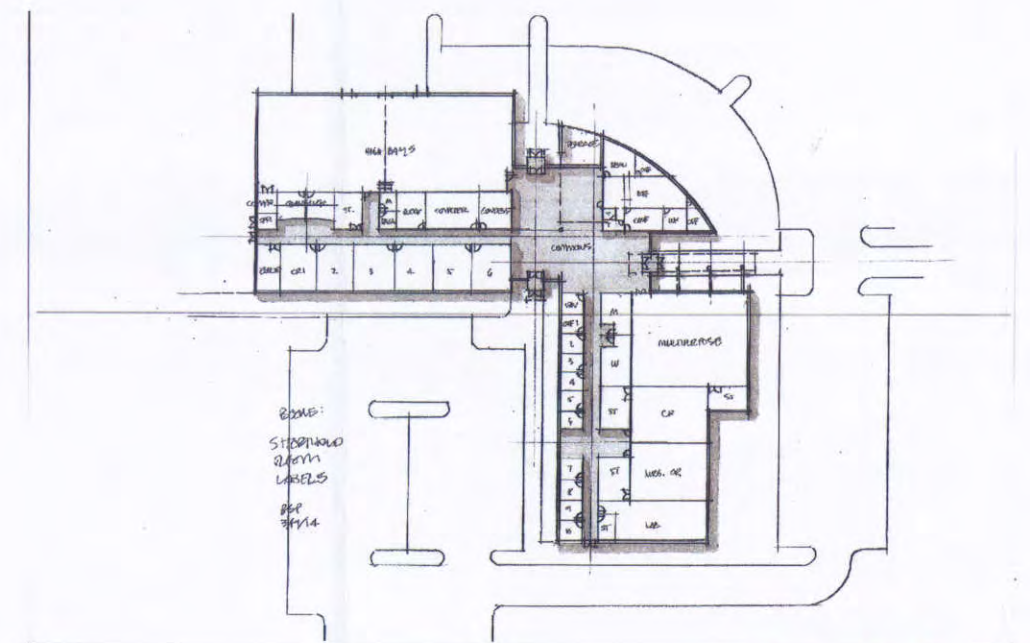
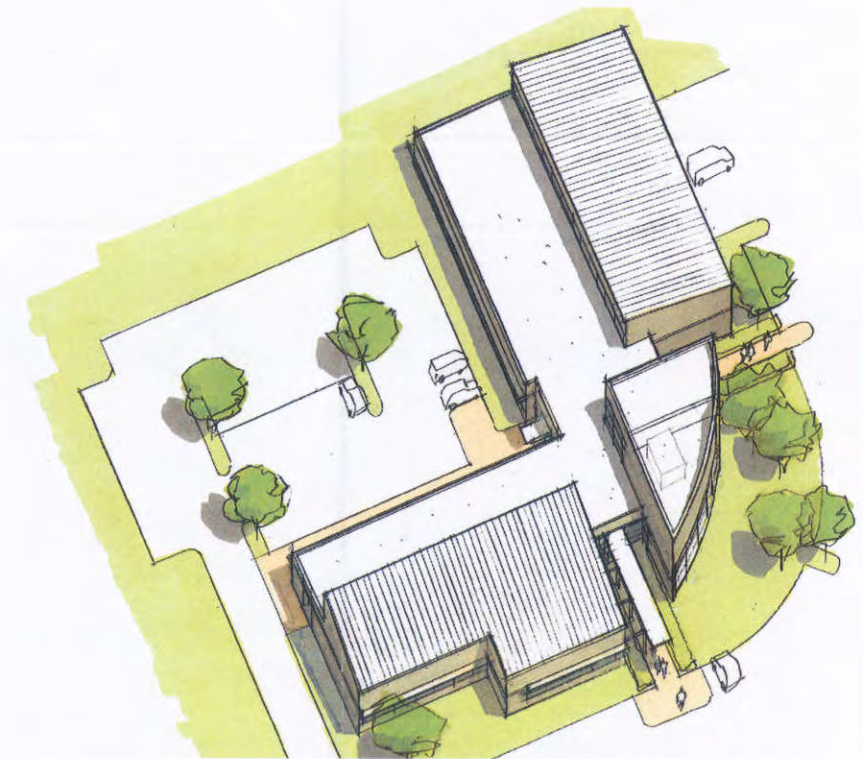
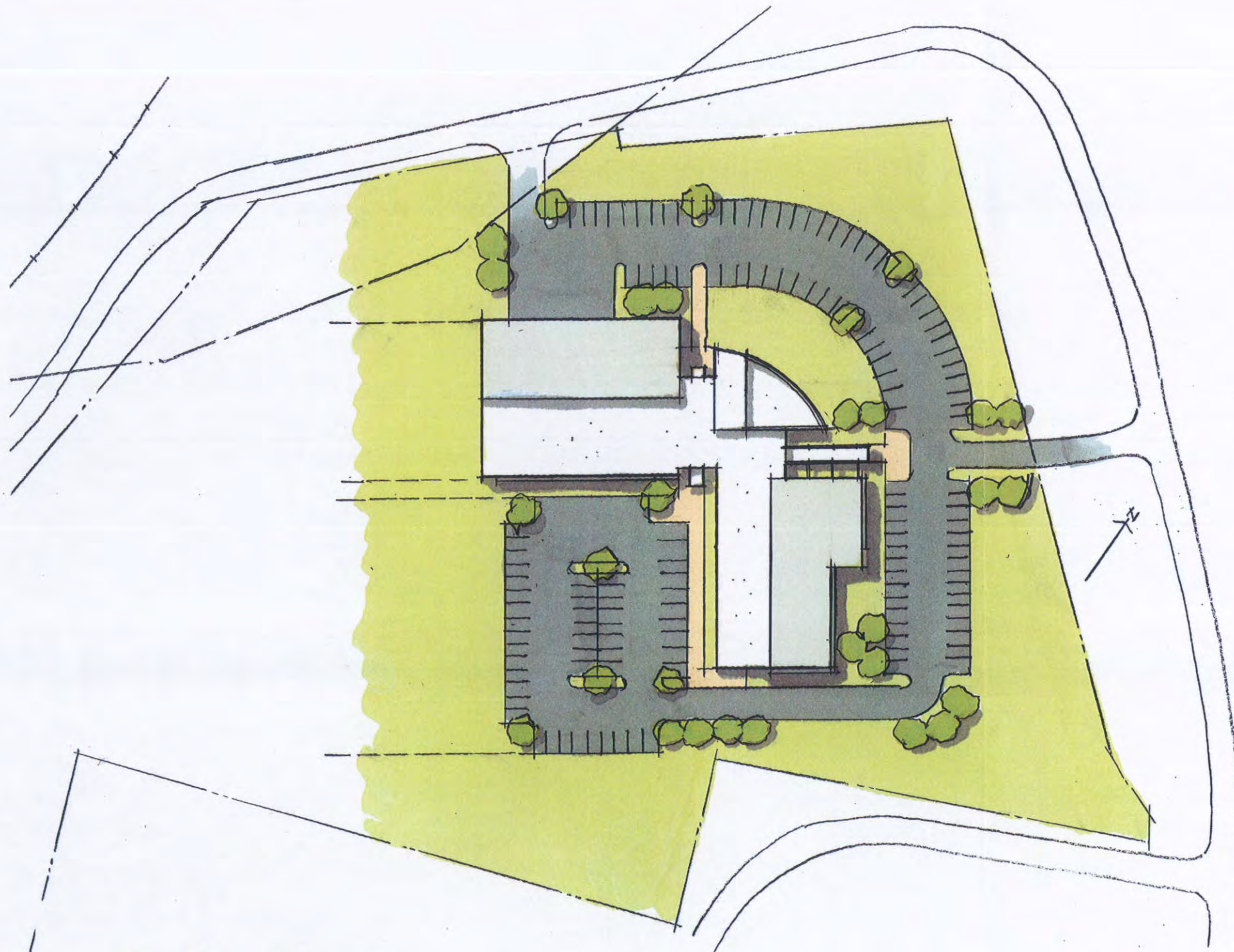


Southern West Virginia Community & Technical College
Williamson Campus Master Plan



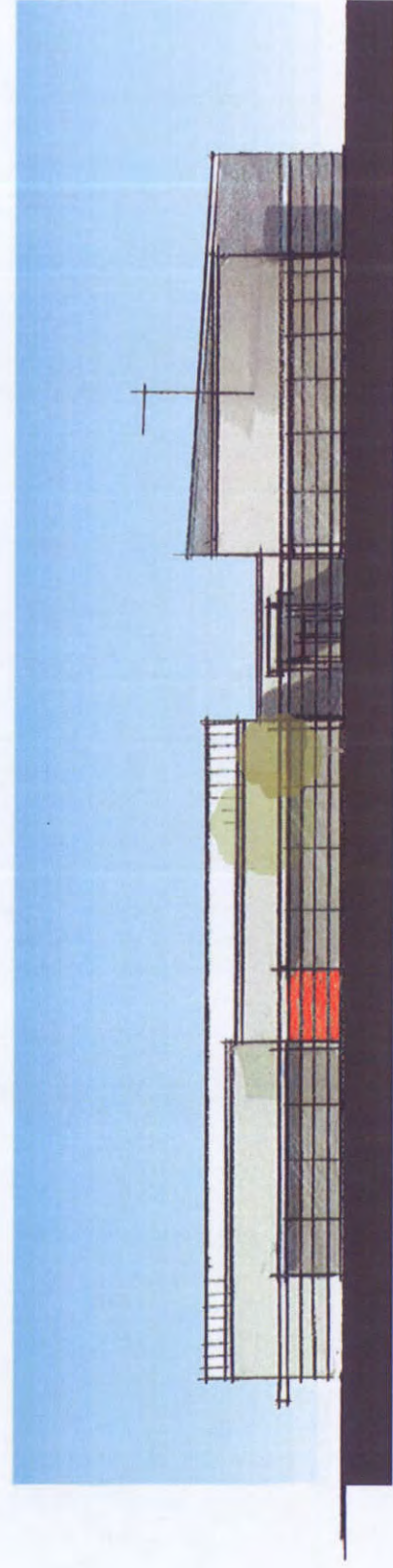
Southern West Virginia Community & Technical College

Boone Campus Master Plan

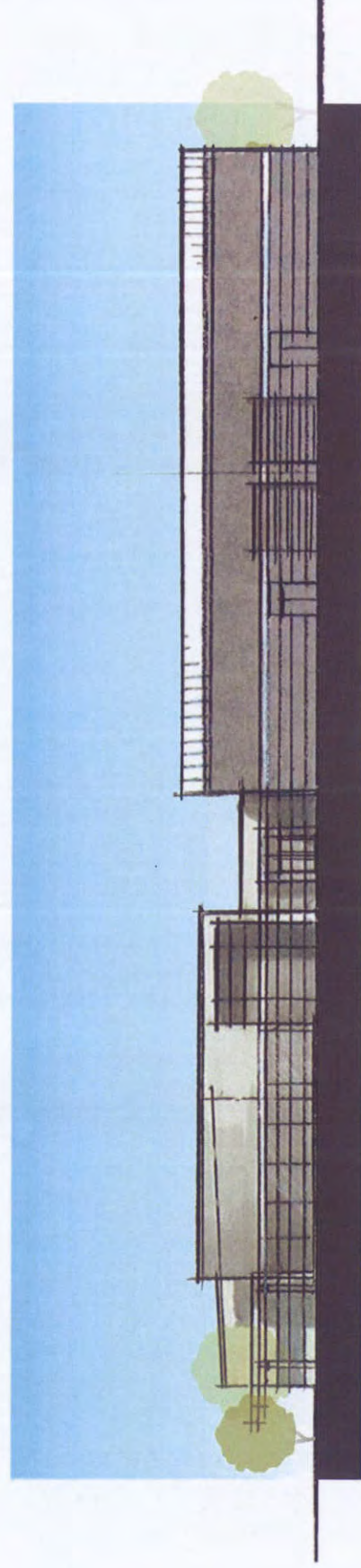


Southern West Virginia Community & Technical College

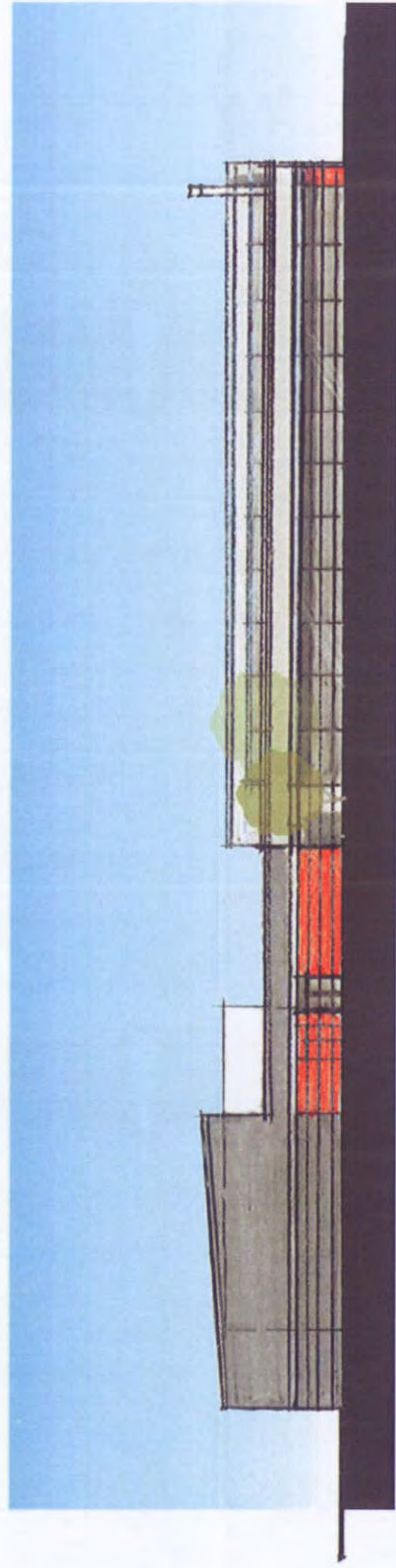
Boone Campus - Elevations



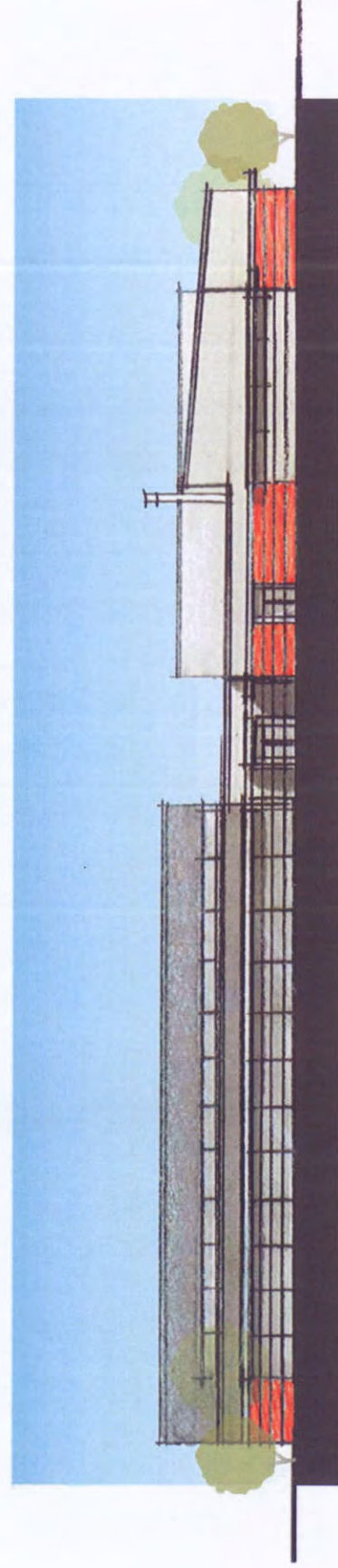
East



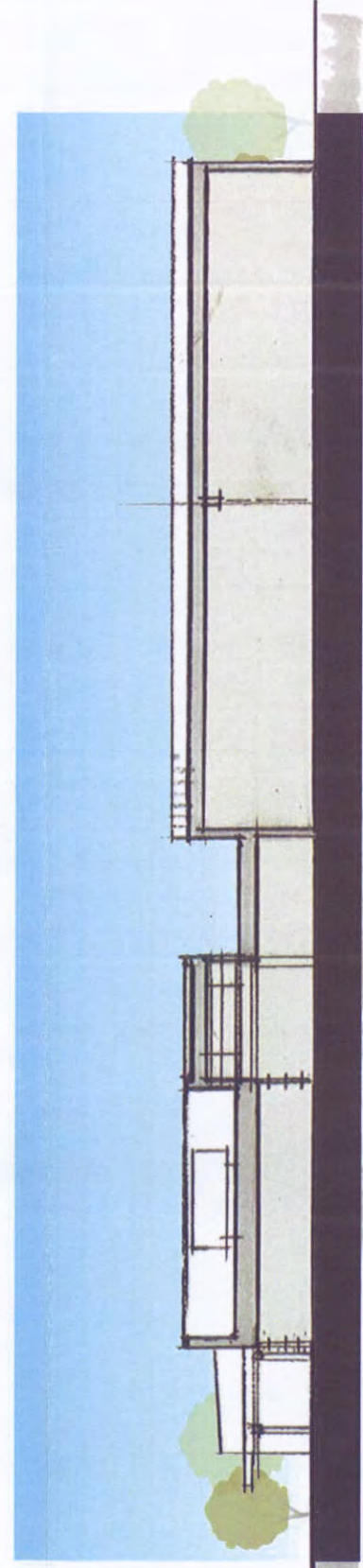
North



West



South



Section

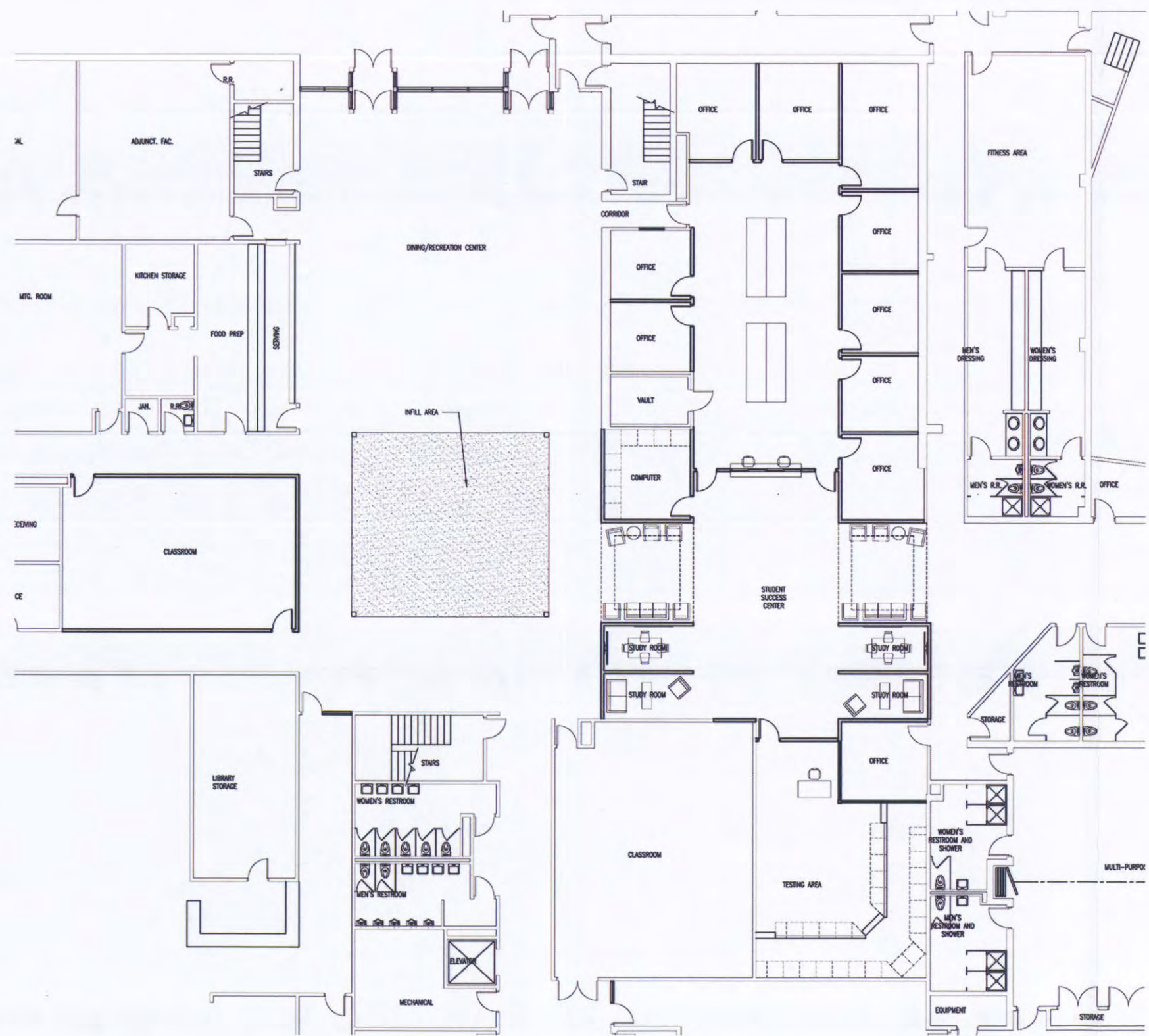
Southern West Virginia Community & Technical College

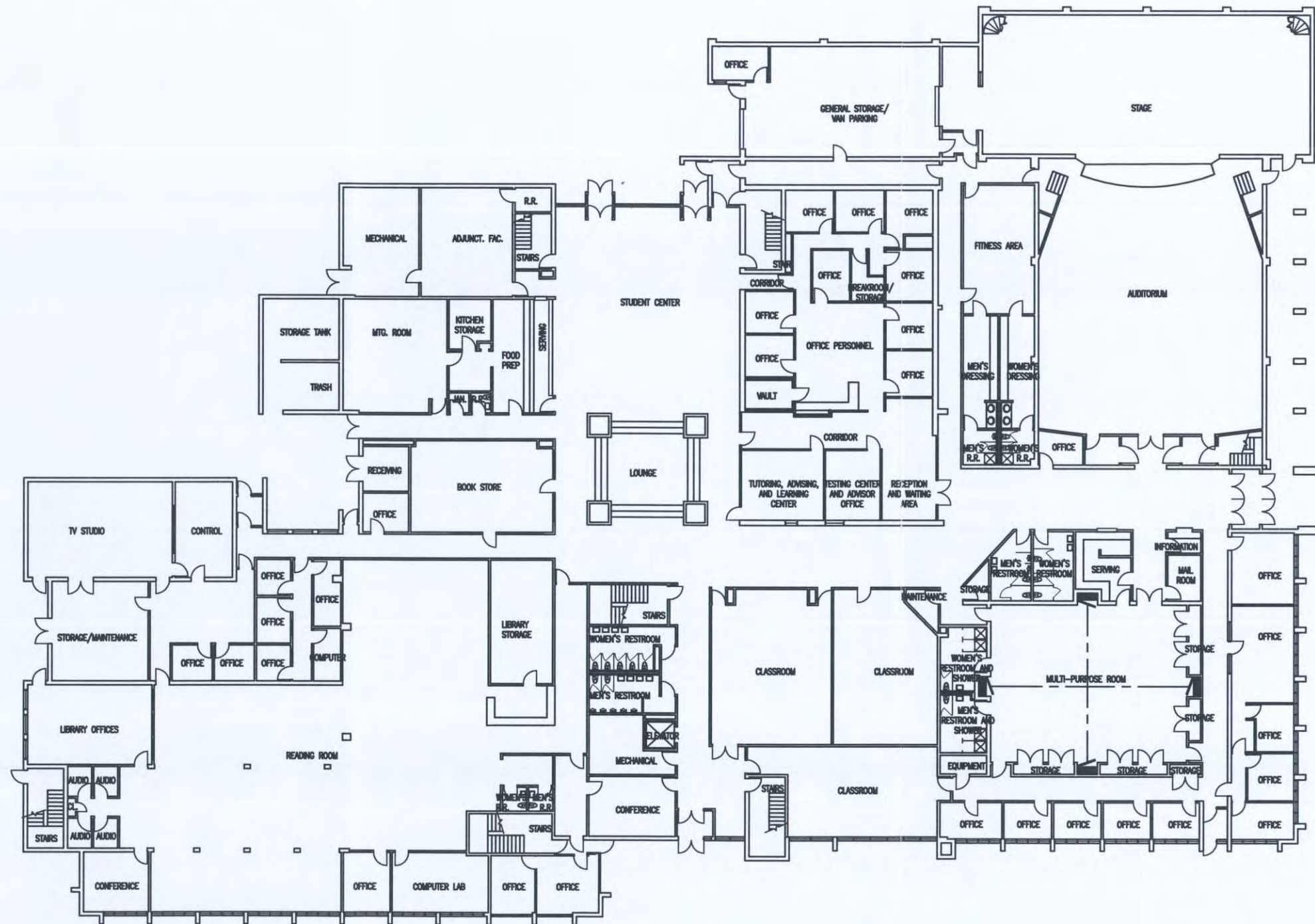
Boone Campus Master Plan



Southern West Virginia Community & Technical College

Logan Campus - Student Success Center





FIRST FLOOR PLAN - BUILDING A - LOGAN CO. CAMPUS

SCALE : 1/32" = 1'-0" Total S.F. = 93,104

DESCRIPTION

REVISIONS
NO. DATE



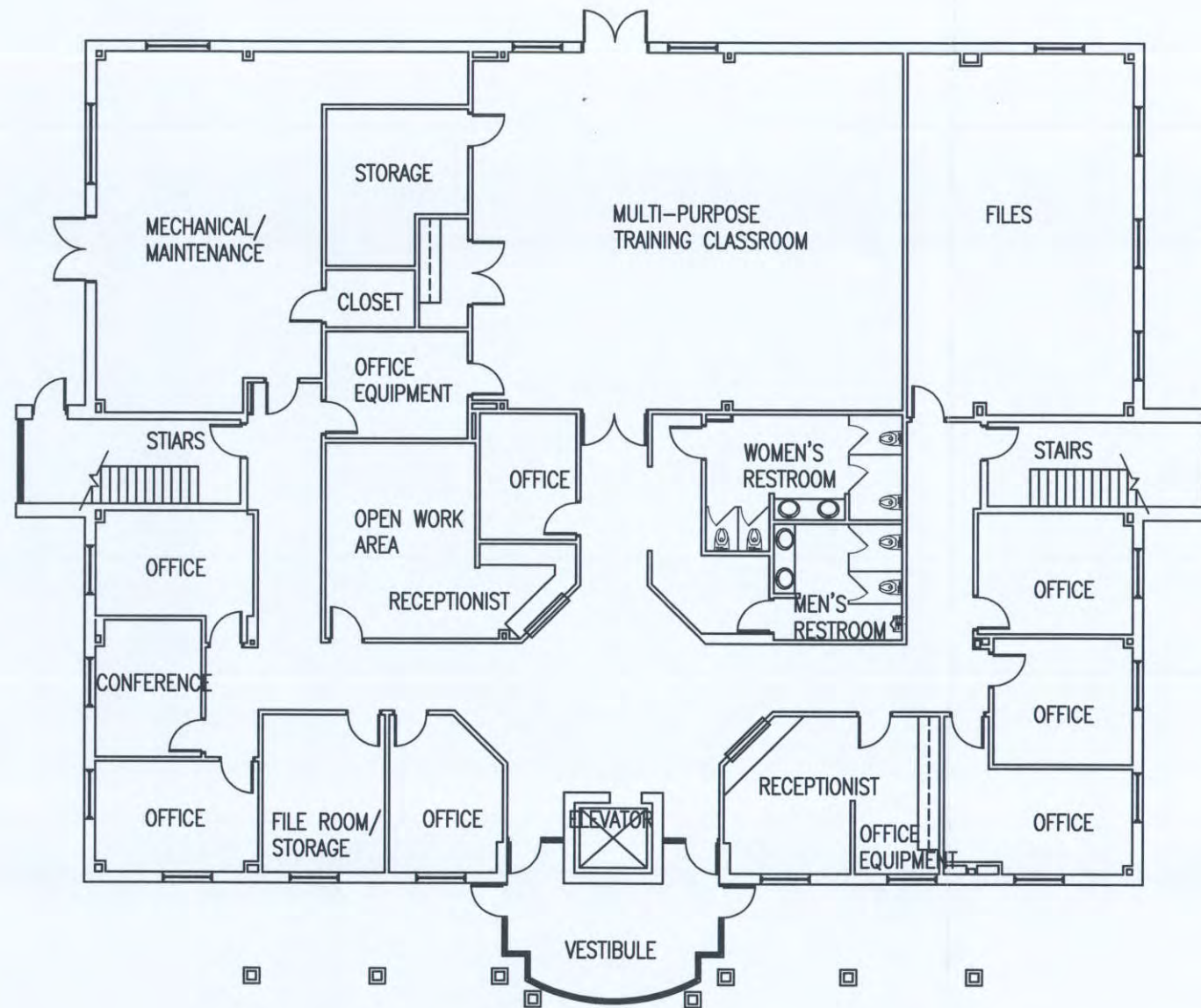
222 Lee Street, West
Charleston, West Virginia 25302
Phone: 304.342.0150
Fax: 304.345.8140
www.zmm.com

Logan County Campus for
Southern West Virginia Community and Technical College
Mount Gay, West Virginia

BUILDING A -
FIRST FLOOR
PLAN

DRWN LJB	CHECKED APK
	DATE 02.28.14
	COMM. NO. 1384

A1-1



FIRST FLOOR PLAN - BUILDING B - LOGAN CO. CAMPUS

SCALE : 1/16" = 1'-0" Total S.F. = 16,494

DESCRIPTION

REVISIONS
NO. DATE



222 Lee Street, West
Charleston, West Virginia 25302
Phone: 304.342.0150
Fax: 304.345.8144
www.zmm.com

Logan County Campus for
Southern West Virginia Community and Technical College
Mount Gay, West Virginia

BUILDING B -
FIRST FLOOR
PLAN

DRWN LJB	CHECKED APK
	DATE 02.28.14
	COMM. NO. 1384

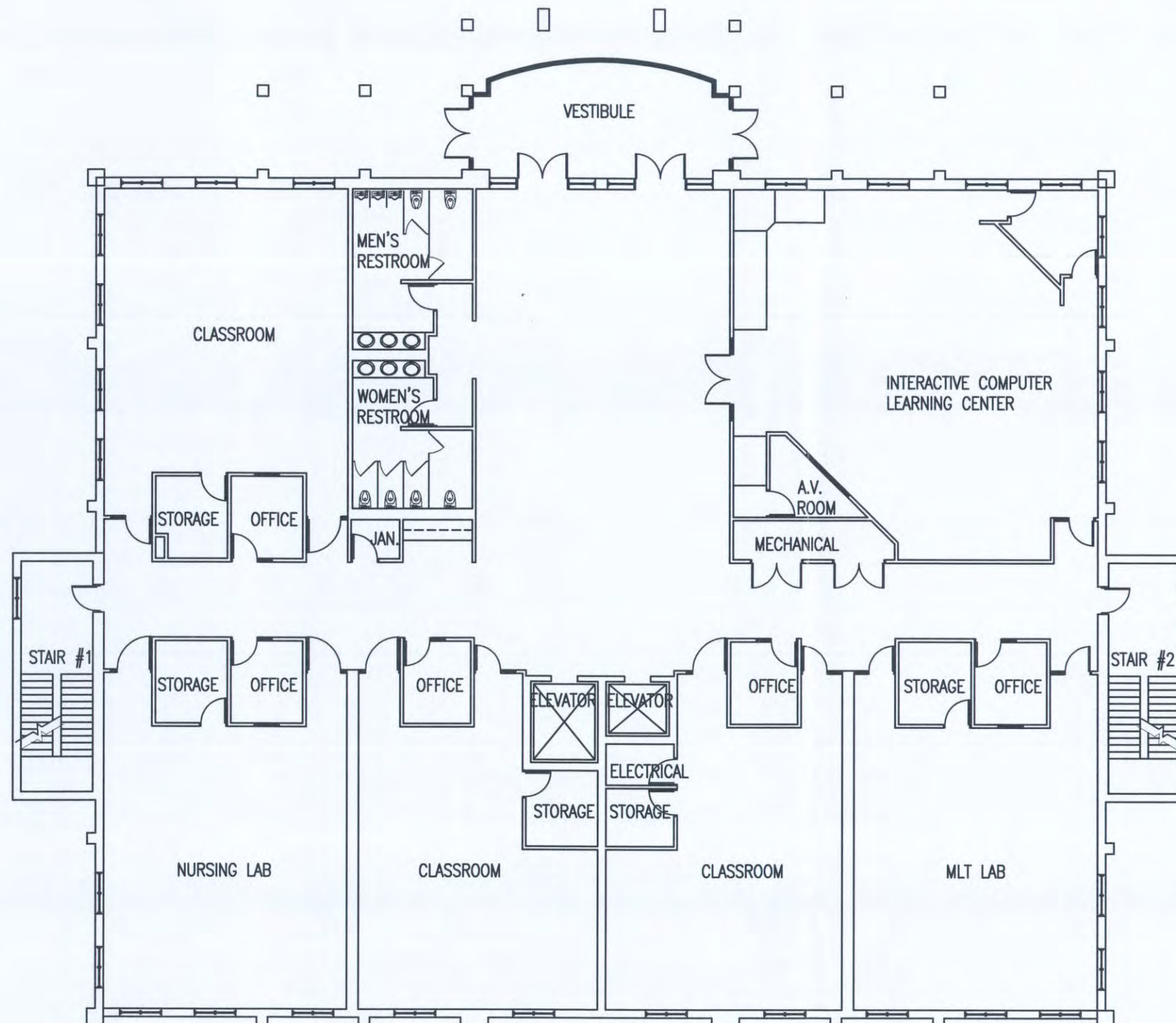
A1-1



FIRST FLOOR PLAN - BUILDING C - LOGAN CO. CAMPUS

SCALE : 1/16" = 1'-0" Total S.F. = 54,838

DESCRIPTION	
REVISIONS	DATE
<p>222 Lee Street, West Charleston, West Virginia 25302 Phone: 304.342.0155 Fax: 304.345.8144 www.zmm.com</p>	
<p>Logan County Campus for Southern West Virginia Community and Technical College Mount Gay, West Virginia</p>	
<p>BUILDING C - FIRST FLOOR PLAN</p>	
<p>DATE 02.28.14</p>	<p>CHECKED ANK</p>
<p>COMM. NO. 1384</p>	
<p>A1-1</p>	



SECOND FLOOR PLAN - BUILDING C - LOGAN CO. CAMPUS

SCALE : 1/16" = 1'-0" Total S.F. = 54,838

DESCRIPTION

REVISIONS
NO. DATE



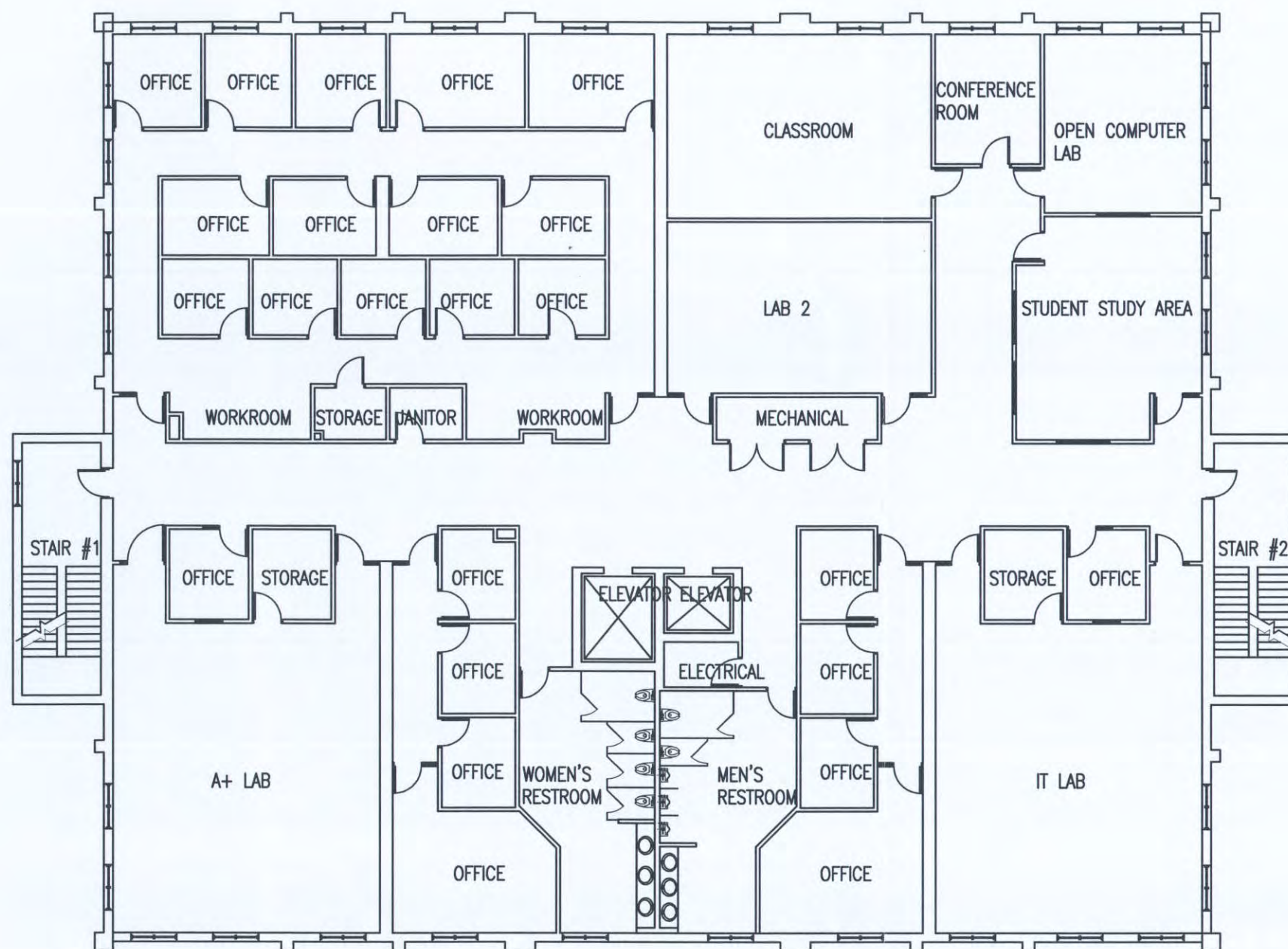
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Logan County Campus for
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Mount Gay, West Virginia

BUILDING C -
SECOND
FLOOR PLAN

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	DATE 02.28.14
	COMM. NO. 1384

A1-2



THIRD FLOOR PLAN - BUILDING C - LOGAN CO. CAMPUS

SCALE : 1/16" = 1'-0" Total S.F. = 54,838

REVISIONS		DESCRIPTION
NO.	DATE	

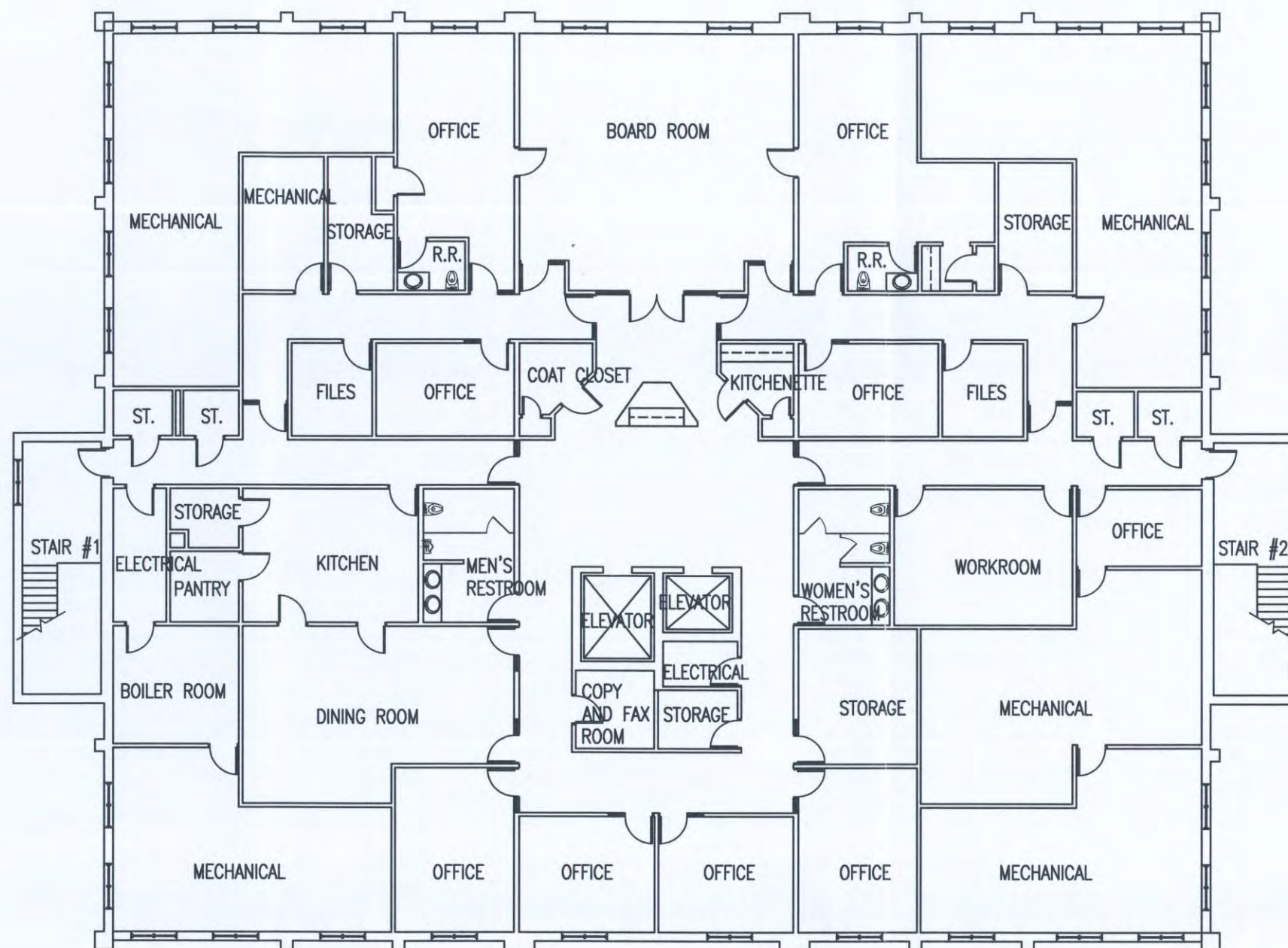
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Logan County Campus for
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BUILDING C -
THIRD FLOOR
PLAN

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FOURTH FLOOR PLAN - BUILDING C - LOGAN CO. CAMPUS

SCALE : 1/16" = 1'-0" Total S.F. = 54,838

DESCRIPTION

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NO. DATE



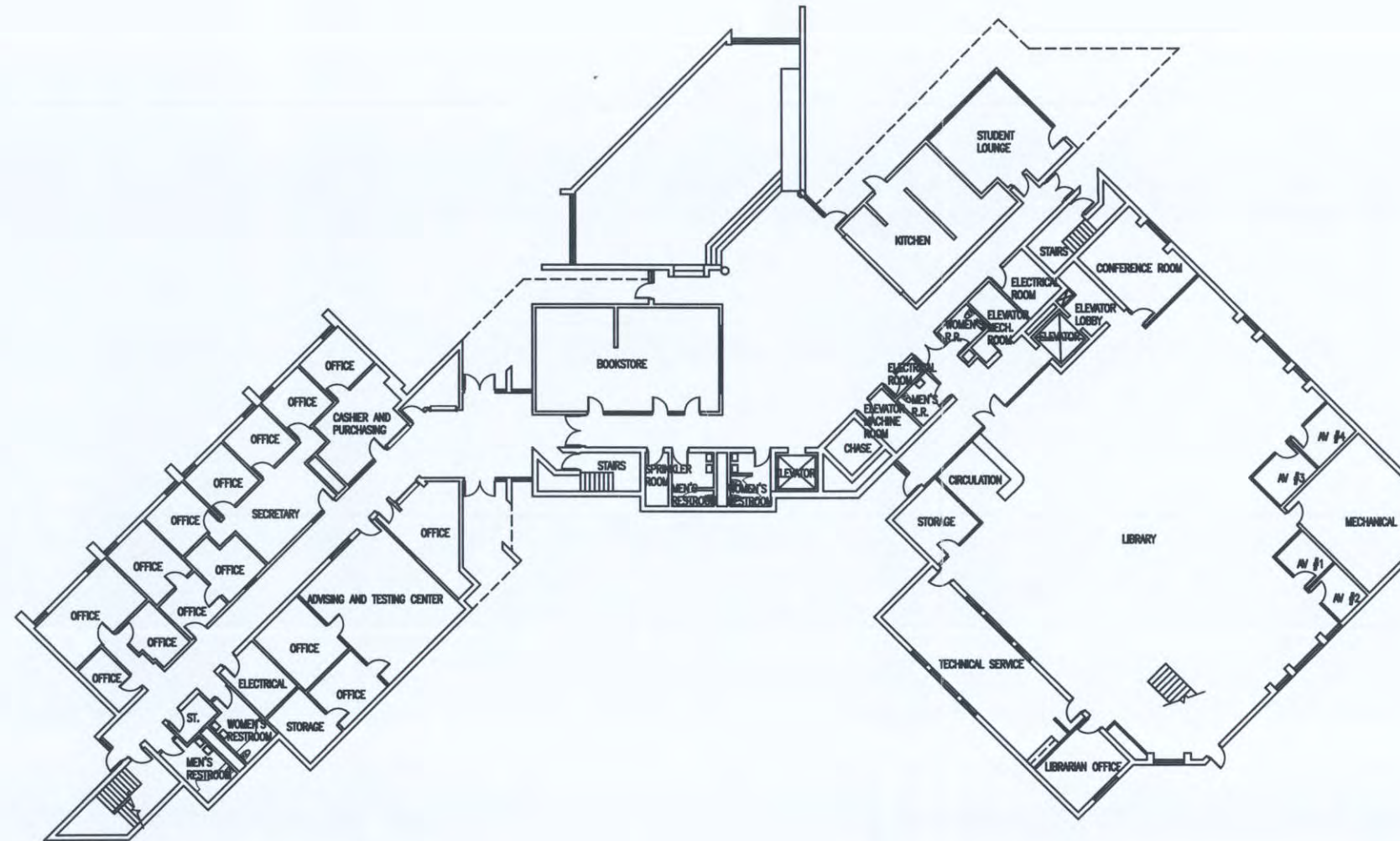
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Logan County Campus for
Southern West Virginia Community and Technical College
Mount Gay, West Virginia

BUILDING C -
FOURTH
FLOOR PLAN

DRAWN LJB	CHECKED APK
	DATE 02.28.14
	COMM. NO. 1384

A1-4



FIRST FLOOR PLAN - BUILDING A - WILLIAMSON CO. CAMPUS

SCALE : 1/32" = 1'-0" Total S.F. = 67,202

DESCRIPTION

REVISIONS
NO. DATE



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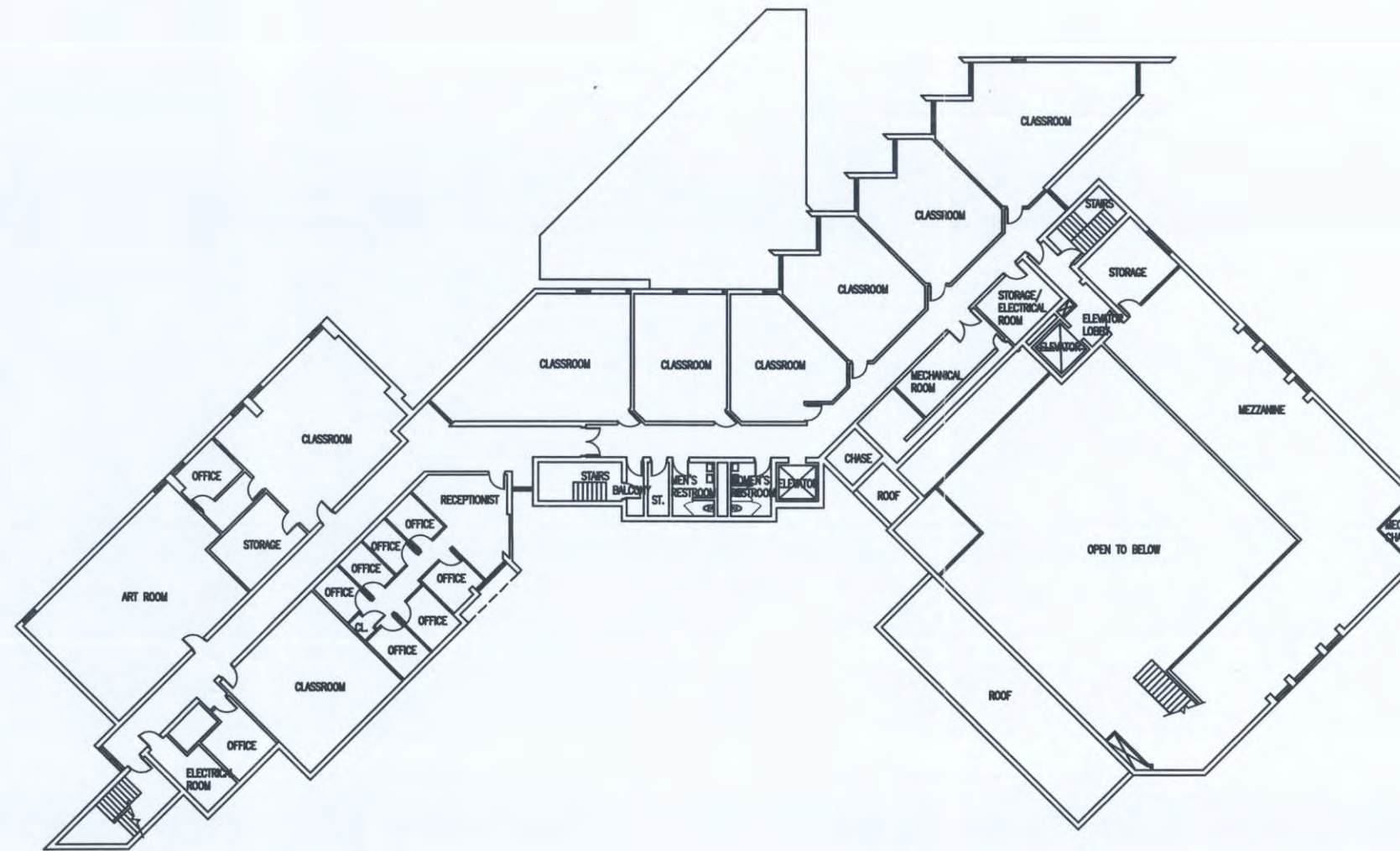
Williamson County Campus for
Southern West Virginia Community and Technical College
Williamson, West Virginia

BY ZMM, INC.

BUILDING 'A' -
FIRST FLOOR
PLAN

DRAWN LJB	CHECKED APK
DATE 02.28.14	COMM. NO. 1384

A1-1



SECOND FLOOR PLAN - BUILDING A - WILLIAMSON CO. CAMPUS

SCALE : 1/32" = 1'-0" Total S.F. = 67,202

REVISIONS NO.	DATE	DESCRIPTION

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ARCHITECTS & ENGINEERS

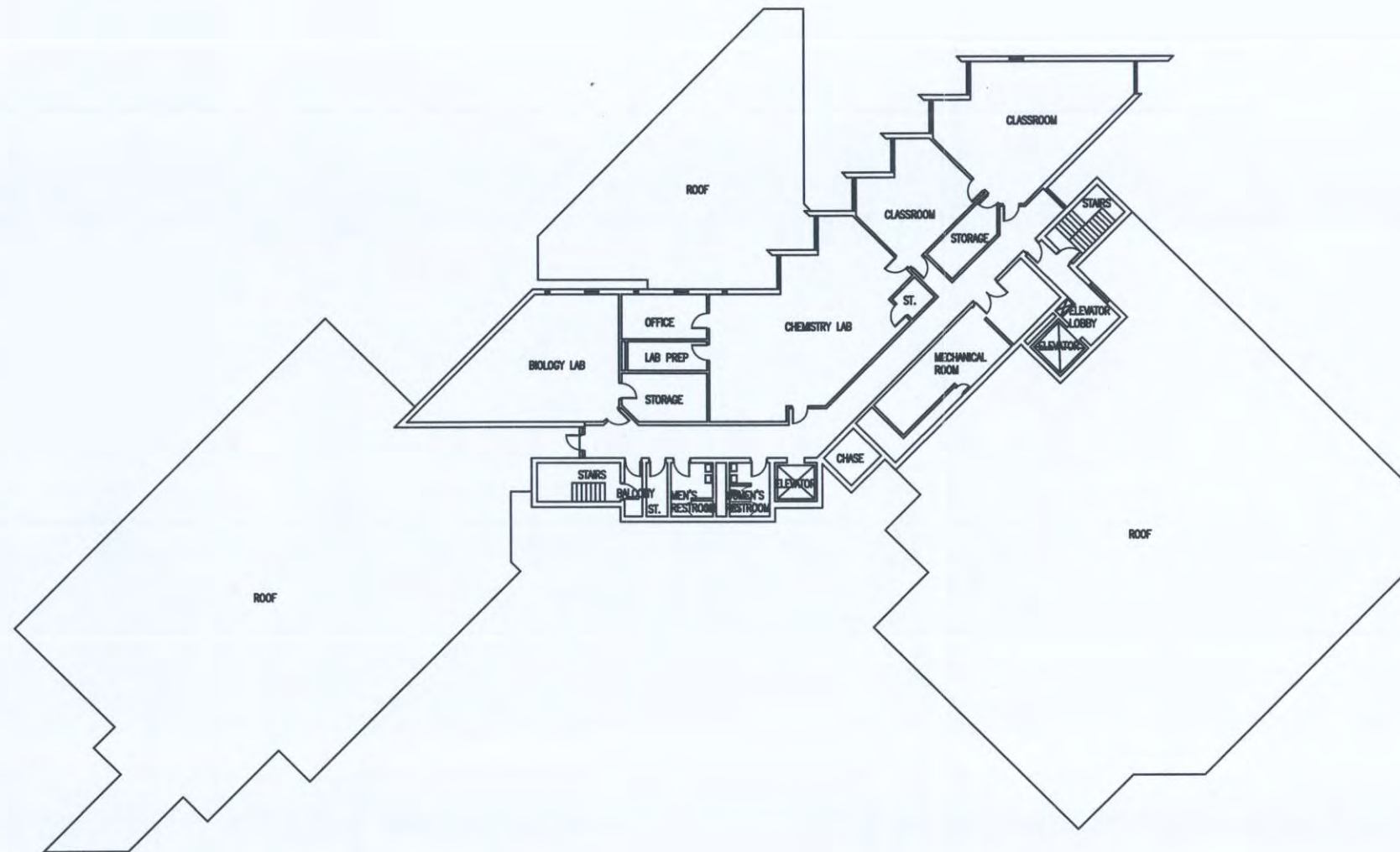
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Williamson County Campus for
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Williamson, West Virginia

**BUILDING 'A' -
SECOND
FLOOR PLAN**

DRWN LJS	CHECKED APK
DATE 02.28.14	COMPL NO. 1384

A1-2



FIFTH FLOOR PLAN - BUILDING A - WILLIAMSON CO. CAMPUS

SCALE : 1/32" = 1'-0" Total S.F. = 67,202

DESCRIPTION

REVISIONS
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BUILDING 'A' -
FIFTH FLOOR
PLAN

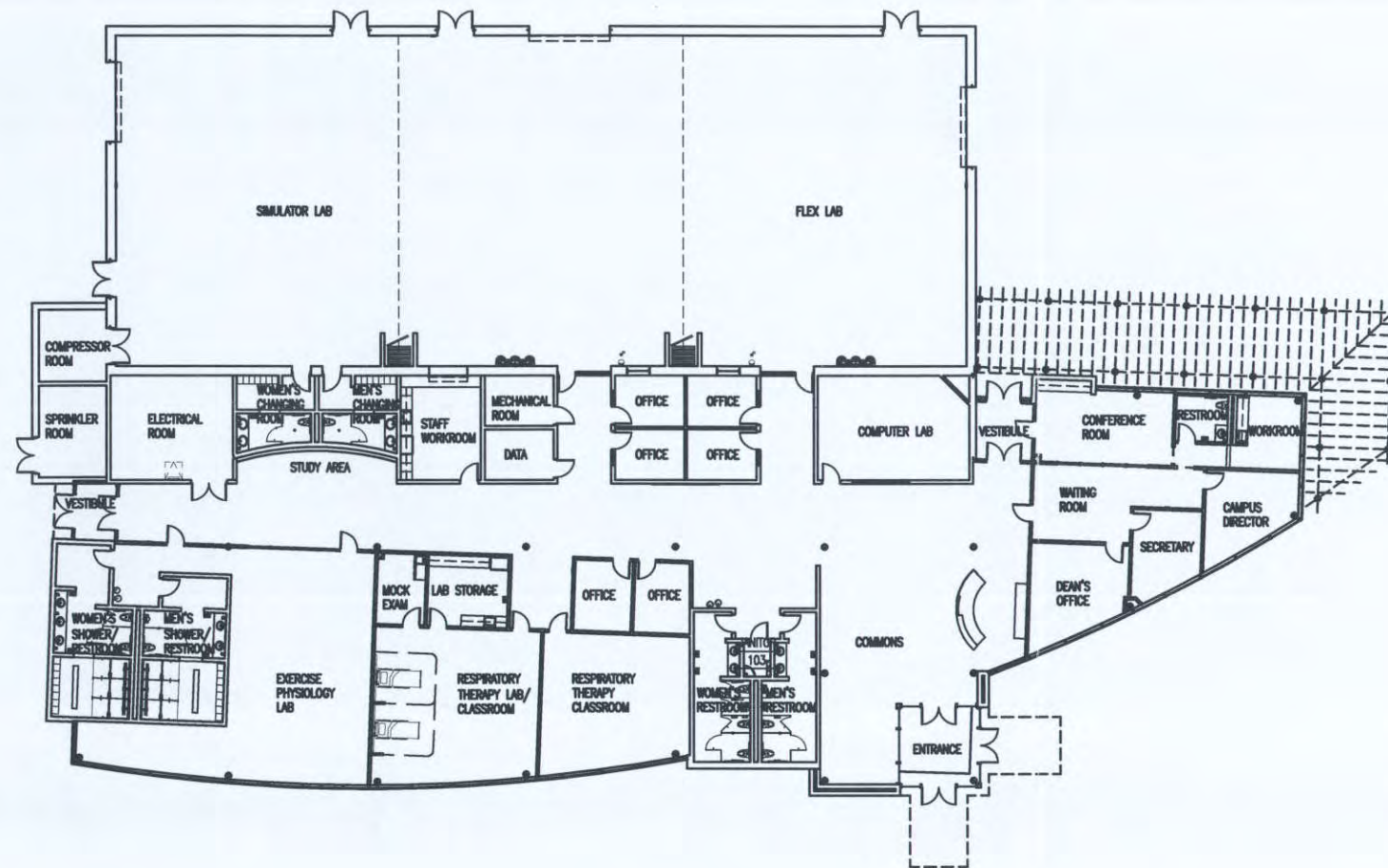
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LJB

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APK

DATE
02.28.14

COMM. NO.
1384

A1-5



FIRST FLOOR PLAN - BUILDING B - WILLIAMSON CO. CAMPUS

SCALE : 1/32" = 1'-0" Total S.F. = 22,965

DESCRIPTION

REVISIONS
NO. DATE



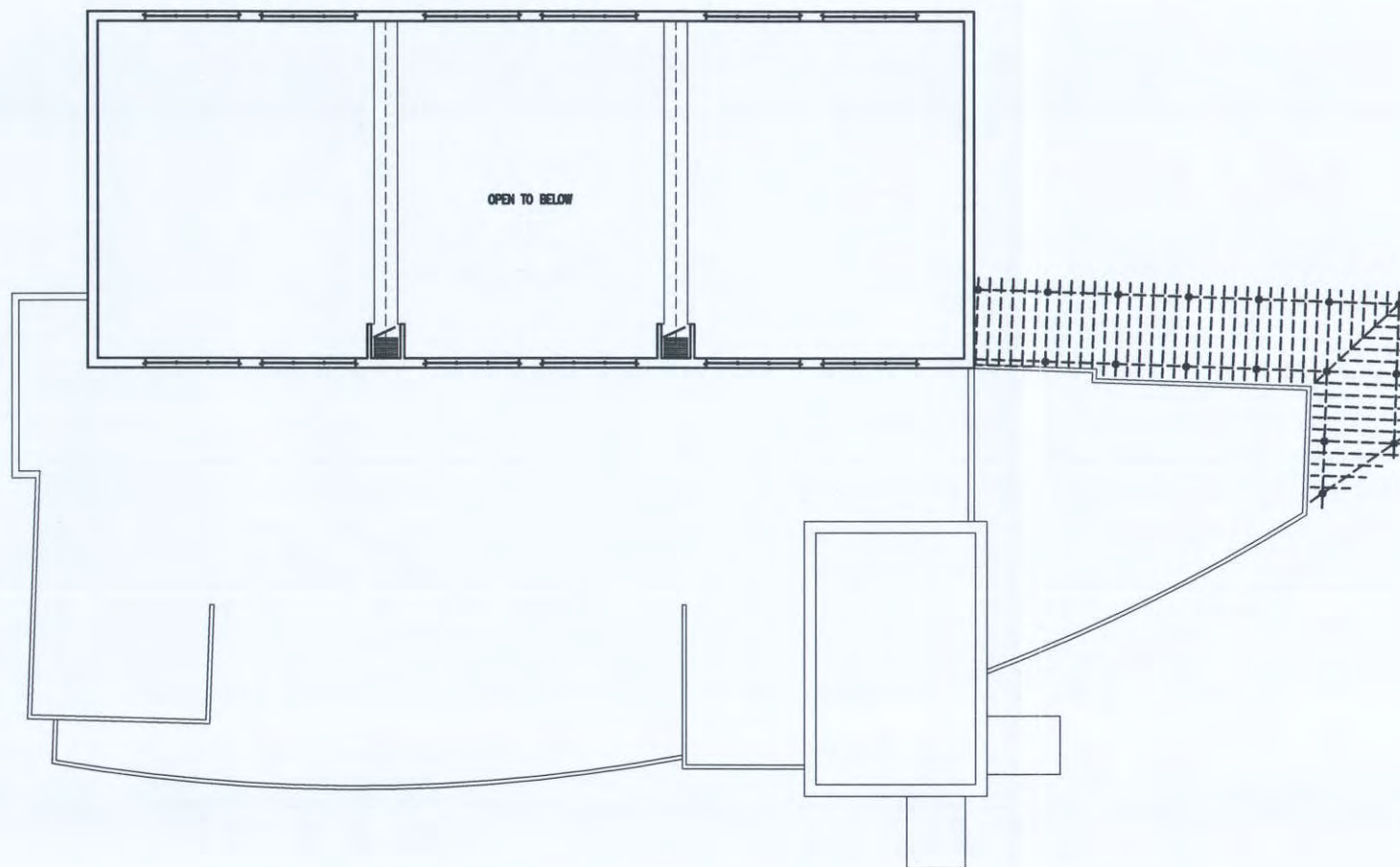
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Williamson, West Virginia

BUILDING 'B' -
FIRST FLOOR
PLAN

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	DATE 02.28.14
	COMM. NO. 1384

A1-1



SECOND FLOOR PLAN - BUILDING B - WILLIAMSON CO. CAMPUS

SCALE : 1/32" = 1'-0" Total S.F. = 22,965

DESCRIPTION

REVISIONS
NO. DATE



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Williamson County Campus for
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BUILDING 'B' -
SECOND
FLOOR

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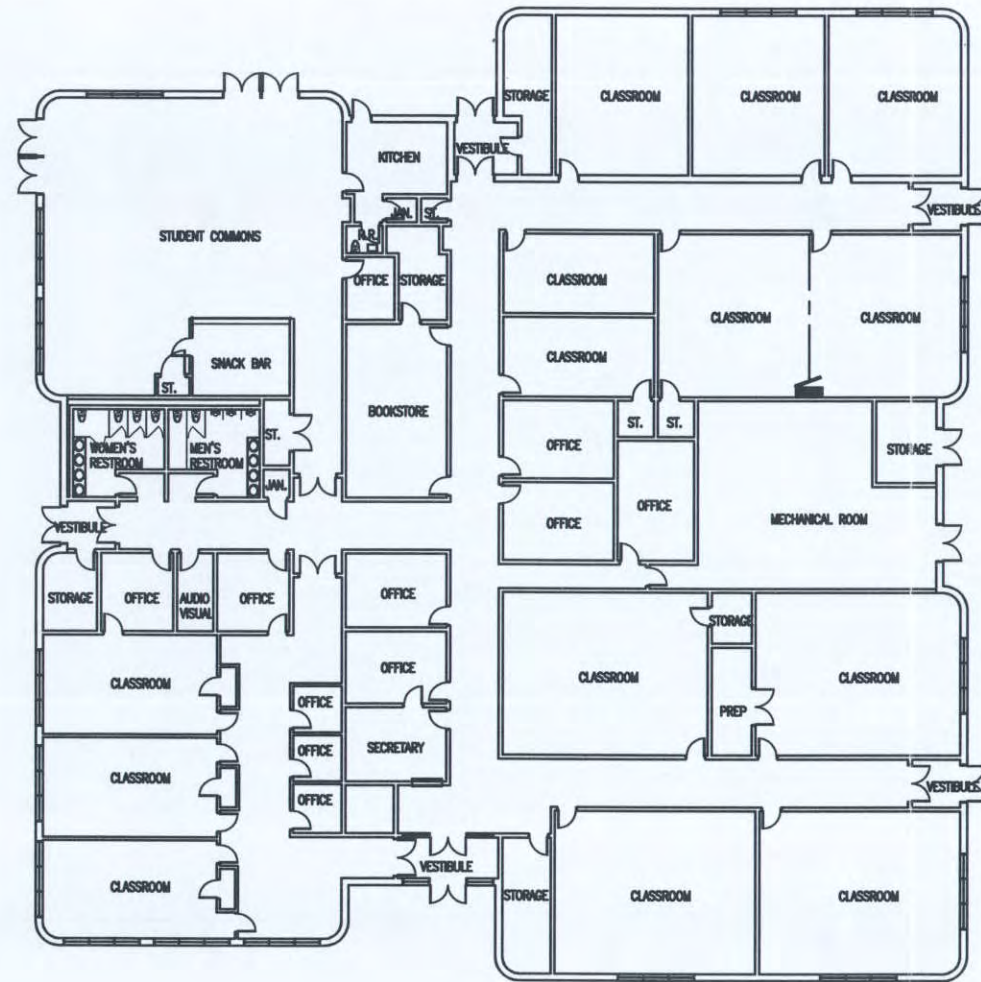
DATE

02.28.14

COMPL. NO.

1384

A1-2



FIRST FLOOR PLAN - WYOMING CO. CAMPUS

SCALE : 1/32" = 1'-0" Total S.F. = 22,983

DESCRIPTION

REVISIONS
NO. DATE



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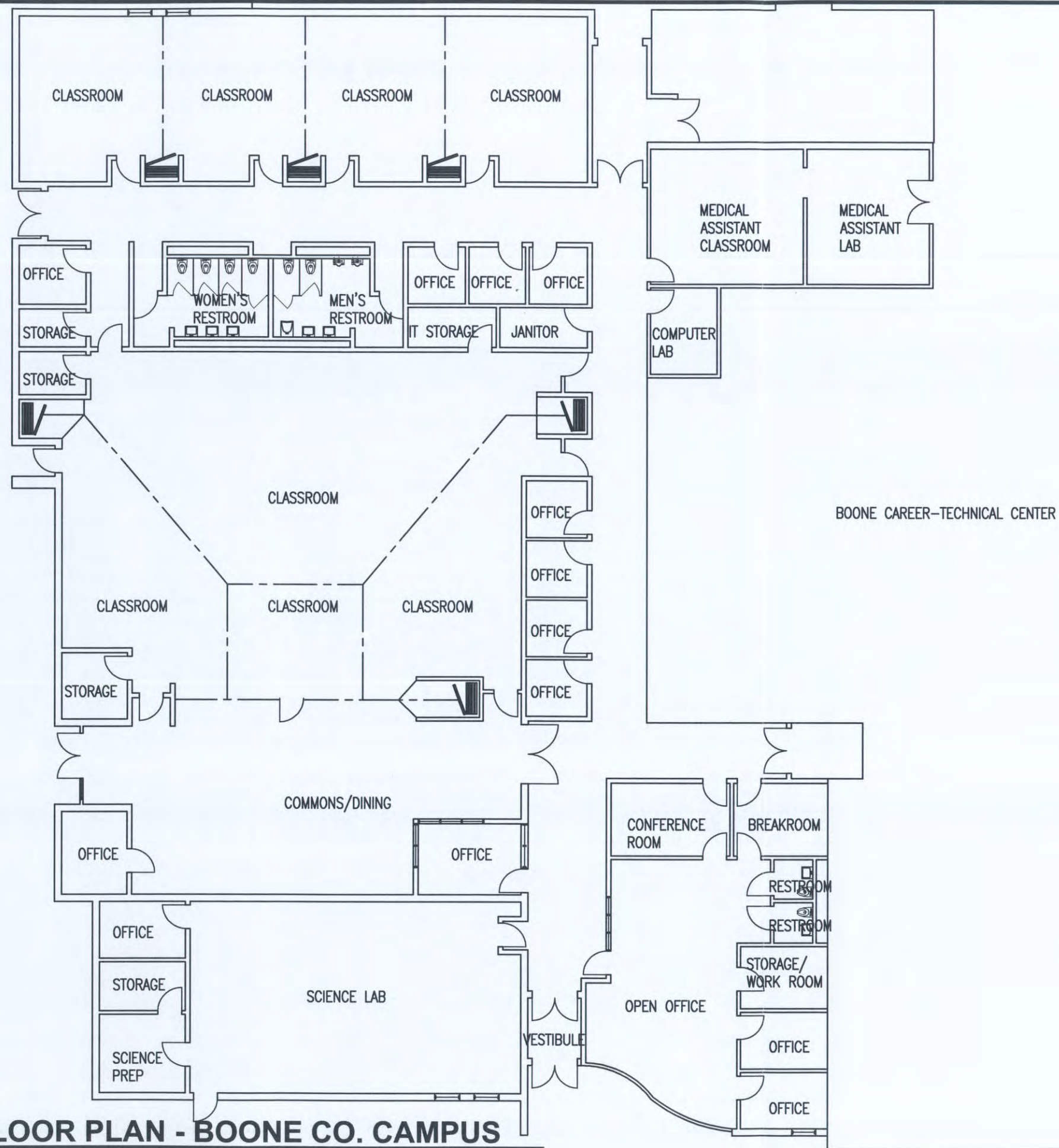
Wyoming County Campus for
Southern West Virginia Community and Technical College
Saulsville, West Virginia

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FIRST FLOOR
PLAN

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	DATE 02.28.14
	COMM. NO. 1384

A1-1



FIRST FLOOR PLAN - BOONE CO. CAMPUS

SCALE : 1/16" = 1'-0" Total S.F. = 28,000

DESCRIPTION

REVISIONS
NO. DATE



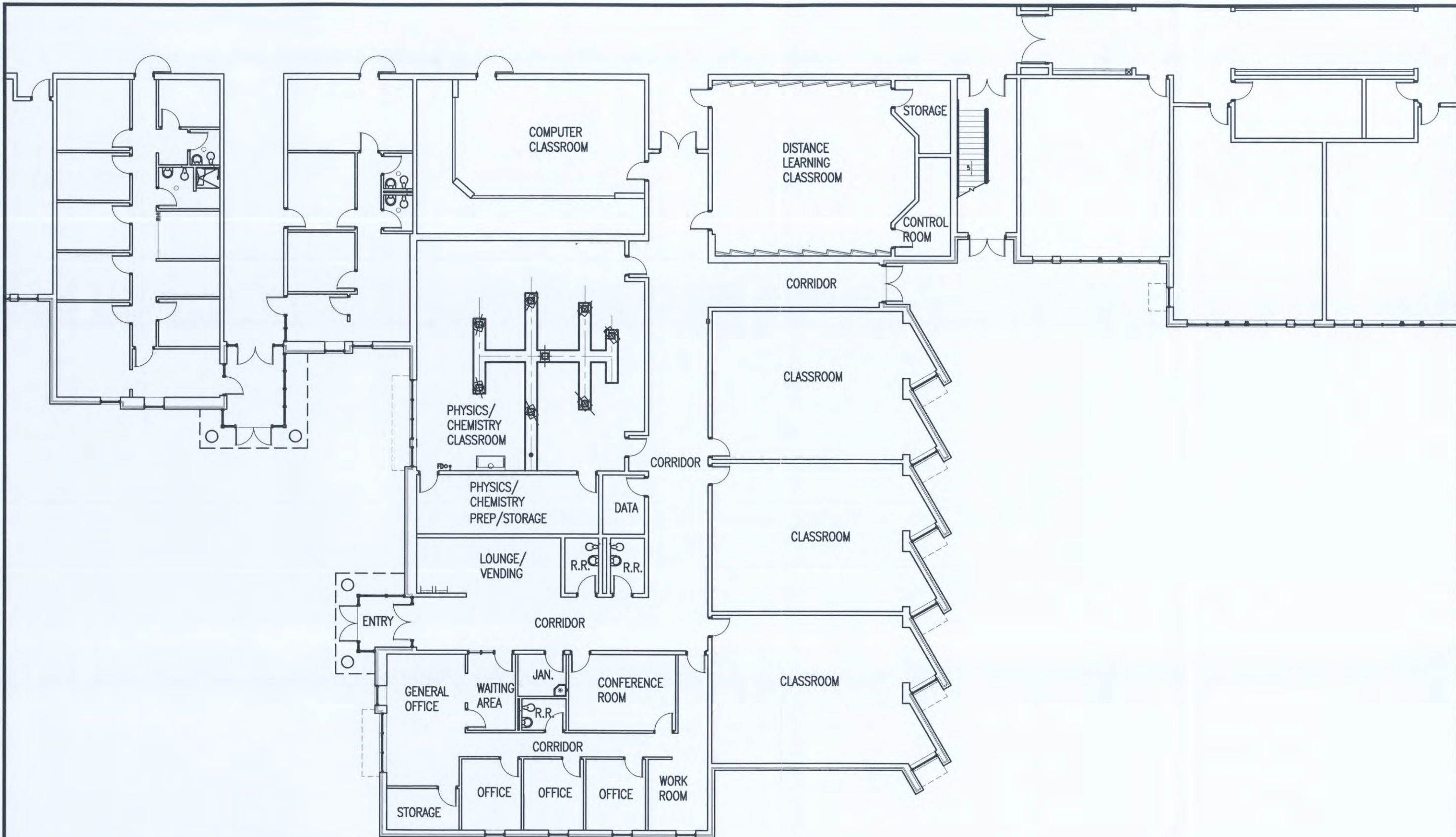
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Boone County Campus for
Southern West Virginia Community and Technical College
Foster, West Virginia

FLOOR PLAN

DRAWN LJB	CHECKED APK
DATE 02.28.14	COMM. NO. 1384

A1-1



REVISIONS		DESCRIPTION
NO.	DATE	

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Lincoln County Campus for
Southern West Virginia Community and Technical College
Hamlin, West Virginia

DRWN
LJB

**FIRST FLOOR
PLAN -
LINCOLN CO.
H.S.**

CHECKED
APK
DATE
02.28.14
COMM. NO.
1384

A1-1

FIRST FLOOR PLAN - LINCOLN CO. CAMPUS

SCALE : 1/16" = 1'-0" Total S.F. = 11,202

Headcount Enrollment by Campus

BANNER

Boone Enrollment

F2013	311
F2012	340
F2011	381
F2010	443
F2009	389
F2008	449
F2007	406
F2006	440
F2005	576
F2004	592

Logan Enrollment

F2013	991
F2012	1124
F2011	1138
F2010	1260
F2009	1321
F2008	1166
F2007	1084
F2006	1126
F2005	1101
F2004	1223

Williamson Enrollment

F2013	466
F2012	513
F2011	616
F2010	631
F2009	680
F2008	561
F2007	531
F2006	527
F2005	585
F2004	603

Wyoming Enrollment

F2013	244
F2012	205
F2011	322
F2010	248
F2009	260
F2008	408
F2007	286
F2006	267
F2005	264
F2004	307

Total Enrollment

F2013	2012
F2012	2182
F2011	2457
F2010	2582
F2009	2650
F2008	3108
F2007	2840
F2006	3152
F2005	3405
F2004	3424

S2013	330
S2012	304
S2011	314
S2010	306
S2009	382
S2008	398
S2007	533
S2006	531
S2005	575

S2013	978
S2012	1011
S2011	1057
S2010	1149
S2009	1048
S2008	1033
S2007	1122
S2006	1043
S2005	1105

S2013	1900
S2012	1955
S2011	2044
S2010	2208
S2009	2756
S2008	2617
S2007	2858
S2006	2765
S2005	2961

<u>School</u>	<u>AY09-10/Fall 2010</u>					<u>AY10-11/Fall 2011</u>					<u>AY11-12/Fall 2012</u>				
	<u># Seniors</u>	<u># Enrolled</u>	<u># in College</u>	<u>CG Yield</u>	<u>Rank</u>	<u># Seniors</u>	<u># Enrolled</u>	<u># in College</u>	<u>CG Yield</u>	<u>Rank</u>	<u># Seniors</u>	<u># Enrolled</u>	<u># in College</u>	<u>CG Yield</u>	<u>Rank</u>
Chapmanville	152	46	76	60.5%	4.0	170	58	90	64.4%	3.0	148	53	84	63.1%	5.0
Logan	175	50	81	61.7%	3.0	168	59	90	65.6%	2.0	183	75	106	70.8%	2.0
Man	96	26	46	56.5%	5.0	88	24	33	72.7%	1.0	87	23	36	63.9%	4.0
Mingo Central*	176	69	96	71.9%	2.0	202	51	91	56.0%	5.0	180	59	78	75.6%	1.0
Tug Valley	93	24	31	77.4%	1.0	80	20	33	60.6%	4.0	97	30	44	68.2%	3.0
Scott	141	33	86	38.4%	7.0	132	23	74	31.1%	9.0	118	28	70	40.0%	6.0
Sherman	115	16	59	27.1%	9.0	94	2	40	5.0%	13.0	100	8	51	15.7%	12.0
Van	24	2	14	14.3%	13.0	22	8	17	47.1%	6.0	40	5	21	23.8%	10.0
Lincoln County	200	28	75	37.3%	8.0	183	28	93	30.1%	10.0	194	33	110	30.0%	8.0
Wyoming East	133	16	66	24.2%	10.0	119	12	38	31.6%	8.0	102	11	41	26.8%	9.0
Westside	128	25	62	40.3%	6.0	146	23	60	38.3%	7.0	122	16	44	36.4%	7.0
Mount View	91	0	20	0.0%	14.0	83	1	24	4.2%	14.0	100	1	25	4.0%	14.0
River View*	143	5	31	16.1%	12.0	132	2	27	7.4%	12.0	121	2	28	7.1%	13.0
Tolsia	114	13	68	19.1%	11.0	105	7	50	14.0%	11.0	106	9	46	19.6%	11.0
TOTALS:	1781	353	811	43.5%		1724	318	760	41.8%		1698	353	784	20.8%	

**Southern West Virginia Community and Technical College
Ten-Year Master Facilities Plan Update
Campus Meetings**

Boone Campus November 12, 2013 9:00 a.m.

Those in attendance included: William Cook, Samantha Baisden, Lora Foster, Debra Johnson, John Hudson and Dana Snyder. Contractors included: Adam Krason (ZMM), Rodney Pauley (ZMM) and Curtis Catron (BSP). College Facilitator: David Lord.

Existing Facility

- Challenge of sharing space
 - Two different levels of education
 - Must share large classroom space when needed (gathering space)
 - Open campus as opposed to closed campus
 - Need some lockable space for equipment storage
 - Code issues
- Advantages of sharing space
 - Can share classroom space for some programs
 - Share food services when needed
 - Some shared expenses/improvement costs
- Current building issues
 - Partition construction is not ideal – noise migration
 - Need to expand ICR (Interactive Classroom) space
 - Smaller than full classroom (2 – 6 spaces)
 - Can be generated from any campus
 - Staff space needs – existing space is small
 - No space for adjuncts
 - Need two additional rooms per three year projections
 - Want to add a nursing program but there is no room
 - Parking is adequate with shared space and timing
 - 13 different light bulbs in the building
 - Doors starting to leak air
 - Sprinkler system is in good shape except all heads need to be replaced to come up to code
 - UNPC is showing age
 - Building is well maintained

Boone County Schools – Existing facility

- Challenges

November 18, 2013

- Honors program enters through the College and uses restrooms
- Advantages
 - Some dual credit
 - Very good relationship.
 - New joint board
- Current Building Issues
 - If Southern was to move, how would Boone BOE use the space?
 - Could expand math and English programs for Tech students
 - Could expand Honors program some
 - Sprinkler heads
- Shared Goal
 - Improve/increase credit programs with the BOE

New Facility

- Programmatic Needs
 - Expand the programs offered (Nursing, education)
 - Increase enrollment
 - School systems are stressing career and technical education (2+2)
 - Biggest Growths/Success
 - Business
 - Medical Assisting (expanding to other campuses in the Fall 2014)
 - Surveying (storage needs)
 - Education (2+2)
 - ICR Expansions
 - Expand welding program for Tech students
 - Expand SUV and Power Sport programs
 - Need larger lab for microbiology
 - Need for the programs to be mobile to accommodate changes in the market
 - Child care issues for students
- Architectural style
 - Modern
 - Here to stay
 - Eye catching
 - Sense of purpose
 - Well established
 - Education
 - Gateway building
- Student Needs
 - No place to study (social learning and private)
 - No computer lab for students to do homework
 - No area to congregate/entertainment

November 18, 2013

- No food (other than vending machines); coffee shop
 - Need outdoor activities
- Student Environment
 - Ask in classrooms
 - Put together an online survey

**Southern West Virginia Community and Technical College
Ten-Year Master Facilities Plan Update
Campus Meetings**

Lincoln Site November 12, 2013 1:30 p.m.

Those in attendance included: William Cook, Crystal Cummings, Brittany Bartram, Derek Christian and Dana Snyder. Contractors included: Adam Krason (ZMM), Rodney Pauley (ZMM) and Curtis Catron (BSP). College Facilitator: David Lord.

Existing Facility

- **Southern**
 - Challenges for shared space
 - Paging system (controlled by high school)
 - HVAC controlled by HS or central office
 - Internet controlled by HS
 - Growth is in conflict with shared space
 - Advantages
 - Direct recruiting
 - Cost (expense) control – affordability
 - Provide needed classroom and computer lab space to HS
 - Programmatic Needs
 - Growing – 72 students
 - Different ICR space
 - Multiple smaller classrooms (10 – 12 seats)
- **High School**
 - Challenges for shared space
 - Security breach because of open access to Southern and shared classrooms
 - No uniform emergency codes
 - No joint board as in Boone (in process of being established)
 - Programmatic needs
 - Need more space
 - Utilizing some of Southern's space
 - Lab not available
 - 890 students
- **10 Year Vision**
 - Continue to grow student population
 - Improve and expand relationship with Lincoln County HS
 - New Programs
 - Welding

November 18, 2013

- Automotive
 - Early Childhood Program (HS has a grant)
 - Electrical – NCCER
 - Building Trades – NCCER
 - New Elder Care requirements
 - Dual credit courses
- Security Needs
 - With shared space, should Southern's employees go through similar background checks that Lincoln school system requires
- Student Needs
 - No food service
 - No internet café (check out laptops at desk)

**Southern West Virginia Community and Technical College
Ten-Year Master Facilities Plan Update
Campus Meetings**

Logan Campus November 13, 2013 9:00 a.m.

Those in attendance included: Dr. Pat White, Ron Lemon, Carol Cole, Pete Parsons, Lola Lackey, Tammy Toppings, Velva Pennington, Marcus Gibbs, Cassandra Goble, Judy Slazo, Suzette Felty, Carol Howerton, Beverly McDonald, Debra Teachman, Pat Miller, Matthew Lewis, Darrell Taylor, MaShawwna Carter, Debbie Dingess, Nancy Fala, Randy Skeens, Tank Williams, and Elijah Hoosher. Contractors included: Adam Krason (ZMM), Rodney Pauley (ZMM) and Curtis Catron (BSP). College Facilitator: David Lord.

Existing Facilities – Building A

- **Positive Attributes**
 - Out of the flood plain
 - Theater
 - Multiple purpose room
 - Student Commons
 - New backup generator
 - Commissary
 - Library
 - Veterans Lounge
 - Exterior seating
 - Most of the technology is updated
- **Challenges**
 - Roof
 - Update HVAC
 - Update restrooms
 - Upgrade lighting
 - Improve structure of parking
 - Elevator upgrade
 - Replace sprinkler heads
 - Additional student social space
 - 2nd floor layout
 - Landscaping
 - Outdoor lighting
 - Sanitary gases
- **Needs**
 - Student media work center
 - Sound reduction in Commons area

November 18, 2013

- Interior signature

Building B (workforce programs and administrative)

- Positive Attributes
 - Generally in good shape
- Challenges
 - Replace HVAC
 - No outdoor public space
 - Sky light issues
 - Update interior
 - Seating space
- Needs
 - Interior signature

Building C – Career and Technical Programs, President’s Office and Administrative Team

- Positive Attributes
 - Newest building in generally good condition
- Challenges
 - Public Access to Cosmetology
- Needs
 - Interior signage
 - Landscaping
 - Lockable storage space
 - Public way finding

Site

- Positive
 - Distinct campus
- Challenges
 - Graffiti
 - ADA issues – access and parking
 - Back lot has no structural gravel
 - Security in all buildings
 - Mining program – downtown leased space
 - Ped connect between bldgs. A & C
 - Site flooding
- Needs
 - Additional parking
 - Outdoor lighting
 - Additional walkways

- Way finding/signature – entrance
- All buildings need voice paging system – part of emergency plan
- Only potential green space has chiller plant
- Identify/organize parking needs and organization
- Improve pedestrian circulation – create spaces
- Pedestrian warning on Mud Fork Road (CR5)

Programmatic Needs – (9:30 – 5:30 traditional, 6:30 – 9:00 non-traditional)

- Planned
 - More smaller ICR
 - More computer access
 - Internet café
 - Check out
 - Better wireless
 - Update all classroom furniture
 - Reallocate bookstore space
 - Fitness space is handled elsewhere
 - Space for adjunct faculty (130 all campuses)
 - Additional/updated security cameras
 - Implement smart building systems
- Potential
 - Marquee for event locations
 - Update student services layout
 - Use specialty facilities at RR Willis Career and Technical Center (Logan Co. Schools)
 - Greenway (landscaped and well light) 1/3 to 1/4m mile

**Southern West Virginia Community and Technical College
Ten-Year Master Facilities Plan Update
Campus Meetings**

Williamson Campus

November 13, 2013 2:00 p.m.

Those in attendance included: Rita Roberson, Linda McEntire, Craig Adkins, Garnet Bolen, Leasha Johnson, Brandy Fancis, Ted Williams, James Smith, Virginia Stepp, Mike Baldwin, Chris Gray, Anita Messer, Jennifer Dove, Diana Jividen, Bruce Curry, Martha Paige, Ruby Runyon, Jason Gray, Randy Keathley, Robert Boberra, Joe Smith and Jerry Mounts. Contractors included: Adam Krason (ZMM), Rodney Pauley (ZMM) and Curtis Catron (BSP). College Facilitator: David Lord.

Existing Facilities

- **Main Building**
 - **Positive Attributes**
 - Plenty of occupiable space – classrooms and offices
 - Bldg. is made available to the public
 - Students common area
 - Library
 - Good access to computers and Wi-Fi
 - Beautiful maple tress
 - More use of smart phones for work by students
 - **Challenges**
 - Parking on lawn (plenty of paved spaces available)
 - Condition of exterior
 - Roof leaks
 - HVAC – balance and humidity (windows)
 - Asbestos abatement (no study)
 - Water heaters
 - Reception/information desk visibility
 - Existing single pane windows
 - Plumbing
 - Bathrooms
 - Electrical upgrade
 - Exterior balcony shows rebar
 - Outdated light fixtures
 - **Needs**
 - Information kiosk
 - Additional adjunct office space
 - Larger computer lab for orientation classes

November 18, 2013

- Separate shower facilities
 - Fire protection – provide training on new system
 - Additional site lighting
 - ICRs – small and large
 - Reconfigure student services
 - Additional conference room
 - New clock system
 - Replace ceiling tiles
 - Replace generator
 - Stairwell lighting and hand rails
 - Replace old floor tiles
 - Additional computer lab
 - Tutoring lab
 - Internet café
- Technical Building
 - Positive Attributes
 - New building
 - New programs being accommodated
- Site
 - Challenges
 - Site entry
 - More trees create issues with security cameras
 - Safety concerns with parking island at entrance
 - Drainage issues in parking lot along main bldg.
 - Speeding cars in parking lot
 - Illegal parking blocking views
 - Pedestrian circulation
 - Existing internet connection between campuses if additional ICR's are added
 - Way finding (inside and outside)
 - Needs
 - Additional site lighting
 - Day care facilities
 - Professional development for technology (faculty and staff)
 - Exterior amenities (tennis or volleyball)
 - Armory
 - Positive Attributes
 - Open space w/mezzanine in old gym
 - Challenges
 - Pedestrian connection
 - Gymnasium has no AC

- Overall need for major renovation
 - Remove old maintenance bldg...
 - Speeding cars
 - Needs
 - Business incubator
 - Improved parking – paved
 - Shower facilities
- Programatic Needs
 - Potential
 - Expanded programs when (if) armory is acquired (incubator, culinary)

**Southern West Virginia Community and Technical College
Ten-Year Master Facilities Plan Update
Campus Meetings**

Wyoming/McDowell Campus

November 14, 2013 9:00 a.m.

Those in attendance included: David Lord, Gina Ingram, Ginny Shirley, Robin Morgan, Jackie Whitley, Steve Lacek, Josie Lacek, Patty Brooks and Rhonda Lester. Contractors included: Rodney Pauley (ZMM) and Curtis Catron (BSP).

Existing Facilities

- **Positive Attributes**
 - Classroom size and space is more than adequate
 - Adequate computer labs
 - ICR upgraded
 - Offices for faculty and staff are adequately sized
 - Site location
- **Challenges**
 - Improvements to academic advising
 - Organizing student services placement/connections/flow
 - HVAC balancing in building
 - Admissions/info window
 - Wayfinding to and on campus
 - Light double sided sign
 - Hidden access point dangerous
- **Needs**
 - Additional outlets
 - Designated testing space
 - On site financial aid
 - Workout fitness room for required PE class
 - Chalk/whiteboards need updated
 - Lockable storage room for student files
 - Need PA system for areas not covered by phones
 - Better after hours security measures
 - Upgrade lighting
 - Some wiring upgrades
 - Add additional outlets
 - Entrance definition
 - Wider main drive (mainly in corner)

Programmatic Needs

November 18, 2013

- Planned
 - Medical assisting – designated lab and classroom space
 - Respiratory care – no special needs (ICR?)
- Potential
 - Extend on-campus stay for Bluefield State 2+2 program
 - Working with career and technical school for adult programs
 - Workforce program

**Southern West Virginia Community and Technical College
Ten-Year Master Facilities Plan Update
Campus Meetings**

Cabinet December 5, 2013 9:00 a.m.

Those in attendance included: Joanne Tomblin, Sam Litteral, Allyn Sue Barker, Debra Teachman, Ron Lemon, and Gary Holman. Contractors included: Adam Krason (ZMM). College Facilitator: David Lord.

- Adam began the meeting with a handout and went over a powerpoint presentation.
- Vison
 - Additional ICRs on all campuses
 - Online programming: Creation of Professional Development Centers on Williamson and Logan campuses
 - Creation of Student Success Centers on all campuses that will start in Logan. These would include tutoring, testing, advising, financial aid, counseling, a space for small workshops on careers and other topics, and free space for staff who will travel from one campus to another.
 - With the increase of online offerings there is a need for computer access for students to work on online courses.
 - Science labs especially on Williamson
 - There is a need to have the best technology available in the classrooms
 - Tech programs besides allied health would be offered at county career and technical centers in some form of agreement.
 - Adjunct space is needed. Small space with lockers possibly. Phone, computer, printer etc.
 - Drop child care centers.
 - Project the cost for a new building in Boone as a side by side report.
 - Banners on light poles, better parking lot lighting, signature signs and entrances, visual look
 - Two entrances to Bldg A in Logan
 - Bldg A is the priority.
 - A digital floor plan of current usage is needed for all facilities
 - A breakout meeting with Debra Teachman is needed to discuss the components of a Student Success Center on each campus
 - Boone partitions need to be done in the short time
 - Address the space use in Boone.

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