Kennebec Valley Community College

Fairfield, Maine

Existing Building Evaluations

March 26, 2014

Project No. 13160

Table of Contents

1. Introduction
2. Whitney Wing, Main Campus
    - Narratives
    - Existing Floor Plans
    - Preliminary Construction Estimate
    - Preliminary IT/Security Estimate
3. Nutter Hall, Alfond Campus
    - Narratives
    - Existing Floor Plans
    - Preliminary Construction Estimate
    - Preliminary IT/Security Estimate
4. Equipment Barn
    - Narratives
    - Proposed Floor Plan
    - Preliminary Construction Estimate – 2 versions
    - Preliminary IT/Security Estimate
5. Farm Stand (Early Childhood Development Center)
    - Narratives
    - Preliminary Construction Estimate
    - Preliminary IT/Security Estimate
6. Appendix

   Reports from Structural Integrity
    - Structural Integrity review of Existing Barns 8/2/13
    - Structural Integrity review of Nutter Field House – 9/27/13

Introduction:

Kennebec Valley Community College asked SMRT to review the existing conditions of several buildings and spaces that they would like to renovate in order to define a preliminary project scope and preliminary construction cost estimate for each project. This report contains architectural, structural, mechanical and electrical narratives along with a preliminary construction cost estimate for each project.

The four buildings and their proposed uses are as follows:

1. **Whitney Wing** (Main Campus): Locate the Timber Frame Construction program into the space vacated by the Electrical Line Worker (ELW) program.

2. **Nutter Hall** (Alfond Campus): Relocate the ELW program into the vacant half of the building. The other half of the building continues to be used for receiving and storage.

3. **Equipment Barn**: Remove this barn and build a new building similar in size and character to provide classroom, lab/processing work space and farm equipment repair and storage space. The occupancy will become Business use and will require compliance with current energy and building codes.

4. **Farm Stand**: Remove the existing farm stand and build a new building of similar size and character for a learning center/play space for the Early Childhood Development (ECD) program.

In-depth code analysis is not included as part of this report. However, some basic items were researched to assist in developing the project scopes and preliminary construction budgets. A detailed code review will be required for each project when they proceed into the design and document phase.

In addition to our field visit, we used the Existing Building Inventory chapter of the 2012 KVCC master plan and the reports by Structural Integrity for Nutter and the Barns (included) as resources to inform the narratives. This report should be considered a compliment to the other reports as it does not repeat or include all of the information contained in the others.

Preliminary Construction Cost Estimates:

The following preliminary cost estimates are based on the schematic narratives and floor plans that are included in this report along with IT/Security estimates provided by KVCC. These figures are not proposed project costs as they do not include architectural and engineering design fees, furniture, furnishings and equipment (FF&E) costs, environmental permitting and regulatory studies or other services such as special inspections or commissioning. The estimates do include a 15% cost contingency which is used to cover changes in the documents as they are developed but we recommend that KVCC also include bid and/or construction contingencies as part of the overall project cost. Lastly, these estimates are based on construction starting in the spring and summer of 2014 so they will need to be adjusted for inflation (2%-5%) if the start dates are extended significantly.

Project	Type	Size (sf)	Construction Cost
Whitney Wing	Renovation	5,775	$82,170
Nutter Hall	Renovation	14,265	$882,340
Equipment Barn	New	6,180	$1,081,110
Farm Stand	New	840	$348,265

Codes and Standards:

Codes, Standards and general requirements elaborated below are provided to establish a base level of quality for all of the proposed projects.

Codes:

National Fire Protection Association (NFPA) 101, 2009 edition

2010 ADA Standards for Accessible Design

NFPA 13

International Building Code, 2009 edition.

ASCE/SEI 7-05, Minimum Design Loads for Buildings and Other Structures

ACI-318-08, Building Code Requirements for Structural Concrete

National Design Specification for Wood Construction, 2005 Edition

ANSI/AISC 360-10, Specification for Structural Steel Buildings

International Mechanical Code, 2009 edition

International Energy Conservation Code, 2009 edition

ASHRAE Standard 62-2007 Ventilation for Acceptable Indoor Air Quality

ASHRAE Standard 90.1-2007 Energy Standard for Buildings Except Low-Rise Residential Buildings.

NPFA 54 – National Fuel Gas Code, Latest edition

NFPA 90A – Installation of Air-Conditioning and Ventilating Systems

State of Maine Internal Plumbing Code, 2009 edition, based on the 2009 Uniform Plumbing Code

National Electric Code

Standards:

Sheet Metal and Air Conditioning Contractors' National Association, Inc. (SMACNA) HVAC Duct Construction Standards

UL – Underwriters' Laboratories

ASME – American Society of Mechanical Engineers

NFPA – National Fire Protection Association

ANSI – American National Standards Institute

ASHRAE – American Society of Heating, Refrigerating, and Air Conditioning Engineers

ARI – American Refrigeration Institute

ASTM – American Society of Testing and Materials

NEMA – National Electrical Manufacturers' Association

NEC – National Electrical Code

FM – Factory Mutual

OSHA – Occupational Safety and Health Act

NEMA National Electrical Manufacturer's Association

AABC – Associated Air Balance Council

AMCA – Air Movement and Control Association

NEBB – National Environmental Balancing Bureau

General Fire Protection Requirements:

The fire protection contractor shall fully design the facility fire protection systems based on current codes as well as direction received from the Authorities Having Jurisdiction.

a. Conduct a flow test to serve as the basis of system designs
b. Provide complete, tested and operational fire protection systems at the facility and to a point of water entrance 10 feet outside the building.
c. Obtain all permits and gain approvals from the Authorities Having Jurisdiction for designs and installations.
d. Sprinkler system designs to be based on the density area method with Light and Ordinary Hazard classifications anticipated.

Materials: Project materials to be UL listed and FM approved for their intended use.

a. Above ground piping 2 inch and smaller shall be schedule 40 steel with threaded or welded joints. Above ground piping 2-1/2 inch and larger shall be schedule 10 steel with rolled grooved mechanical joints.

b. Dry pipe above ground piping 2 inch and smaller shall be schedule 40 steel with threaded or welded joints. Above ground piping 2-1/2 inch and larger shall be schedule 40 steel with rolled grooved mechanical joints. Dry pipe systems shall comply with Maine Fire Marshals dry pipe policy to the fullest extent possible.

c. Sprinkler heads to be standard spray, quick response type with the following finishes:

   - Finished high profile areas/hard ceilings – concealed heads with white cover plates.
   - Finished areas/suspended ceilings – recessed heads with white finish and escutcheons.
   - Unfinished areas – rough brass upright and pendent heads. Provide cages in areas subject to mechanical damage.
   - Areas subject to freezing – dry barrel type with finishes to match adjacent heads.

d. System valves, flow and pressure switches to be supervised by the facility fire alarm system

General Mechanical Systems Requirements:

Design Criteria

Indoor design conditions:

Winter: 68 – 70 deg. F db, 20-30% relative humidity

Summer: 72 – 75 deg. F db, max. 60% relative humidity

Outdoor design conditions:

HVAC system design to be based on 2009 ASHRAE Fundamentals Handbook Climatic design conditions data for Augusta, Maine.

Winter (Extreme Annual Low): -10 deg. F. db.

Summer Normal Cooling (ASHRAE 0.4%): 87 deg. F db / 71 deg. F wb.

Summer Dehumidification (ASHRAE 0.4%): 78 deg. F db / 71 deg. F dp.

Piping is to be copper or steel in size 2" and below. Piping above 2" is to be steel: Steel piping to be threaded or grooved-end. Water piping shall be insulated with all service jacketed fiberglass. Shut-off valves shall be provided at all components that require servicing. In addition, shutoff valves shall be strategically located to allow isolating portions of the system piping. Balancing valves shall be provided at all major branches and terminal units.

Duct System: Duct shall be G90 galvanized steel duct and shall meet all SMACNA standards. Duct shall be sealed to Class A standards regardless of pressure class. Duct to be insulated with 2" fiberglass blanket with reinforced foil face.

Temperature Controls: The entire facility shall be provided with a complete direct digital control (DDC) system. The DDC system shall handle all functions of the heating, ventilating and air conditioning systems.

Testing, Adjusting and Balancing: The air and water systems shall be tested, adjusted and balanced in accordance with current industry standards.

General Plumbing Systems Narrative:

Fixtures to be Kohler, American Standard, Eljer, Elkay or approved Equal.

Water closets shall be sensor operated, 1.28 GPF, wall hung or floor, vitreous china. Urinals shall be wall hung, sensor operated, low flow 1/8 gallon per flush, vitreous china. The sensors shall be hardwired into the building electrical system. The plumbing fixtures shall be ADA compliant.

Lavatories: Wall mounted, vitreous china, ADA compliant, 20"x18", 0.5 gpm ultra low flow sensor operated faucet.

Laboratory sink: Stainless steel, single bowl, ADA compliant, 25x22x6.5. Basis of design: Elkay DLR252210.

Showers: Acrylic, one piece construction, ADA compliant. Basis of design: Aquabath C4136.

Eyewash/shower: ADA accessible, combination shower and eye/face wash. Basis of design: Guardian GBF 1909.

Mop Sinks: A 24x24 terrazzo mop sink shall be provided in each Janitor's closet.

Equipment Barn

Project Description:

KVCC would like to turn the equipment barn into an enclosed, conditioned building with a classroom, office and food processing spaces with coolers and freezers. Part of the barn would remain as equipment storage and repair space.

Converting the barn to enclosed, functional space is a change of occupancy from Utility to Business and requires compliance with current building and energy codes. After a preliminary review it was determined that an extensive amount of work would be required in order to reuse and upgrade the structural frame (roof trusses and posts) in order to meet the building code criteria. KVCC then decided they would like to build a new structure of similar size and appearance in the same location.

Preliminary Construction Cost:

The preliminary construction cost estimate is $1,606,985 which includes $275,000 for the photovoltaic (PV) array. A second estimate, of $1,081,110, removed the root cellar, the PV array and left the tractor and equipment storage spaces covered but not enclosed. Several items were priced as alternates: the PV array is $360,250, the root cellar is $64,185, the pellet boiler option is $9,825 and expanding the boiler to carry the greenhouse loads is $43,100.

To keep the overall project budget under $1,000,000, the construction cost should be approximately $750,000.

To further reduce cost and as the next step in the design process, there are several steps and/or strategies that can be undertaken. 1. Review the program and right size the spaces and the building. The current plan was based on the existing pole barn but probably could be reduced in size. 2. Build the building in phases. Perhaps the enclosed, conditioned spaces can be built first and the tractor and equipment storage second. 3. Revisit and reduce architectural items such as doors and windows, lockers, marker and tack boards which is a tedious task with limited savings. 4. Revisit each material and mechanical system to see if there is a less expensive alternative. One needs to keep in mind the durability, cleaning and maintenance requirements of the alternates. The finishes that are proposed are not fancy or extensive – exposed or polished concrete – but are durable and easy to maintain so there may not be much savings here.

Architectural Narrative:

The new classroom/food processing/storage building will be located in the same place as the equipment barn. It is 10' longer (to accommodate a tool shed) so the western end will be 10' closer to the dairy barn. The new building will be a modern looking, but complimentary, version of the adjacent barns. KVCC has produced a schematic floor plan which is included for reference. It will need to be modified to include spaces for mechanical and electrical equipment.

The exterior walls will be wood frame construction with R-15 insulation in the stud cavity and then R-7.5 continuous wall insulation. They will be clad with a cementitious panel product similar to the Classroom and Lab building. A new standing seam metal roof, with R-38 insulation, will be installed to support the photovoltaic panels. Doors, sized as indicated on floor plan, should be insulated steel. Windows, sized as indicated on floor plan, should be operable double hung, double pane insulated units with screens.

Interior spaces:

The extents of heating and radiant floor slabs are indicated on the floor plan.

The multipurpose class room will have a polished concrete floor and an acoustical tile ceiling. The gypsum board walls will have a porcelain tile wainscot to 24" with white board paint above on the two interior end walls. The room will have the same technology as the classrooms in the new building with a ceiling mounted projector and power and data drops on all walls.

The mudroom will have a sealed concrete floor and porcelain tile wainscot to 24" above the floor. There will be 30 half size lockers.

The toilet and shower rooms will have tile floors, walls and a gypsum board ceiling.

The wash/pack area will have a sealed concrete floor, stainless steel work counters and the walls will have smooth, fiber reinforced plastic paneling to 6' above the floor. The ceiling will be gypsum board with epoxy paint. The walk-in cooler will be a prefabricated unit that will be purchased separately by the Owner. The floor slab will be recessed to allow for direct (non-ramped) access.

The Coolbot room will have underslab insulation and 4" rigid insulation in the walls surrounding it. The Coolbot Room will be conditioned using a residential style, window hung air-conditioner. The air-conditioner is than connected to a "Coolbot" controller.

The tractor workshop and storage bays will be covered by the roof and open on three sides. In the future, the spaces can be enclosed. There will be a concrete slab with floor drains. Exterior rated lighting will be hung from the roof trusses.

Structural Narrative:

The building: 30'-0" x 187'-0" footprint to the outside face of foundations, located in the same place as the existing equipment barn.

Foundations will be 24" wide 12" thick continuous wall footings placed below the frost line to support 8" thick concrete stem walls. Footing will have 3#5 continuous bars along their length. Stem walls will have #4 dowels and vertical bars placed 18" on center, with 2#4 bars placed within the top 4" and bottom 4" of the wall continuously along their length.

The ground floor will be a concrete slab on grade with 5" minimum thickness reinforced with either #4@18" on center, both ways, at mid-depth or W6xW6-6x6 welded wire fabric. The entire slab will be underlain with a 15mil vapor retarder. 2" rigid insulation will be detailed along the interior face of the foundation stem wall from top of footing to underside of slab. Insulation will return along the underside across the entire building where the radiant floor heating system is indicated. Where the slab is not heated, insulation will return along the underside of the slab 48" towards the interior of the building. All rooms will have slabs sloped towards floor drains with a minimum 1/8"/ft. slope. All hinged entry doors will have an 8" thick exterior slab 4ft square with frost wall supports. At overhead doors an 8" thick by 24" wide concrete apron will be provided with #4 dowels from building wall to apron mid-depth. Exterior pads and aprons will be reinforced with #4 bars placed at 18" on center, both ways.

The exterior walls and three full-width interior walls will be used for structural support. These walls will be constructed of either nominal 2x6 wood studs (SPF#2 or better) or 6" cold-formed metal (18ga minimum) placed on 16" centers. Walls will be covered on one face with 5/8" thick (24/0 rated) wood sheathing to provide lateral force resistance. At interior walls the wood sheathing will be covered with gypsum wall board per architectural requirements. Overhead door openings will utilize engineered lumber (5 ¼"x 14") headers to span roof loads. Built-up posts will be used to resist concentrated loads at header supports and at corners of structural walls. Corner posts at structural walls will be detailed with metal hold-down connectors with anchor rods set into the concrete foundation wall (Simpson HDU6 or similar).

The roof will be a single gable parallel to the building length, formed with metal-plated wood trusses. Trusses will be spaced at 24" on center and have a 6:12 sloped top chord and flat bottom chord. Trusses will extend 12" past the exterior bearing walls to form a soffit for roof venting. Trusses will be fastened to the exterior walls with metal straps to resist uplift forces and will have partial height blocking detailed between bearings to transfer diaphragm lateral loads to the exterior bearing walls. Interior structural walls will have double ply trusses fastened directly to top plate, these trusses will be detailed to transfer lateral loads (drag truss) to interior lines. The roof will be covered with ¾" thick wood (40/20 rated) sheathing. Gable

end walls will be detailed as 2x6 framing (not gable truss) and detailed for 12" deep ladder framing. Bottom chords will be designed to support weight of ceilings.

The root cellar (alternate): 12'x24' footprint, long dimension parallel to building length. It is located on the north side of the building per the architectural floor plan.

The foundation of the main building will be stepped down to provide a full-depth basement space to create the cellar. Foundation walls will be of the same dimensions as the typical frost walls (8" thick to 24" footing). Walls will be reinforced with #4 bars placed at 18" on center in both directions at center of the wall. Interior will have a 4" concrete slab on grade with reinforcing and vapor retarder similar to balance of building, no under-slab insulation. Exterior of foundation will be insulated and damp-proofed. A 2x6 sheathed wall will bear from top of foundation to underside of first floor, approximate height of wall is 24".

First floor will be framed with 2x12 joists spaced at 16" on center. ¾" T&G subfloor (40/20 rated). 2x6 bearing wall built on first floor platform will be bearing line for mono-pitched shed roof. High point of roof will align with main trusses, rafters will be 2x12 spaced at 24" on center and covered with ¾" sheathing. Walls to be sheathed same as balance of building and rafters will have blocking and hold-downs same as balance of building.

Site is wet, so foundation drains are likely. Topography has potential to allow day-light exit for drains.

Foundations of main building will step in 24" tall increments to reach depth of basement.

Mechanical Narrative:

Existing conditions: The existing pole barn is set to be demolished. The pole barn currently has no utilities serving it.

Fire Protection Systems

Provide a new 6" fire service complete with backflow preventer, fire department connection, alarm check valve, and dry alarm check valve. Wet pipe sprinkler system to provide coverage over occupied areas. Dry pipe sprinkler system to be provided in attic space and areas subject to freezing.

Mechanical Systems

Ventilation: Code required ventilation shall be provided using a combination of natural and mechanical ventilation. A fan powered packaged energy recovery ventilator will provide exhaust to the bathroom, showers, and janitors closet and make-up air will be provided to maintain building pressurization during the winter months. The energy recovery ventilator will remove exhaust heat energy and transfer

the energy to the supply air stream. The package ventilator shall be equal to Mitsubishi Lossnay or RenwaireAire EV series. A duct heating coil shall be provided to provide room neutral air during the heating season.

If enclosed, the tractor workshop area will require additional exhaust ventilation. Both general exhaust and (1) direct muffler snorkel exhausts shall be provided. Snorkel exhaust to be equal to Ventair. (Exact number of snorkel exhaust to be equal to number of vehicles in space). Make-up air to be provided via a wall louver. Provide gas monitoring devices throughout the workshop and storage area (CO, CO2, NO2 etc.).

Heating System: Heating shall be provided through two condensing boilers, each sized for 2/3 for the peak building load (approximately 150,000 BTU each). Boilers to be equal to HTP Elite or Camus DynaMax. The heating hot water will provide radiant heat from Tool Shed area to the Wash/Pack area (approximately 2,800 SF), and condition the make-up air. Radiant heating to be equal to Uponor Pex-A. Additional heating will be provided in the workshop and storage area via unit heaters.

The boiler heating hot water shall run through a plate and frame heat-exchanger to heat a 40% PG Heating Water to provide supplementary heating to the root cellar. Heat exchanger to come complete with pumps, glycol fill station, air-separator, expansion tank, etc.

A propane tank shall be provided and installed by the local propane dealer chosen by the owner.

Greenhouse Alternate: KVCC has asked for additional boiler capacity for the Greenhouse which is 30’ x 48’ and located 300’ away from the new building. The capacity of Glycol Hot Water heating system will also need to be increased. The Glycol Hot Water Supply and Return will be run underground to the green house where radiant heat will be provided in the floor and at the bench tops via (2) radiant manifolds. The underground pipe shall be a pre-insulated pex pipe, basis of design: Urecon Pex-Flex.

Cooling System: Mechanical cooling will not be provided for this building.

Root Cellar: The root cellar shall be primarily cooled (and heated) by passive means. The passive ventilation shall include a low outdoor air intake and exhaust vents at the ceiling. Additionally, fan powered ventilation shall be provided for the space to draw in additional outside air when appropriate based on design conditions. Extend Glycol heating hot water into the space to provide supplemental heating as required. Additional information is required to finalize scope of mechanical work for the root cellar.

Alternative Heating System: Heating to be provided through two pellet boilers, each sized for 2/3 of the beak building load. Boilers to be complete with storage silo and vacuum delivery system. Basis of design: Kedel.

Plumbing Systems

Water service: The water service for the facility will be tied into the existing municipal system serving the campus. RPZ type water backflow prevention will be provided in accordance with the state and local utility requirements. Water meter shall be installed as required on the domestic water service entrance. The domestic water shall enter the building via a dedicated main serving the building.

Sewer: There are no sewer lines in the area surrounding the pole barn. Provide a new leach field. Verify location of leach field with soil tests in the area. An oil and water separator shall be provided for the floor drains serving the workshop and storage area. Basis of Design: Zurn Z188 with Class E rated cover.

Domestic Hot Water: A solar domestic water array will be provided and mounted on the roof. The system will be composed of vacuum tube type panels and will be capable of producing enough hot water for 2 showers, 2 lavatories, 3 sinks and 1 mop basin per day during the month of September. Solar heated water will be circulated to a 120 gallon cement lined storage tank located within the building mechanical room.

The storage tank will be configured with an indirect boiler water heat exchanger and an electric heating element. A dedicated pump will be provided connecting into the boiler system for temperature boost when the boiler plant is operational. The electric resistance heater will operate only on days when the boiler is off, providing temperature boost. The domestic water will be stored at 140 degrees F and routed through a master mixing valve before distribution to the distribution to the building at 120 degrees F. Basis of Design: Kingspan Solar.

Plumbing Fixtures: Two toilets, two lavatories, two showers, four freeze resistant exterior wall hydrants, eyewash/shower and four tamper resistant wall hydrants. Floor drains with mechanical trap primers will be provided throughout the building.

Electrical Narrative:

Existing Conditions: An overhead service from a pole mounted CMP transformer and meter feeds the milking barn adjacent to the equipment barn. An overhead subfeed from the milking barn runs to the peak on the south west end of the equipment barn building. The conductors then transition to the inside of the building where they land on a 120/240V load center. The load center feeds various lighting and receptacle loads within the building. There are no existing telecommunications or fire alarm systems located within the building.

Demolition: Remove all existing electrical equipment from the building. Remove the overhead subfeed from the milking barn.

Electrical Service: A new pole mounted Central Maine Power transformer and meter will be installed to serve the building. A new service entrance panelboard will be installed.

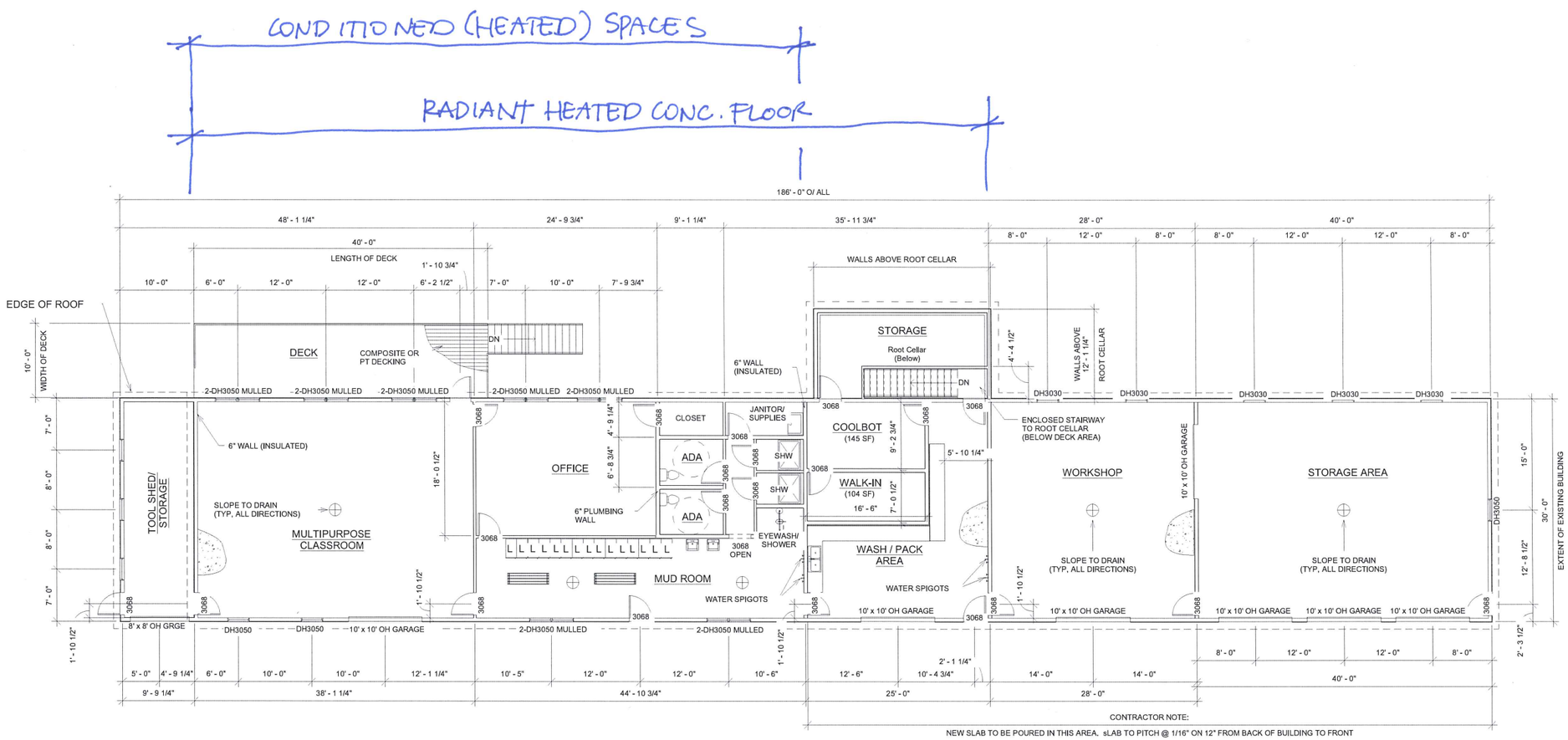
Electrical Equipment: A branch panel will be installed to serve electrical and lighting loads within the building. Small mechanical loads will also be fed from this branch panel; larger mechanical loads will be fed directly from the service entrance panelboard. Based on electrical requirements, a separate branch panel may be installed within the workshop to serve equipment within.

Lighting: Lighting within the building will consist of LED fixtures. Fixture mounting types will vary based on the height and type of the ceilings. Occupancy sensors will be installed within classroom, bathrooms, corridors and storage areas. Egress lighting will consist of wall mounted emergency lighting fixtures with integral battery. Exit signs will be provided where required and will include integral battery packs. Exterior lighting at the building exits will consist of wall mounted LED fixtures.

Telecommunications: A new telecommunications service will be installed within the building. Wired and wireless internet will be installed. Wired data outlets will be installed within the classroom and office.

Fire Alarm: A new digital addressable fire alarm system will be installed within the building. This will include smoke/heat detectors, pull stations and notification devices where required to be installed by codes. A new fire alarm control panel will be installed within the electrical room and a remote annunciator at the building entrance.

Photovoltaic System (alternate): A new roof mounted photovoltaic (PV) array will be installed on the south east facing roof. This system will be sized to offset the yearly cost of electricity purchased from CMP. The PV array inverters will be located within the electrical room of the building. This system will require the bus of the service entrance panelboard be upsized. Preliminary sizing would suggest that an array would need to be 100kW to offset the building's electricity usage.



NOTES:

- EACH LOCKER (L) IS 3'-0"(H) x 1'-6" (W) x 2'-6" (D)
- 2 LOCKERS PER STACK (TOTAL 30 LOCKERS)
- TOOL SHED AREA IS NEW DEVELOPMENT

(1) Finished Floor at Top of New Slab
1/8" = 1'-0"

The drawings for this project may only be reproduced with the express, written consent of Mid-Maine Drafting Services and Kennebec Valley Community College.

Mid-Maine Drafting SERVICES
229 Cushman Rd
Winslow ME 04901
(207)859-0384
www.midmainedrafting.com

No.	Description	Date
A	RELEASED FOR OWNER REVIEW	10/3/2013
1	REVISED PER OWNER COMMENTS	10/22/2013

d
s
tate/ Zip code
Fax:

Mid-Maine drafting Services is not responsible for the structural design of this project. This drawing and the information contained herein is for illustrative purposes only. All structural framing is suggested and should be designed by a licensed professional engineer before construction begins. Mid-Maine Drafting Services assumes no liability for changes and/or revisions made to the plans by the client or contractor.

KVCC
COMMUNITY COLLEGE

KVCC
Building 4 Farm Classroom
First Floor Plan

Project number	KVCC_BLDG4_10113
Date	10/1/2013
Drawn by	G. Libby
Checked by	MMDS

A1

Scale 1/8" = 1'-0"

JOB #	2013.57	KENNEBEC VALLEY C OMMUNITY COLLEGE - Equipment Barn w/O pen Storage 3 Sides					WORKSHEETS			(page 1)
			3/24/2014							
Qnty	X on	Un its	Description	Mtrl	Eqpmt	Subco n	Labor	Other	TOTAL	GR TOTAL
				0		0	0		0	
			Work Scope	0		0	0		0	
1	ls	$500	Demolition dust control	0		500	0		500	
150	cy	$50	Demolish existing equipment barn & root cellar (includes MEP demo)	0		7,500	0		7,500	
15	cy	$150	Demolish existing concrete piers	0		2,250	0		2,250	
12	15 cy	$750	Cleanup & disposal demolition debris	0		9,000	0		9,000	
1	ea	$1,000	Construction entrance	0		1,000	0		1,000	
1	ls	$1,000	Protection & dewatering	0		1,000	0		1,000	
1	ls	$1,500	Dust & erosion control	0		1,500	0		1,500	
225	cy	$5	Loam strip & stockpile	0		1,125	0		1,125	
300	cy set	$35	Excavation & backfill structure & haul excavated materials	0		10,500	0		10,500	
5,580	sf set	$1.25	12" gravel subslab & 2" sand & VB	0		6,975	0		6,975	
250	lf	$16	Excavation & backfill interior utilities	0		4,000	0		4,000	
435	lf	$15	Foundation drains	0		6,525	0		6,525	
5,580	sf	$0.15	Fine grade slabs	0		840	0		840	
8,650	sf	$0.65	Loam & seed perimeter disturbed areas	0		5,625	0		5,625	
85	cy	$375	Concrete frost & entry slab foundations	0		31,875	0		31,875	
5,580	sf	$4.50	5" reinforced slab on grade w/sawcutting & finishing	0		25,110	0		25,110	
100	sf	$8	8" reinforced frost edge entry slabs w/finishing	0		800	0		800	
140	sf	$15	8" x 24" reinforced OHD landing pad doweled to building slab	0		2,100	0		2,100	
50	sf	$1.50	Equipment pads	0		75	0		75	
1	ls	$1,000	Framing hold down rods & anchor bolts	0		1,000	0		1,000	
5,950	sf flat	$4.75	Flat bottom wood trusses w/eave overhang & blocking	0		28,265	0		28,265	
1,600	bf	$3.50	Roof edge framing & blocking & ladder framing	0		5,600	0		5,600	
230	shts	$43	3/4" roof sheathing	0		9,890	0		9,890	
200	bf	$4.50	LVL headers overhead doors	0		900	0		900	
4,695	bf	$2.75	2 x 6 exterior stud framing & posts	0		12,915	0		12,915	
1,400	bf	$2.75	2 x 6 interior stud framing	0		3,850	0		3,850	
130	shts	$25	1/2" exterior wall sheathing	0		3,250	0		3,250	
85	shts	$35	5/8" interior shear wall sheathing	0		2,975	0		2,975	
2,000	bf	$3.75	Door & window header-block-shim	0		7,500	0		7,500	
250	bf	$3.75	In wall blocking	0		940	0		940	
4	shts	$45	Electric panel plywood	0		180	0		180	
60	lf	$15	Window solid surface sill & stoop	0		900	0		900	
1,105	lf	$6	Door & window interior trim surround	0		6,630	0		6,630	
			continued on next page	0		0	0		0	
Conestco.		222 Mountain Road, R aymond ME 04071 ~ 207.627.4099 ph/fx ~ O pinions of Probable C ost ~ Construction Co nsulting ~ Value Engi neering								

JOB #	2013.57	KENNEBEC VALLEY C OMMUNITY COLLEGE - Equipment Barn w/O pen Storage 3 Sides					WORKSHEETS			(page 2)
			3/24/2014							
Qnty	X on	Un its	Description	Mtrl	Eqpmt	Subco n	Labor	Other	TOTAL	GR TOTAL
				0		0	0		0	
			Work Scope (cont.)	0		0	0		0	
600	sf	$4	FRP wall panel & trim wash-pack to 6'	0		2,400	0		2,400	
3	ea	$700	Class storage wardrobe	0		2,100	0		2,100	
36	lf	$250	Stainless steel work counters wash-pack	0		9,000	0		9,000	
450	lf set	$12	Aluminum wrapped eave & gable wood fascia	0		5,400	0		5,400	
455	sf set	$25	Exterior PT frame deck w/compostie board finish-steps-rails	0		11,375	0		11,375	
375	lf	$5	Eave perforated soffit strips	0		1,875	0		1,875	
2,000	sf	$1.15	2" rigid foundation insulation	0		2,300	0		2,300	
4,225	sf	$1.15	2" rigid underslab insulation typ radiant & 4' return non-radiant	0		4,860	0		4,860	
655	sf	$3.50	4" rigid wall insulation surround coolbot room	0		2,295	0		2,295	
3,540	sf	$2.50	R38 batt and-or blown insulation ceiling	0		8,850	0		8,850	
3,805	sf	$0.75	R15 batt insulation exterior wall	0		2,855	0		2,855	
3,805	sf	$1.75	R7.5 rigid insulation exterior wall face	0		6,660	0		6,660	
2,600	sf	$0.90	6" stud batt interior walls	0		2,340	0		2,340	
4,855	sf	$0.30	Tyvek building air barrier	0		1,460	0		1,460	
8,715	sf	$0.20	Ceiling & exterior wall 6 mil VB	0		1,745	0		1,745	
6,745	sf	$8	Stand seam metal panel & 100% ice-water shield & drip-trim-flash	0		53,960	0		53,960	
4,855	sf	$6.50	Cement board siding factory prefinished w/trims & drain barrier	0		31,560	0		31,560	
1	ls	$5,000	Firestopping & caulking	0		5,000	0		5,000	
4	lvs	$1,450	Metal clad wood exterior door-frame-hardware	0		5,800	0		5,800	
16	lvs	$950	Metal clad wood interior door-frame-hardware	0		15,200	0		15,200	
305	sf	$60	Fiberglass windows low e insulated glass operable	0		18,300	0		18,300	
1	ea	$2,250	Overhead door 8 x 8 electric operator insulated panel	0		2,250	0		2,250	
1	ea	$3,500	Overhead door 10 x 10 electric operator insulated panel	0		3,500	0		3,500	
10,575	sf	$1.50	5/8" drywall sheathing @ wood studs	0		15,865	0		15,865	
3,715	sf	$2.25	Ceiling drywall sheathing on furring toilet-shower-wash-pack	0		8,360	0		8,360	
2,165	sf	$2.25	Acoustical ceiling 2 x 4 square edge class & mud room & office	0		4,875	0		4,875	
1,130	sf	$1.25	Polished concrete floor	0		1,415	0		1,415	
4,240	sf	$0.45	Sealed concrete floor	0		1,910	0		1,910	
210	sf	$10	Ceramic tile w/tile base	0		2,100	0		2,100	
225	sf	$10	Ceramic tile wainscot	0		2,250	0		2,250	
13,435	sf	$0.50	Drywall painting	0		6,720	0		6,720	
20	lvs	$90	Door & frame painting	0		1,800	0		1,800	
4,855	sf	$0.25	Exterior siding & trim touch-ups	0		1,215	0		1,215	
			continued on next page	0		0	0		0	
Conestco.		222 Mountain Road, R aymond ME 04071 ~ 207.627.4099 ph/fx ~ O pinions of Probable C ost ~ Construction Co nsulting ~ Value Engi neering								

JOB #	2013.57	KENNEBEC VALLEY C OMMUNITY COLLEGE - Equipment Barn w/O pen Storage 3 Sides					WORKSHEETS			(page 3)
			3/24/2014							
Qnty	X on	Un its	Description	Mtrl	Eqpmt	Subco n	Labor	Other	TOTAL	GR TOTAL
				0		0	0		0	
			Work Scope (cont.)	0		0	0		0	
2	set	$750	Toilet accessories-grab bars-mirrors	0		1,500	0		1,500	
30	opngs	$260	Lockers double tier	0		7,800	0		7,800	
11	lf	$55	Locker benches	0		605	0		605	
1	ls	$500	Signage ADA & directional	0		500	0		500	
160	sf	$13	Mark & tack boards	0		2,080	0		2,080	
3	ea	$250	Bulletin board	0		750	0		750	
3	ea	$325	Fire extinguisher w/semiflush wall cabinet	0		975	0		975	
1	set	$3,000	Ceiling projector & mount & screen allowance	0		3,000	0		3,000	
75	lf	$135	Sprinkler water line & valves~new main to 10' outside w/wet tap	0		10,125	0		10,125	
1	ls	$8,500	Sprinkler backflow & water building entry to 10' outside	0		8,500	0		8,500	
5,580	sf	$2.50	Sprinkler wet interior system	0		13,950	0		13,950	
3,540	sf	$2	Sprinkler dry attic system	0		7,080	0		7,080	
10	lf	$50	Plumbing water line & valves split from new sprinkler main	0		500	0		500	
1	ls	$1,250	Plumbing backflow preventor & meter & water to 10' outside	0		1,250	0		1,250	
1	ls	$10,000	Plumbing leach field & tank system complete w/field	0		10,000	0		10,000	
1	ea	$5,000	Plumbing 120 gallon cement line tank w/heat exchange & coil	0		5,000	0		5,000	
1	ls allow	$10,000	Plumbing domestic solar hot water system roof mounted	0		10,000	0		10,000	
6	fxtr	$1,500	Plumbing WC-LAV-SS-JAN w/rough	0		9,000	0		9,000	
2	ea	$2,500	Plumbing SH w/curtain & rod & robe hooks	0		5,000	0		5,000	
1	ea	$1,000	Plumbing EYE	0		1,000	0		1,000	
11	ea	$1,000	Plumbing FD w/piping	0		11,000	0		11,000	
4	ea	$350	Plumbing HB	0		1,400	0		1,400	
1	ea	$3,500	Plumbing WH	0		3,500	0		3,500	
1	tons	$325	HVAC window hung AC unit coolbot	0		325	0		325	
1	ls	$20,000	HVAC condensing gas boiler system	0		20,000	0		20,000	
3,260	sf	$7.50	HVAC radiant slab system	0		24,450	0		24,450	
3,540	sf	$7.50	HVAC ERU w/insulated duct & heating coil & grilles-registers	0		26,550	0		26,550	
4	ea	$1,250	HVAC unit heaters workshop & storage	0		5,000	0		5,000	
1	set	$4,000	HVAC exhaust fans & louvers work area	0		4,000	0		4,000	
1	ea	$1,000	HVAC direct muffler snorkel exhaust & venting work area	0		1,000	0		1,000	
1	ls	$2,500	HVAC gas monitoring system work area & storage	0		2,500	0		2,500	
1	ls allow	$3,500	HVAC passive mech system root cellar w/radiant heat loop add	0		3,500	0		3,500	
5,580	sf	$2.50	HVAC controls	0		13,950	0		13,950	
			continued on next page	0		0	0		0	

JOB #	2013.57	KENNEBEC VALLEY C OMMUNITY COLLEGE - Equipment Barn w/O pen Storage 3 Sides					WORKSHEETS			(page 4)
			3/24/2014							
Qnty	X on	Un its	Description	Mtrl	Eqpmt	Subco n	Labor	Other	TOTAL	GR TOTAL
				0		0	0		0	
			Work Scope (cont.)	0		0	0		0	
75	lf allow	$55	Electrical secondary u.g. conduit & wire to building	0		4,125	0		4,125	
5,580	sf	$3	Electrical power & distribution	0		16,740	0		16,740	
5,580	sf	$6.50	Electrical LED lighting & wiring	0		36,270	0		36,270	
11	ea	$800	Electrical lighting & wiring LED exterior building mounted	0		8,800	0		8,800	
5,580	sf	$1.50	Electrical telecomdata conduit & wiring	0		8,370	0		8,370	
5,580	sf	$1	Electrical fire & smoke alarm-egress lights-battpaks-horns-strobes	0		5,580	0		5,580	
1	ls	$6,000	Electrical wiring new HVAC equipment & overhead doors	0		6,000	0		6,000	
1	ls	x	Owner outside cable plant	0		0	0		0	
1	ls	$18,450	Owner infrastructure internal cable plant	0		18,450	0		18,450	
1	ls	$11,770	Owner security doors	0		11,770	0		11,770	
1	ls	$21,460	Owner security cameras	0		21,460	0		21,460	
1	ls	$9,655	Owner security internal notification	0		9,655	0		9,655	5,580 sf 1st
1	ls	$11,700	Owner technology	0		11,700	0		11,700	5,580 sf
			SubTotals	0	0	825,400	0	0	825,400	$193.65/sf
		31%	Markups	0		0	0	255,710	255,710	
			TOTALS	0	0	825,400	0	255,710	1,081,110	$1,081,110
				0		0	0		0	
Markups = 8% Div 1 Conditions + 7% GenCon O&P + 15% Cost Contingency + 1% Bonds = 31%										
Excludes A&E fees, Owner movables & furnishings, hazmats & unsuitable soils, inflation (Owner to add 2% min to 5% max per year inflation beyond Spring 2014)										
				0		0	0		0	
				0		0	0		0	
			Alternates	0		0	0		0	
			# 1: Root Cellar	0		0	0		0	
250	cy set	$35	Excavation & backfill structure & haul excavated materials	0		8,750	0		8,750	
300	sf set	$1.25	12" gravel subslab & 2" sand & VB	0		375	0		375	
50	lf	$15	Foundation drains	0		750	0		750	
300	sf	$0.15	Fine grade slabs	0		45	0		45	
25	cy	$400	Concrete retaining foundations root cellar	0		10,000	0		10,000	
300	sf	$4.50	5" reinforced slab on grade w/sawcutting & finishing	0		1,350	0		1,350	
300	sf flat	$4.75	Flat bottom wood trusses w/eave overhang & blocking	0		1,425	0		1,425	
150	bf	$3.50	Roof edge framing & blocking & ladder framing	0		525	0		525	
10	shts	$43	3/4" roof sheathing	0		430	0		430	
350	bf	$3.25	2 x 12 floor joists root cellar	0		1,140	0		1,140	
			continued on next page	0		0	0		0	

JOB #	2013.57	KENNEBEC VALLEY C OMMUNITY COLLEGE - Equipment Barn w/O pen Storage 3 Sides					WORKSHEETS			(page 5)
			3/24/2014							
Qnty	X on	Un its	Description	Mtrl	Eqpmt	Subco n	Labor	Other	TOTAL	GR TOTAL
				0		0	0		0	
			Alternates (cont.)	0		0	0		0	
			# 1: Root Cellar (cont.)	0		0	0		0	
10	shts	$43	3/4" floor sheathing root cellar	0		895	0		895	
750	bf	$2.75	2 x 6 exterior stud framing & posts	0		560	0		560	
15	shts	$25	1/2" exterior wall sheathing	0		375	0		375	
1	floor	$1,000	Wood stair set w/railing to root cellar	0		1,000	0		1,000	
50	lf set	$12	Aluminum wrapped eave & gable wood fascia	0		600	0		600	
25	lf	$5	Eave perforated soffit strips	0		125	0		125	
325	sf	$2.75	Asphalt mastic 2 coat damp proof @ root cellar	0		895	0		895	
485	sf	$1.15	2" rigid foundation insulation	0		560	0		560	
200	sf	$1.15	2" rigid underslab insulation typ radiant & 4' return non-radiant	0		230	0		230	
300	sf	$2.50	R38 batt and-or blown insulation ceiling	0		750	0		750	
480	sf	$0.75	R15 batt insulation exterior wall	0		360	0		360	
480	sf	$1.75	R7.5 rigid insulation exterior wall face	0		840	0		840	
480	sf	$0.30	Tyvek building air barrier	0		145	0		145	
320	sf	$8	Stand seam metal panel & 100% ice-water shield & drip-trim-flash	0		2,560	0		2,560	
480	sf	$6.50	Cement board siding factory prefinished w/trims & drain barrier	0		3,120	0		3,120	
480	sf	$1.50	5/8" drywall sheathing @ wood studs	0		720	0		720	
300	sf	$2.25	Ceiling drywall sheathing on furring	0		675	0		675	
300	sf	$0.45	Sealed concrete floor	0		135	0		135	
780	sf	$0.50	Drywall painting	0		390	0		390	
480	sf	$0.25	Exterior siding & trim touch-ups	0		120	0		120	
600	sf	$2.50	Sprinkler wet interior system	0		1,500	0		1,500	
300	sf	$2	Sprinkler dry attic system	0		600	0		600	
300	sf	$7.50	HVAC ERU w/insulated duct & heating coil & grilles-registers	0		2,250	0		2,250	
300	sf	$2.50	HVAC controls	0		750	0		750	
300	sf	$3	Electrical power & distribution	0		900	0		900	
300	sf	$6.50	Electrical LED lighting & wiring	0		1,950	0		1,950	300 sf cellar
300	sf	$1	Electrical fire & smoke alarm-egress lights-battpaks-horns-strobes	0		300	0		300	300 sf 1st
300	sf	$3	Electrical minimals root cellar basement	0		900	0		900	600 sf
			SubTotals	0	0	48,995	0	0	48,995	$106.98/sf
		31%	Markups	0		0	0	15,190	15,190	
			TOTALS	0	0	48,995	0	15,190	64,185	$64,185
				0		0	0		0	
				0		0	0		0	
Conestco.		222 Mountain Road, R aymond ME 04071 ~ 207.627.4099 ph/fx ~ O pinions of Probable C ost ~ Construction Co nsulting ~ Value Engi neering								

JOB #	2013.57	KENNEBEC VALLEY C OMMUNITY COLLEGE - Equipment Barn w/O pen Storage 3 Sides					WORKSHEETS			(page 6)
			3/24/2014							
Qnty	X on	Un its	Description	Mtrl	Eqpmt	Subco n	Labor	Other	TOTAL	GR TOTAL
				0		0	0		0	
				0		0	0		0	
			Alternates (cont.)	0		0	0		0	
			# 2: Boiler Expansion for Greenhouse Work	0		0	0		0	
160	sf set	$5	2 x furred & rigid insul & 3/4" pwd overlay on existing GH benches	0		800	0		800	
1,440	sf set	$3.75	2 x furred & rigid insul & 3/4" pwd overlay on existing GH floor	0		5,400	0		5,400	
300	lf set	$30	Underground supply & return loop inuslated piping w/dig & bf	0		9,000	0		9,000	
1	ls	$2,500	75,000 btu Eqpmnt Barn boiler size upgrade for Greenhouse	0		2,500	0		2,500	
1,600	sf	$7.50	In floor and top of bench radiant supply piping & pumping	0		12,000	0		12,000	
1,600	sf	$2	Controls for radiant system	0		3,200	0		3,200	
			SubTotals	0	0	32,900	0	0	32,900	
		31%	Markups	0		0	0	10,200	10,200	
			TOTALS	0	0	32,900	0	10,200	43,100	$43,100
				0		0	0		0	
			# 3: Pellet Boiler System	0		0	0		0	
1	ls add	$7,500	Pellet boiler system add including loading chute & storage	0		7,500	0		7,500	
			SubTotals	0	0	7,500	0	0	7,500	
		31%	Markups	0		0	0	2,325	2,325	
			TOTALS	0	0	7,500	0	2,325	9,825	$9,825
				0		0	0		0	
			# 4: Photovoltaic System	0		0	0		0	
1	ls	$275,000	Phtovoltaic system	0		275,000	0		275,000	
			SubTotals	0	0	275,000	0	0	275,000	
		31%	Markups	0		0	0	85,250	85,250	
			TOTALS	0	0	275,000	0	85,250	360,250	$360,250
				0		0	0		0	
Markups = 8% Div 1 Conditions + 7% GenCon O&P + 15% Cost Contingency + 1% Bonds = 31%										
Excludes A&E fees, Owner movables & furnishings, hazmats & unsuitable soils, inflation (Owner to add 2% min to 5% max per year inflation beyond Spring 2014)										
				0		0	0		0	
				0		0	0		0	
				0		0	0		0	
				0		0	0		0	
				0		0	0		0	
				0		0	0		0	
				0		0	0		0	
				0		0	0		0	
Conestco.		222 Mountain Road, R aymond ME 04071 ~ 207.627.4099 ph/fx ~ O pinions of Probable C ost ~ Construction Co nsulting ~ Value Engi neering								

JOB #	2013.57	KENNEBEC VALLEY C OMMUNITY COLLEGE - Equipment Barn					WORKSHEETS			(page 1)
			3/24/2014							
Qnty	X on	Un its	Description	Mtrl	Eqpmt	Subco n	Labor	Other	TOTAL	GR TOTAL
				0		0	0		0	
			Work Scope	0		0	0		0	
1	ls	$500	Demolition dust control	0		500	0		500	
150	cy	$50	Demolish existing equipment barn & root cellar (includes MEP demo)	0		7,500	0		7,500	
15	cy	$150	Demolish existing concrete piers	0		2,250	0		2,250	
12	15 cy	$750	Cleanup & disposal demolition debris	0		9,000	0		9,000	
1	ea	$1,000	Construction entrance	0		1,000	0		1,000	
1	ls	$1,000	Protection & dewatering	0		1,000	0		1,000	
1	ls	$1,500	Dust & erosion control	0		1,500	0		1,500	
225	cy	$5	Loam strip & stockpile	0		1,125	0		1,125	
550	cy set	$35	Excavation & backfill structure & haul excavated materials	0		19,250	0		19,250	
5,880	sf set	$1.25	12" gravel subslab & 2" sand & VB	0		7,350	0		7,350	
250	lf	$16	Excavation & backfill interior utilities	0		4,000	0		4,000	
485	lf	$15	Foundation drains	0		7,275	0		7,275	
5,880	sf	$0.15	Fine grade slabs	0		885	0		885	
8,650	sf	$0.65	Loam & seed perimeter disturbed areas	0		5,625	0		5,625	
25	cy	$400	Concrete retaining foundations root cellar	0		10,000	0		10,000	
85	cy	$375	Concrete frost & entry slab foundations	0		31,875	0		31,875	
5,880	sf	$4.50	5" reinforced slab on grade w/sawcutting & finishing	0		26,460	0		26,460	
100	sf	$8	8" reinforced frost edge entry slabs w/finishing	0		800	0		800	
140	sf	$15	8" x 24" reinforced OHD landing pad doweled to building slab	0		2,100	0		2,100	
50	sf	$1.50	Equipment pads	0		75	0		75	
1	ls	$1,000	Framing hold down rods & anchor bolts	0		1,000	0		1,000	
6,250	sf flat	$4.75	Flat bottom wood trusses w/eave overhang & blocking	0		29,690	0		29,690	
1,750	bf	$3.50	Roof edge framing & blocking & ladder framing	0		6,125	0		6,125	
240	shts	$43	3/4" roof sheathing	0		10,320	0		10,320	
350	bf	$3.25	2 x 12 floor joists root cellar	0		1,140	0		1,140	
10	shts	$43	3/4" floor sheathing root cellar	0		430	0		430	
525	bf	$4.50	LVL headers overhead doors	0		2,365	0		2,365	
7,750	bf	$2.75	2 x 6 exterior stud framing & posts	0		21,315	0		21,315	
1,800	bf	$2.75	2 x 6 interior stud framing	0		4,950	0		4,950	
200	shts	$25	1/2" exterior wall sheathing	0		5,000	0		5,000	
95	shts	$35	5/8" interior shear wall sheathing	0		3,325	0		3,325	
80	shts	$35	5/8" interior finish wall sheathing workshop-storage	0		2,800	0		2,800	
2,000	bf	$3.75	Door & window header-block-shim	0		7,500	0		7,500	
			continued on next page	0		0	0		0	

JOB #	2013.57	KENNEBEC VALLEY C OMMUNITY COLLEGE - Equipment Barn					WORKSHEETS			(page 2)
			3/24/2014							
Qnty	X on	Un its	Description	Mtrl	Eqpmt	Subco n	Labor	Other	TOTAL	GR TOTAL
				0		0	0		0	
			Work Scope (cont.)	0		0	0		0	
250	bf	$3.75	In wall blocking	0		940	0		940	
4	shts	$45	Electric panel plywood	0		180	0		180	
1	floor	$1,000	Wood stair set w/railing to root cellar	0		1,000	0		1,000	
75	lf	$15	Window solid surface sill & stoop	0		1,125	0		1,125	
1,165	lf	$6	Door & window interior trim surround	0		6,990	0		6,990	
600	sf	$4	FRP wall panel & trim wash-pack to 6'	0		2,400	0		2,400	
3	ea	$700	Class storage wardrobe	0		2,100	0		2,100	
36	lf	$250	Stainless steel work counters wash-pack	0		9,000	0		9,000	
500	lf set	$12	Aluminum wrapped eave & gable wood fascia	0		6,000	0		6,000	
455	sf set	$25	Exterior PT frame deck w/compostie board finish-steps-rails	0		11,375	0		11,375	
400	lf	$5	Eave perforated soffit strips	0		2,000	0		2,000	
325	sf	$2.75	Asphalt mastic 2 coat damp proof @ root cellar	0		895	0		895	
2,485	sf	$1.15	2" rigid foundation insulation	0		2,860	0		2,860	
4,425	sf	$1.15	2" rigid underslab insulation typ radiant & 4' return non-radiant	0		5,090	0		5,090	
655	sf	$3.50	4" rigid wall insulation surround coolbot room	0		2,295	0		2,295	
5,880	sf	$2.50	R38 batt and-or blown insulation ceiling	0		14,700	0		14,700	
6,055	sf	$0.75	R15 batt insulation exterior wall	0		4,545	0		4,545	
6,055	sf	$1.75	R7.5 rigid insulation exterior wall face	0		10,600	0		10,600	
2,600	sf	$0.90	6" stud batt interior walls	0		2,340	0		2,340	
6,055	sf	$0.30	Tyvek building air barrier	0		1,820	0		1,820	
11,935	sf	$0.20	Ceiling & exterior wall 6 mil VB	0		2,390	0		2,390	
7,065	sf	$8	Stand seam metal panel & 100% ice-water shield & drip-trim-flash	0		56,520	0		56,520	
6,055	sf	$6.50	Cement board siding factory prefinished w/trims & drain barrier	0		39,360	0		39,360	
1	ls	$5,000	Firestopping & caulking	0		5,000	0		5,000	
5	lvs	$1,450	Metal clad wood exterior door-frame-hardware	0		7,250	0		7,250	
17	lvs	$950	Metal clad wood interior door-frame-hardware	0		16,150	0		16,150	
345	sf	$60	Fiberglass windows low e insulated glass operable	0		20,700	0		20,700	
1	ea	$2,250	Overhead door 8 x 8 electric operator insulated panel	0		2,250	0		2,250	
7	ea	$3,500	Overhead door 10 x 10 electric operator insulated panel	0		24,500	0		24,500	
11,055	sf	$1.50	5/8" drywall sheathing @ wood studs	0		16,585	0		16,585	
3,415	sf	$2.25	Ceiling drywall sheathing on furring toilet-shower-wash-pack	0		7,685	0		7,685	
2,165	sf	$2.25	Acoustical ceiling 2 x 4 square edge class & mud room & office	0		4,875	0		4,875	
1,130	sf	$1.25	Polished concrete floor	0		1,415	0		1,415	
			continued on next page	0		0	0		0	

JOB #	2013.57	KENNEBEC VALLEY C OMMUNITY COLLEGE - Equipment Barn					WORKSHEETS			(page 3)
			3/24/2014							
Qnty	X on	Un its	Description	Mtrl	Eqpmt	Subco n	Labor	Other	TOTAL	GR TOTAL
				0		0	0		0	
			Work Scope (cont.)	0		0	0		0	
4,540	sf	$0.45	Sealed concrete floor	0		2,045	0		2,045	
210	sf	$10	Ceramic tile w/tile base	0		2,100	0		2,100	
225	sf	$10	Ceramic tile wainscot	0		2,250	0		2,250	
13,915	sf	$0.50	Drywall painting	0		6,960	0		6,960	
22	lvs	$90	Door & frame painting	0		1,980	0		1,980	
6,055	sf	$0.25	Exterior siding & trim touch-ups	0		1,515	0		1,515	
2	set	$750	Toilet accessories-grab bars-mirrors	0		1,500	0		1,500	
30	opngs	$260	Lockers double tier	0		7,800	0		7,800	
11	lf	$55	Locker benches	0		605	0		605	
1	ls	$500	Signage ADA & directional	0		500	0		500	
160	sf	$13	Mark & tack boards	0		2,080	0		2,080	
3	ea	$250	Bulletin board	0		750	0		750	
3	ea	$325	Fire extinguisher w/semiflush wall cabinet	0		975	0		975	
1	set	$3,000	Ceiling projector & mount & screen allowance	0		3,000	0		3,000	
75	lf	$135	Sprinkler water line & valves~new main to 10' outside w/wet tap	0		10,125	0		10,125	
1	ls	$8,500	Sprinkler backflow & water building entry to 10' outside	0		8,500	0		8,500	
5,880	sf	$2.50	Sprinkler wet interior system	0		14,700	0		14,700	
5,880	sf	$2	Sprinkler dry attic system	0		11,760	0		11,760	
10	lf	$50	Plumbing water line & valves split from new sprinkler main	0		500	0		500	
1	ls	$1,250	Plumbing backflow preventor & meter & water to 10' outside	0		1,250	0		1,250	
1	ls	$10,000	Plumbing leach field & tank system complete w/field	0		10,000	0		10,000	
1	ea	$5,000	Plumbing 120 gallon cement line tank w/heat exchange & coil	0		5,000	0		5,000	
1	ls allow	$10,000	Plumbing domestic solar hot water system roof mounted	0		10,000	0		10,000	
6	fxtr	$1,500	Plumbing WC-LAV-SS-JAN w/rough	0		9,000	0		9,000	
2	ea	$2,500	Plumbing SH w/curtain & rod & robe hooks	0		5,000	0		5,000	
1	ea	$1,000	Plumbing EYE	0		1,000	0		1,000	
11	ea	$1,000	Plumbing FD w/piping	0		11,000	0		11,000	
4	ea	$350	Plumbing HB	0		1,400	0		1,400	
1	ea	$3,500	Plumbing WH	0		3,500	0		3,500	
1	tons	$325	HVAC window hung AC unit coolbot	0		325	0		325	
1	ls	$20,000	HVAC condensing gas boiler system	0		20,000	0		20,000	
3,260	sf	$7.50	HVAC radiant slab system	0		24,450	0		24,450	
5,880	sf	$7.50	HVAC ERU w/insulated duct & heating coil & grilles-registers	0		44,100	0		44,100	
			continued on next page	0		0	0		0	

JOB #	2013.57	KENNEBEC VALLEY C OMMUNITY COLLEGE - Equipment Barn					WORKSHEETS			(page 4)
			3/24/2014							
Qnty	X on	Un its	Description	Mtrl	Eqpmt	Subco n	Labor	Other	TOTAL	GR TOTAL
				0		0	0		0	
			Work Scope (cont.)	0		0	0		0	
4	ea	$1,250	HVAC unit heaters workshop & storage	0		5,000	0		5,000	
1	set	$4,000	HVAC exhaust fans & louvers work area	0		4,000	0		4,000	
1	ea	$1,000	HVAC direct muffler snorkel exhaust & venting work area	0		1,000	0		1,000	
1	ls	$2,500	HVAC gas monitoring system work area & storage	0		2,500	0		2,500	
1	ls allow	$3,500	HVAC passive mech system root cellar w/radiant heat loop add	0		3,500	0		3,500	
6,180	sf	$2.50	HVAC controls	0		15,450	0		15,450	
75	lf allow	$55	Electrical secondary u.g. conduit & wire to building	0		4,125	0		4,125	
6,180	sf	$3	Electrical power & distribution	0		18,540	0		18,540	
6,180	sf	$6.50	Electrical LED lighting & wiring	0		40,170	0		40,170	
11	ea	$800	Electrical lighting & wiring LED exterior building mounted	0		8,800	0		8,800	
6,180	sf	$1.50	Electrical telecomdata conduit & wiring	0		9,270	0		9,270	
6,180	sf	$1	Electrical fire & smoke alarm-egress lights-battpaks-horns-strobes	0		6,180	0		6,180	
1	ls allow	$275,000	Electrical photovoltaic array system	0		275,000	0		275,000	
1	ls	$6,000	Electrical wiring new HVAC equipment & overhead doors	0		6,000	0		6,000	
1	ls	x	Owner outside cable plant	0		0	0		0	
1	ls	$18,450	Owner infrastructure internal cable plant	0		18,450	0		18,450	
1	ls	$11,770	Owner security doors	0		11,770	0		11,770	
1	ls	$21,460	Owner security cameras	0		21,460	0		21,460	300 sf cellar
1	ls	$9,655	Owner security internal notification	0		9,655	0		9,655	5,850 sf 1st
1	ls	$11,700	Owner technology	0		11,700	0		11,700	6,180 sf
			SubTotals	0	0	1,226,705	0	0	1,226,705	$260.03/sf
		31%	Markups	0		0	0	380,280	380,280	
			TOTALS	0	0	1,226,705	0	380,280	1,606,985	$1,606,985
				0		0	0		0	
Markups = 8% Div 1 Conditions + 7% GenCon O&P + 15% Cost Contingency + 1% Bonds = 31%										
Excludes A&E fees, Owner movables & furnishings, hazmats & unsuitable soils, inflation (Owner to add 2% min to 5% max per year inflation beyond Spring 2014)										
				0		0	0		0	
				0		0	0		0	
				0		0	0		0	
				0		0	0		0	
				0		0	0		0	
				0		0	0		0	
				0		0	0		0	
				0		0	0		0	
Conestco.		222 Mountain Road, R aymond ME 04071 ~ 207.627.4099 ph/fx ~ O pinions of Probable C ost ~ Construction Co nsulting ~ Value Engi neering								

JOB #	2013.57	KENNEBEC VALLEY C OMMUNITY COLLEGE - Equipment Barn					WORKSHEETS			(page 5)
			3/24/2014							
Qnty	X on	Un its	Description	Mtrl	Eqpmt	Subco n	Labor	Other	TOTAL	GR TOTAL
				0		0	0		0	
			Alternates	0		0	0		0	
			# 1: Boiler Expansion for Greenhouse Work	0		0	0		0	
160	sf set	$5	2 x furred & rigid insul & 3/4" pwd overlay on existing GH benches	0		800	0		800	
1,440	sf set	$3.75	2 x furred & rigid insul & 3/4" pwd overlay on existing GH floor	0		5,400	0		5,400	
300	lf set	$30	Underground supply & return loop inuslated piping w/dig & bf	0		9,000	0		9,000	
1	ls	$2,500	75,000 btu Eqpmnt Barn boiler size upgrade for Greenhouse	0		2,500	0		2,500	
1,600	sf	$7.50	In floor and top of bench radiant supply piping & pumping	0		12,000	0		12,000	
1,600	sf	$2	Controls for radiant system	0		3,200	0		3,200	
			SubTotals	0	0	32,900	0	0	32,900	
		31%	Markups	0		0	0	10,200	10,200	
			TOTALS	0	0	32,900	0	10,200	43,100	$43,100
				0		0	0		0	
			# 2: Pellet Boiler System	0		0	0		0	
1	ls add	$7,500	Pellet boiler system add including loading chute & storage	0		7,500	0		7,500	
			SubTotals	0	0	7,500	0	0	7,500	
		31%	Markups	0		0	0	2,325	2,325	
			TOTALS	0	0	7,500	0	2,325	9,825	$9,825
				0		0	0		0	
Markups = 8% Div 1 Conditions + 7% GenCon O&P + 15% Cost Contingency + 1% Bonds = 31%										
Excludes A&E fees, Owner movables & furnishings, hazmats & unsuitable soils, inflation (Owner to add 2% min to 5% max per year inflation beyond Spring 2014)										
				0		0	0		0	
				0		0	0		0	
				0		0	0		0	
				0		0	0		0	
				0		0	0		0	
				0		0	0		0	
				0		0	0		0	
				0		0	0		0	
				0		0	0		0	
				0		0	0		0	
				0		0	0		0	
				0		0	0		0	
				0		0	0		0	
				0		0	0		0	
				0		0	0		0	
Conestco.		222 Mountain Road, R aymond ME 04071 ~ 207.627.4099 ph/fx ~ O pinions of Probable C ost ~ Construction Co nsulting ~ Value Engi neering								

HIGH LEVEL BUDGET ESTIMATION

PROJECT BARN W/ CLASSRM RETROFIT

DATE 02.27.2014

DIMENSIONS OVERALL: 186 x 30
CLASS & OFFICE: 92 x 30

Qty	Qty Type	Cost / Unit	Extended	Description	Budget Type	Notes
1	flat	$0.00	$0.00	Outside Cable Plant	Project Bid	Fiber & Copper, Trenching, Conduit, etc ** Add-On to OCP Project - Sep Funding
	Section Subtotal		**$0.00**			
2760	sq ft	$3.75	$10,350.00	Infrastructure - Internal Cable Plant - Data/Voice	Project Bid	Jack/Station Wiring ** Reduced sq ft to represent classrm & office only locs
1	closet	$3,500.00	$3,500.00	Infrastructure - Inside Cable Plant Distribution	Project Bid	Build out of CDF - Racks, Labor, etc
1	closet	$4,600.00	$4,600.00	Infrastructure - Inside Cable Plant Distribution Equipment	Allowance	Switch, UPS, etc
0	closet	$4,600.00	$0.00	Infrastructure - Inside Cable Plant Redundant Distribution Equipment	Allowance	If redundancy required
	Section Subtotal		**$18,450.00**			
Scenario A - Remote Building / No HVAC / No NetController - Incls Door-Only System						
1	ea	$10,520.00	$10,520.00	Security - Door - 4-door Remote Expansion	Project Bid	Control System Material & Labor (Controller(s), Readers, Door Status, RTEs) ***Crash Bar/Strike/Etc Installed & Provided by Others***
0	ea	$18,480.00	$0.00	Security - Door - 8-door Remote Expansion	Project Bid	Control System Material & Labor (Controller(s), Readers, Door Status, RTEs) ***Crash Bar/Strike/Etc Installed & Provided by Others***
1	flat	$1,250.00	$1,250.00	Security - Door Infrastructure	Allowance	
Scenario B - Remote Building / NetController Cost Included (allows for HVAC) - (8-door System)						
0	ea	$24,240.00	$0.00	Security - Door - 8-door + HVAC NetController Remote Expansion	Project Bid	Control System Material & Labor (Controller(s), Readers, Door Status, RTEs) ***Crash Bar/Strike/Etc Installed & Provided by Others***
0	flat	$1,650.00	$0.00	Security - Door Infrastructure	Allowance	
Scenario C - Building with existing NetController						
0	ea	$2,257.00	$0.00	Security - Door	Project Bid	Control System Material & Labor (Controller(s), Readers, Door Status, RTEs) ***Crash Bar/Strike/Etc Installed & Provided by Others***
0	flat	$0.00	$0.00	Security - Door Infrastructure	Allowance	

	Section Subtotal		**$11,770.00**			
12	ea	$1,200.00	$14,400.00	Security - Cameras - External	Allowance	Material - camera & POE interface
0	ea	$700.00	$0.00	Security - Cameras - Internal	Allowance	Material - camera & POE interface
3720	sq ft	$1.75	$6,510.00	Security - Camera Cabling	Project Bid	Labor & Material - Terminated ** Reduced sq ft to represent unique structure
1	flat	$550.00	$550.00	Security - Camera Infrastructure	Allowance	Material - misc supplies
	Section Subtotal		**$21,460.00**			
5	ea	$225.00	$1,125.00	Security - Internal Notification - Horn	Allowance	Material - horn & power supply
6	ea	$275.00	$1,650.00	Security - Internal Notification - Ceiling Speaker	Allowance	Material - speaker & power supply
2	ea	$425.00	$850.00	Security - External Notification - Horn	Allowance	Material - horn & power supply
3720	sq ft	$1.50	$5,580.00	Security - Notification Cabling	Project Bid	Labor & Material - UnTerminated ** Reduced sq ft to represent unique structure
1	flat	$450.00	$450.00	Security - Notification Infrastructure	Allowance	Material - misc supplies
	Section Subtotal		**$9,655.00**			
4	ea	$1,200.00	$4,800.00	Technology - Computer Stations	Allowance	
6	ea	$250.00	$1,500.00	Technology - Phones - Digital	Allowance	
0	ea	$375.00	$0.00	Technology - Phones - IP	Allowance	
1	ea	$1,400.00	$1,400.00	Technology - Printer	Allowance	
0	ea	$1,200.00	$0.00	Technology - Projector	Allowance	
0	ea	$300.00	$0.00	Technology - Projector Screen (Manual)	Allowance	
0	ea	$600.00	$0.00	Technology - Projector Screen (Motorized)	Allowance	
3	room	$250.00	$750.00	Technology - Misc	Allowance	
1	room	$3,250.00	$3,250.00	Technology - Classroom Technology Pkg	Allowance	
	Section Subtotal		**$11,700.00**			

All Sections Subtotal		$73,035.00	
GC Markup	15%	$5,469.00	*(Project Bid items only)*

Total Budgetary Estimate	$78,504.00

Farm Stand / Early Childhood Education Center Playspace

Project Description:

As part of the Early Childhood Education program, KVCC wanted to turn the existing farm stand into a play space as a part of the Nature Explore development plan. After a preliminary review, KVCC decided they would like to build a new structure of similar size and appearance in the same location.

The new building will be business occupancy (as the children would always be under parental supervision) with an occupant load of 25 people based on 10 children, 10 parents and 5 KVCC students and staff.

Preliminary Construction Cost:

The preliminary construction cost estimate is $348,265 which is approximately $415/square foot. This includes approximately $80,000 for IT and Security needs for the building based on KVCC standards.

Architectural Narrative:

The size of the existing farm stand is approximately 838 square feet (20'x40'). This will be adequate square footage for a play space for 10 young children, a mudroom, an office, two bathrooms, mechanical/electrical room and an entry vestibule.

Exterior envelope can be standard wood frame construction with R-15 insulation in the stud cavity and then R-7.5 continuous wall insulation and R-38 insulation in the roof. The standing seam metal roof would be framed with scissor trusses so that the interior play space would follow the profile of the truss. Windows should be operable, double pane insulated fiberglass windows similar to Marvin Integrity. Siding should be cementitious lap siding similar to Hardie Plank siding. Entry doors to be commercial grade aluminum clad, fully glazed doors similar to Marvin Commercial Clad Wood Door. Heating will be through the radiant floor and cooling will be with ceiling fans and the operable windows.

Interior spaces:

The play room must be at least 350 square feet as regulations require a minimum of 35 sf/child. The play space will be a large open space with a rubber tile floor that may be divided by furnishings. The ceiling will be gypsum board attached to the underside of the trusses with acoustical clouds or baffles floating below for acoustical and visual treatment.

The mud room will be approximately 150 sf to provide adequate space for a group of parents and children to change into outerwear all at the same time. It will also double

as a vestibule with an exterior door and an interior door into the play space. The floor material will be rubber tile similar to the play room.

The bathroom area will have two rooms with one child sized and one full size toilet fixtures separated by a counter with two sinks. Doors to the toilet rooms will be Dutch doors to allow for adult supervision. Floor material should be rubber tile.

The office will be approximately 120 square feet with carpeting and an acoustical tile ceiling.

The mechanical and electrical room is approximately 50 square feet with a sealed concrete floor and exposed ceiling.

The vestibule is approximately 40 square feet with rubber tile and a gypsum board ceiling.

Structural Narrative:

The replacement structure will be a conventionally framed single-story wood structure with a gable roof line formed with prefabricated metal-plated wood scissor trusses. Preliminary architectural design call for a 12:12 pitched top chord and 6:12 pitch bottom chord. Walls will be framed with 2x6 nominal lumber (SPF #2) spaced at 16" centers covered with 1/2" (nominal) thick rated wood sheathing, blocked at panel edges. Fastening requirement of the wood sheathing will be determined through lateral analysis, but a typical system of 8d nails placed at 6" along panel edges and 12" in the panel field. Corners of the buildings will be detailed with proprietary steel hold-down devices connected to the foundation system with threaded rod and fastened to the wall framing with screws or nails. The roof trusses will be placed at 24" on center and will be covered with 5/8" (nominal) wood sheathing, 40/20 span rated. Fastening of the wood panels will be determined during building design, but fastening will be similar to the wall system listed above. Metal straps will be used to resist calculated uplift forces on the roof trusses from wind loads.

Footings for the building will be designed to conform to requirements and recommendations within the project Geotechnical Engineer's report. We expect that a continuous 24" wide footing, with two #5 steel reinforcing bars, placed below the frost line to support an 8" stem wall will be acceptable for typical soils in the region. Stem wall will be reinforced with 2 #5 rebar at the top and bottom of the wall with #5 vertical rods placed at 18"on center. Connection of the wood walls to the foundation will be made with ½" anchor rods placed at a maximum spacing of 48" on center.

It is expected that a footing drain will be required by the geotechnical report. This drain should be formed with a 4" diameter perforated PVC drain pipe placed within a crushed stone bedding approximately 24" square in cross section. This bedding should

also be wrapped with a geotextile fabric to prevent fine particulates from the soil clogging the pipe. The drain outlet should be extended to daylight with a minimum pitch of 1/32" per foot. Drain cleanouts should be provided at the furthest corner from the drain outlet.

The interior floor of the space will be a 5" thick concrete slab on grade with radiant tubing (see Mechanical Narrative), and reinforced with welded wire fabric (W4xW4-4x4). Slab will be uniformly supported by compacted subgrade materials as specified by the Geotechnical Engineer's report. A 15 mil vapor retarder, such as Stego Wrap, will be specified between the subgrade and the rigid under-slab insulation required for the radiant floor system.

Mechanical Narrative:

Farm Stand Systems Narrative

The existing farm stand is set to be demolished. The existing farm stand currently has no utilities serving it. Domestic water supply and sanitary utilities appear to have been removed from the site.

Fire Protection Systems

The new farm stand does not require an automatic sprinkler system.

Mechanical Systems

Ventilation: Code required ventilation shall be provided using a fan powered packaged energy recovery ventilator, which will remove exhaust heat energy and transfer the energy to the supply air stream. The package ventilator shall be equal to Mitsubishi Lossnay or RenwaireAire EV series. A duct heating coil shall be provided room neutral air during the heating season.

Cooling System: Air conditioning will not be provided for this space. Three 60" diameter ceiling mounted fans to provide passive cooling in the summer and heat destratification in the winter. Fans shall be equal to Big Ass Fans – Haiku or MarcoAir Airstar.

Heating System: Heating shall be provided via a wall hung, condensing boiler and sized for the peak building load. Boiler shall be equal to HTP Elite or Rinnai E Series. The heating hot water will provide radiant heat throughout the space. Radiant heating shall be equal to Uponor Pex-A. A propane tank shall be provided and installed by the local propane dealer chosen by the owner.

Plumbing Systems

Water service: The water service for the facility will be tied into the existing municipal system serving the campus. RPZ type water backflow prevention will be provided in accordance with the state and local utility requirements. A water meter shall be installed as required on the domestic water service entrance. The domestic water shall enter the building via a dedicated main serving the building.

Sewer: Provide new sanitary line to connect to existing sewer.

Domestic Hot Water: A 1 gallon electric water heater will serve the two lavatories requiring hot water. Water will be heated to 140°F and then tempered with a thermostatic mixing valve before being supplied to the fixtures. Basis of design: Hubbel CE110.

Plumbing Fixtures: One child sized toilet and one full size toilet, two lavatories, three exterior freeze resistant wall hydrants, 1 tamper resistant hose bib, and two floor drains with mechanical trap primers.

Electrical Narrative:

Electrical Service: The existing 120/240V overhead electrical service, from Central Maine Power, which currently feeds the farmstand will be re-used. There will be an exterior mounted CMP meter where the service enters the building. The service will land on a new 120/240V panelboard which will feed power to all electrical equipment within the building.

Electrical Equipment: Due to the new building occupants, all of the receptacles accessible by children will be tamper proof type. Power will be provided to all required mechanical and plumbing loads.

Lighting: Lighting within the new farmstand will consist of higher efficiency linear fluorescent fixtures in the office, mud room and vestibule areas. The playroom will consist of LED downlights. Egress lighting will consist of wall mounted emergency lighting fixtures with integral battery. Exit signs will be provided where required and will include integral battery packs. Exterior lighting at the building exits will consist of wall mounted LED fixtures.

Telecommunications: There appeared to be no existing telecommunications in the building so a new telecommunication service will need to be installed. Wired and wireless internet will be installed. Data outlets will be installed where requested.

Fire Alarm: A new digital addressable fire alarm system will be installed within the building. This will include smoke/heat detectors, pull stations and notification devices where required to be installed by codes. A new fire alarm control panel

will be installed within the electrical room and a remote annunciator at the building entrance.

JOB #	2013.57	KENNEBEC VALLEY C OMMUNITY COLLEGE - Farm Stand					WORKSHEETS			(page 1)
			3/24/2014							
Qnty	X on	Uni ts	Description	Mtrl	Eqpmt	Subc on	Labor	Other	TOTAL	GR TOTAL
				0		0	0		0	
			Work Scope	0		0	0		0	
1	ls	$500	Demolition dust control	0		500	0		500	
50	cy	$50	Demolish existing farm stand & deck (includes MEP demo)	0		2,500	0		2,500	
3	cy	$150	Demolish existing concrete piers	0		450	0		450	
4	15 cy	$750	Cleanup & disposal demolition debris	0		3,000	0		3,000	
1	ea	$1,000	Construction entrance	0		1,000	0		1,000	
1	ls	$1,000	Site protection & dewatering	0		1,000	0		1,000	
1	ls	$750	Dust & erosion control	0		750	0		750	
40	cy	$5	Loam strip & stockpile	0		200	0		200	
150	cy set	$35	Excavation & backfill structure & haul excavated materials	0		5,250	0		5,250	
840	sf set	$1.25	12" gravel subslab & 2" sand & VB	0		1,050	0		1,050	
40	lf	$16	Excavation & backfill interior utilities	0		640	0		640	
125	lf	$15	Foundation drains	0		1,875	0		1,875	
840	sf	$0.15	Fine grade slabs	0		130	0		130	
2,160	sf	$0.65	Loam & seed perimeter disturbed areas	0		1,405	0		1,405	
25	cy	$375	Concrete frost foundations	0		9,375	0		9,375	
840	sf	$4.50	5" reinforced slab on grade w/sawcutting & finishing	0		3,780	0		3,780	
25	sf	$8	6" reinforced frost edge entry slab w/finishing	0		200	0		200	
10	sf	$1.50	Equipment pads	0		15	0		15	
1	ls	$400	Framing hold down rods & anchor bolts	0		400	0		400	
880	sf flat	$5.50	Scissor wood trusses & eave overhang & blocking	0		4,840	0		4,840	
400	bf	$3.50	Roof edge framing & blocking	0		1,400	0		1,400	
35	shts	$40	5/8" roof sheathing	0		1,400	0		1,400	
1,500	bf	$2.75	2 x 6 exterior stud framing	0		4,125	0		4,125	
800	bf	$2.75	2 x 6 interior stud framing	0		2,200	0		2,200	
200	bf	$3	2 x flat ceiling framing @ bathrooms	0		600	0		600	
45	shts	$25	1/2" exterior wall sheathing	0		1,125	0		1,125	
875	bf	$3.75	Door & window header-block-shim	0		3,285	0		3,285	
100	bf	$3.75	In wall blocking	0		375	0		375	
2	shts	$45	Electric panel plywood	0		90	0		90	
30	lf	$15	Window solid surface sill & stoop	0		450	0		450	
420	lf	$6	Door & window interior trim surround	0		2,520	0		2,520	
20	opng	$40	Mud room wood cubbies	0		800	0		800	
10	lf set	$350	Play room base & wall cabinet set w/plam countertop	0		3,500	0		3,500	
			continued on next page	0		0	0		0	
Conestco.		222 Mountain Road, R aymond ME 04071 ~ 207.627.4099 ph/fx ~ O pinions of Probable C ost ~ Construction Co nsulting ~ Value Engi neering								

JOB #	2013.57	KENNEBEC VALLEY C OMMUNITY COLLEGE - Farm Stand					WORKSHEETS			(page 2)
			3/24/2014							
Qnty	X on	Uni ts	Description	Mtrl	Eqpmt	Subc on	Labor	Other	TOTAL	GR TOTAL
				0		0	0		0	
			Work Scope (cont.)	0		0	0		0	
2	ea	$700	Play room storage wardrobe	0		1,400	0		1,400	
185	lf set	$12	Aluminum wrapped eave & gable wood fascia	0		2,220	0		2,220	
85	lf	$5	Eave perforated soffit strips	0		425	0		425	
625	sf	$1.15	2" rigid foundation insulation	0		720	0		720	
840	sf	$1.15	2" rigid underslab insulation	0		970	0		970	
840	sf	$2.50	R38 batt and-or blown insulation ceiling	0		2,100	0		2,100	
1,280	sf	$0.75	R15 batt insulation exterior wall	0		960	0		960	
1,280	sf	$1.75	R7.5 rigid insulation exterior wall face	0		2,240	0		2,240	
1,000	sf	$0.90	6" stud batt interior walls	0		900	0		900	
1,280	sf	$0.30	Tyvek building air barrier	0		385	0		385	
2,160	sf	$0.20	Ceiling & exterior wall 6 mil VB	0		435	0		435	
995	sf	$8	Standing seam metal panel & 100% ice-water shield & drip-trim-flash	0		7,960	0		7,960	
1,280	sf	$6.50	Cement board siding factory prefinished w/trims & drain barrier	0		8,320	0		8,320	
1	ls	$1,250	Firestopping & caulking	0		1,250	0		1,250	
2	lvs	$1,450	Metal clad wood exterior door-frame-hardware	0		2,900	0		2,900	
7	lvs	$950	Wood interior door-frame-hardware	0		6,650	0		6,650	
150	sf	$60	Fiberglass windows low e insulated glass operable	0		9,000	0		9,000	
3,000	sf	$1.50	5/8" drywall sheathing @ wood studs	0		4,500	0		4,500	
840	sf	$2.25	Ceiling drywall sheathing on furring bathrooms-play-mud-vest	0		1,890	0		1,890	
120	sf	$2.25	Acoustical tile 2 x 4 square edge office	0		270	0		270	
150	sf	$10	Acoustical suspended clouds	0		1,500	0		1,500	
720	sf	$8.50	Rubber tile floor w/rubber base	0		6,120	0		6,120	
120	sf	$3.75	Carpeting w/rubber base	0		450	0		450	
4,160	sf	$0.50	Drywall painting	0		2,080	0		2,080	
10	lvs	$90	Door & frame painting	0		900	0		900	
1,280	sf	$0.25	Exterior siding & trim touch-ups	0		320	0		320	
2	set	$750	Toilet accessories-grab bars-mirrors	0		1,500	0		1,500	
2	ea	$450	Baby change stations	0		900	0		900	
1	ls	$250	Signage ADA & directional	0		250	0		250	
80	sf	$13	Mark & tack boards	0		1,040	0		1,040	
2	ea	$250	Bulletin board	0		500	0		500	
1	ea	$325	Fire extinguisher w/semiflush wall cabinet	0		325	0		325	
75	lf allow	$135	Plumbing water line extension to 10' outside w/dig & bf & patch	0		10,125	0		10,125	
			continued on next page	0		0	0		0	
Conestco.		222 Mountain Road, R aymond ME 04071 ~ 207.627.4099 ph/fx ~ O pinions of Probable C ost ~ Construction Co nsulting ~ Value Engi neering								

JOB #	2013.57		KENNEBEC VALLEY C OMMUNITY COLLEGE - Farm Stand				WORKSHEETS			(page 3)
			3/24/2014							
Qnty	X on	Uni ts	Description	Mtrl	Eqpmt	Subc on	Labor	Other	TOTAL	GR TOTAL
				0		0	0		0	
			Work Scope (cont.)	0		0	0		0	
1	ls	$1,250	Plumbing backflow preventor & meter & water to 10' outside	0		1,250	0		1,250	
	excluded		Plumbing sewer line extension to 10' outside w/dig & bf & patch	0		0	0		0	
1	ls	$500	Plumbing sewer to 10' outside	0		500	0		500	
5	fxtr	$1,500	Plumbing WC-LAV-SS w/rough	0		7,500	0		7,500	
2	ea	$1,000	Plumbing FD w/piping	0		2,000	0		2,000	
2	ea	$350	Plumbing HB	0		700	0		700	
1	ea	$2,500	Plumbing WH	0		2,500	0		2,500	
1	ls	$7,500	HVAC condensing gas boiler system	0		7,500	0		7,500	
840	sf	$7.50	HVAC radiant slab system	0		6,300	0		6,300	
840	sf	$7.50	HVAC ERU w/insulated duct & heating coil w/grilles-registers	0		6,300	0		6,300	
3	ea	$1,000	HVAC ceiling fans	0		3,000	0		3,000	
840	sf	$1.50	HVAC controls	0		1,260	0		1,260	
1	ls	$750	Electrical reconnect existing overhead service	0		750	0		750	
840	sf	$2.50	Electrical power & distribution	0		2,100	0		2,100	
840	sf	$6.50	Electrical LED lighting & wiring	0		5,460	0		5,460	
10	ea	$750	Electrical lighting & wiring LED interior downlights	0		7,500	0		7,500	
3	ea	$800	Electrical lighting & wiring LED exterior building mounted	0		2,400	0		2,400	
840	sf	$1.50	Electrical telecomdata conduit & wiring	0		1,260	0		1,260	
840	sf	$1	Electrical fire & smoke alarm-egress lights-battpaks-horns-strobes	0		840	0		840	
1	ls	$2,500	Electrical wiring new HVAC equipment	0		2,500	0		2,500	
1	ls	$18,500	Owner outside cable plant	0		18,500	0		18,500	
1	ls	$11,100	Owner infrastructure internal cable plant	0		11,100	0		11,100	
1	ls	$11,770	Owner security doors	0		11,770	0		11,770	
1	ls	$12,250	Owner security cameras	0		12,250	0		12,250	
1	ls	$3,325	Owner security internal notification	0		3,325	0		3,325	
1	ls	$5,550	Owner technology	0		5,550	0		5,550	840 sf
			SubTotals	0	0	265,850	0	0	265,850	$414.60/sf
		31%	Markups	0		0	0	82,415	82,415	
			TOTALS	0	0	265,850	0	82,415	348,265	$348,265
				0		0	0		0	
Markups = 8% Div 1 Conditions + 7% GenCon O&P + 15% Cost Contingency + 1% Bonds = 31%										
Excludes A&E fees, Owner movables & furnishings, hazmats & unsuitable soils, inflation (Owner to add 2% min to 5% max per year inflation beyond Spring 2014)										
				0		0	0		0	
				0		0	0		0	
Conestco.		222 Mountain Road, R aymond ME 04071 ~ 207.627.4099 ph/fx ~ O pinions of Probable C ost ~ Construction Co nsulting ~ Value Engi neering								

HIGH LEVEL BUDGET ESTIMATION

PROJECT EARLY CHILDHOOD EDU RETROFIT (FARM STAND)

DATE 02.27.2014

DIMENSIONS 40 x 20

Qty	Qty Type	Cost / Unit	Extended	Description	Budget Type	Notes
1	flat	$18,500.00	$18,500.00	Outside Cable Plant	Project Bid	Fiber & Copper, Trenching, Conduit, etc
	Section Subtotal		**$18,500.00**			
800	sq ft	$3.75	$3,000.00	Infrastructure - Internal Cable Plant - Data/Voice	Project Bid	Jack/Station Wiring
1	closet	$3,500.00	$3,500.00	Infrastructure - Inside Cable Plant Distribution	Project Bid	Build out of CDF - Racks, Labor, etc
1	closet	$4,600.00	$4,600.00	Infrastructure - Inside Cable Plant Distribution Equipment	Allowance	Switch, UPS, etc
0	closet	$4,600.00	$0.00	Infrastructure - Inside Cable Plant Redundant Distribution Equipment	Allowance	If redundancy required
	Section Subtotal		**$11,100.00**			
Scenario A - Remote Building / No HVAC / No NetController - Incls Door-Only System						
1	ea	$10,520.00	$10,520.00	Security - Door - 4-door Remote Expansion	Project Bid	Control System Material & Labor (Controller(s), Readers, Door Status, RTEs) ***Crash Bar/Strike/Etc Installed & Provided by Others***
0	ea	$18,480.00	$0.00	Security - Door - 8-door Remote Expansion	Project Bid	Control System Material & Labor (Controller(s), Readers, Door Status, RTEs) ***Crash Bar/Strike/Etc Installed & Provided by Others***
1	flat	$1,250.00	$1,250.00	Security - Door Infrastructure	Allowance	
Scenario B - Remote Building / NetController Cost Included (allows for HVAC) - (8-door System)						
0	ea	$24,240.00	$0.00	Security - Door - 8-door + HVAC NetController Remote Expansion	Project Bid	Control System Material & Labor (Controller(s), Readers, Door Status, RTEs) ***Crash Bar/Strike/Etc Installed & Provided by Others***
0	flat	$1,650.00	$0.00	Security - Door Infrastructure	Allowance	
Scenario C - Building with existing NetController						
0	ea	$2,257.00	$0.00	Security - Door	Project Bid	Control System Material & Labor (Controller(s), Readers, Door Status, RTEs) ***Crash Bar/Strike/Etc Installed & Provided by Others***
0	flat	$0.00	$0.00	Security - Door Infrastructure	Allowance	
	Section Subtotal		**$11,770.00**			
8	ea	$1,200.00	$9,600.00	Security - Cameras - External	Allowance	Material - camera & POE interface
1	ea	$700.00	$700.00	Security - Cameras - Internal	Allowance	Material - camera & POE interface

800	sq ft	$1.75	$1,400.00	Security - Camera Cabling	Project Bid	Labor & Material - Terminated
1	flat	$550.00	$550.00	Security - Camera Infrastructure	Allowance	Material - misc supplies
	Section Subtotal		**$12,250.00**			
0	ea	$225.00	$0.00	Security - Internal Notification - Horn	Allowance	Material - horn & power supply
3	ea	$275.00	$825.00	Security - Internal Notification - Ceiling Speaker	Allowance	Material - speaker & power supply
2	ea	$425.00	$850.00	Security - External Notification - Horn	Allowance	Material - horn & power supply
800	sq ft	$1.50	$1,200.00	Security - Notification Cabling	Project Bid	Labor & Material - UnTerminated
1	flat	$450.00	$450.00	Security - Notification Infrastructure	Allowance	Material - misc supplies
	Section Subtotal		**$3,325.00**			
2	ea	$1,200.00	$2,400.00	Technology - Computer Stations	Allowance	
4	ea	$250.00	$1,000.00	Technology - Phones - Digital	Allowance	
0	ea	$375.00	$0.00	Technology - Phones - IP	Allowance	
1	ea	$1,400.00	$1,400.00	Technology - Printer	Allowance	
0	ea	$1,200.00	$0.00	Technology - Projector	Allowance	
0	ea	$300.00	$0.00	Technology - Projector Screen (Manual)	Allowance	
0	ea	$600.00	$0.00	Technology - Projector Screen (Motorized)	Allowance	
3	room	$250.00	$750.00	Technology - Misc	Allowance	
0	room	$3,250.00	$0.00	Technology - Classroom Technology Pkg	Allowance	
	Section Subtotal		**$5,550.00**			

All Sections Subtotal		$62,495.00	
GC Markup	15%	$5,718.00	*(Project Bid items only)*

Total Budgetary Estimate	$68,213.00