

FACULTY STUDENT ASSOCIATION

of Jefferson Community College, Inc.

March 19, 2013

**Jeffrey E. Graham, Mayor
and Watertown City Council
City of Watertown**
245 Washington Street, Room 302A
Watertown NY 13601

Re: Jefferson Community College Residence Hall

Dear Honorable Mayor and City Council:

The Faculty-Student Association at Jefferson Community College, (FSA) is proposing the development of a Residence Hall on County property adjacent to the current Jefferson Community College (JCC) campus. The proposed facility will consist of two (2), four (4) story housing wings interconnected by a single-story common area. The total housing units encompassed within this facility will be sixty four (64) suites totaling 290 beds.

The location of this proposed development is at the corner of Cannoneer Loop and Rand Drive on the JCC Campus. The lands on which this project is proposed are currently owned by the County of Jefferson. The FSA is in the process of acquiring the 6.55 acre parcel from the County. This parcel of land is currently undeveloped and consists of dense scrub brush and some larger trees. This parcel of land has been re-zoned by the City of Watertown from Residence "A" to Residence "C" to allow for the development of dormitory style housing.

The FSA is confident that this is a viable project, based on studies performed by outside consultants. These studies focused on the housing needs of the College, and the number of beds that the College's student population could support. Also, on-campus housing is a growing trend among community colleges. For JCC to be competitive, in the community college market, there is an opinion that on-campus housing is a necessity.

Should there be a need for any questions or updates on meeting information, I can be contacted by phone at (315) 786-2353 or by email at dschissler@sunyjefferson.edu, or Joseph L. Thesier, P.E. with Bernier Carr & Associates by phone at (315) 782-8130 or by email at jthesier@thebcgroup.com.

Thank you for your assistance in this matter.

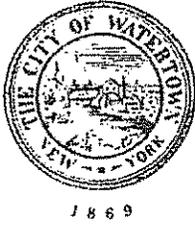
Very truly yours,



David Schissler
Executive Director, Faculty-Student Association

COFFEEN STREET WATERTOWN, NEW YORK 13601-1897

Bookstore 315 786-2423 • Food Service 315 786-2284 • Office 315 786-2412 • Fax 315 788-2123



**CITY OF WATERTOWN
SITE PLAN APPLICATION
AND
SHORT ENVIRONMENTAL
ASSESSMENT FORM, PART 1**

** Provide responses for all sections. INCOMPLETE APPLICATIONS WILL NOT BE PROCESSED. Failure to submit required information by the submittal deadline will result in not making the agenda for the upcoming Planning Board meeting.

PROPERTY LOCATION

Proposed Project Name: JCC Residence Hall

Tax Parcel Number: 8-34- (various)

Property Address: No 911 address at this time.

Existing Zoning Classification: Residence C

OWNER OF PROPERTY

Name: County of Jefferson Attn:Michael E. Kaskan, Deputy. Co. Admin.

Address: 195 Arsenal Street

Watertown, NY 13601

Telephone Number: 315-785-3075

Fax Number: 315-785-5070

APPLICANT

Name: Faculty-Student Association Attn:David Schissler, Ex. Dir.

Address: 1220 Coffeen Street

Watertown, NY 13601

Telephone Number: 315-786-2353

Fax Number: _____

Email Address: dschissler@sunyjefferson.edu

ENGINEER/ARCHITECT/SURVEYOR

Name: Bernier, Carr & Assoc. Attn:Joseph L. Thesier, P.E.

Address: 327 Mullin Street

Watertown, NY 13601

Telephone Number: 315-782-8130

Fax Number: 315-782-7192

Email Address: jthesier@thebcgroup.com

PROJECT DESCRIPTION

Describe project and proposed use briefly:

Construction of a four (4) story residence hall.

Is proposed Action:

New Expansion Modification/Alteration

Amount of Land Affected:

Initially: 4.99 Acres Ultimately: 4.99 Acres

Will proposed action comply with existing zoning or other existing land use restrictions?

Yes No If no, describe briefly

What is present land use in vicinity of project?

Residential Industrial Commercial Agriculture
 Park/Forest/Open Space Other

Describe: College Campus

Does project involve a permit approval, or funding, now or ultimately from any other Governmental Agency (Federal, State or Local)?

Yes No If yes, list agency(s) and permit/approval(s)
NYSDEC-SWPPP Permit, NYSDOH-Approval of public water supply main.
~~Jefferson County for land disposition.~~

Jefferson County Civic Facility Development Corporation for bonding
Does any aspect of the project have a currently valid permit or approval?

Yes No If yes, list agency(s) and permit/approval(s)

As a result of proposed project, will existing permit/approval require modification?

Yes No

Proposed number of housing units (if applicable): 64 Suites totaling 290 beds.

Proposed building area: 1st Floor 32,787 Sq. Ft.
2nd Floor 19,820 Sq. Ft.
3rd Floor 19,820 Sq. Ft.
4th Floor ~~Port~~ 19,820 Sq. Ft.
Total 61,512 Sq. Ft.

Area of building to be used for the boiler room, heat facilities, utility facilities
and storage: 800 Sq. Ft.

Number of parking spaces proposed: 151

Construction Schedule: July 2013 to July 2014

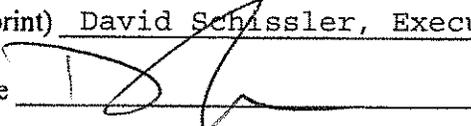
Hours of Operation: 24/7

Volume of traffic to be generated: N/A ADT

SIGNATURE

I certify that the information provided above is true to the best of my knowledge.

Applicant (please print) David Schissler, Executive Director

Applicant Signature  Date: 3/18/13

OPTIONAL DRAWINGS:

- PROVIDE AN ELECTRONIC (.DWG) COPY OF THE SITE PLAN WITH AS-BUILT REVISIONS.** This will assist the City in keeping our GIS mapping up-to-date.

REQUIRED DRAWINGS:

**** The following drawings with the listed information ARE REQUIRED, NOT OPTIONAL.** If the required information is not included and/or addressed, the Site Plan Application will not be processed.

- ELECTRONIC COPY OF ENTIRE SUBMISSION (PDF preferred)**
- BOUNDARY & TOPOGRAPHIC SURVEY**
(Depict existing features as of the date of the Site Plan Application. This Survey and Map must be performed and created by a Professional Land Surveyor licensed and currently registered to practice in the State of New York. This Survey and Map must be stamped and signed with an original seal and signature on at least one copy, the rest may be copies thereof.)
- All elevations are National Geodetic Vertical Datum of 1929 (NGVD29).
- 1' contours are shown & labeled with appropriate spot elevations.
- All existing features on and within 50 feet of the subject property are shown and labeled.
- All existing utilities on and within 50 feet of the subject property are shown and labeled.
- All existing easements and/or right-of-ways are shown and labeled.
- Existing property lines (bearings & distances), margins, acreage, zoning, existing land use, reputed owner, adjacent reputed owners & tax parcel numbers are shown and labeled.
- The north arrow & graphic scale are shown.
- DEMOLITION PLAN (If Applicable)**
- All existing features on and within 50 feet of the subject property are shown and labeled.
- All items to be removed are labeled in darker text.

SITE PLAN

- All proposed above ground features are depicted and clearly labeled.
- All proposed features are clearly labeled "proposed".
- All proposed easements & right-of-ways are shown and labeled.
- Land use, zoning, & tax parcel number are shown.
- The Plan is adequately dimensioned including radii.
- The line work & text for all proposed features is shown darker than existing features.
- All vehicular & pedestrian traffic circulation is shown including a delivery or refuse vehicle entering and exiting the property.
- Proposed parking & loading spaces including ADA accessible spaces are shown and labeled.
- N/A Refuse Enclosure Area (Dumpster), if applicable, is shown. Section 161-19.1 of the Zoning Ordinance states, "No refuse vehicle or refuse container shall be parked or placed within 15 feet of a party line without the written consent of the adjoining owner, if the owner occupies any part of the adjoining property".
- The north arrow & graphic scale are shown.

GRADING PLAN

- All proposed below ground features including elevations & inverts are shown and labeled.
- All proposed above ground features are shown and labeled.
- The line work & text for all proposed features is shown darker than existing features.
- All proposed easements & right-of-ways are shown and labeled.
- 1' existing contours are shown dashed & labeled with appropriate spot elevations.
- 1' proposed contours are shown & labeled with appropriate spot elevations.
- All elevations are National Geodetic Vertical Datum of 1929 (NGVD29).

- Sediment & Erosion control are shown & labeled on the grading plan unless separate drawings have been provided as part of a Stormwater Pollution Prevention Plan (SWPPP).

UTILITY PLAN

- All proposed above & below ground features are shown and labeled.
- All existing above & below ground utilities including sanitary, storm water, water, electric, gas, telephone, cable, fiber optic, etc. are shown and labeled.
- All proposed easements & right-of-ways are shown and labeled.
- The Plan is adequately dimensioned including radii.
- The line work & text for all proposed features is shown darker than existing features.
- The following note has been added to the drawings stating, "All water main and service work must be coordinated with the City of Watertown Water Department. The Water Department requirements supersede all other plans and specifications provided."

LANDSCAPING PLAN

- All proposed above ground features are shown and labeled.
- All proposed trees, shrubs, and other plantings are shown and labeled. Generic labeling at this time.
- All proposed landscaping & text are shown darker than existing features.
- All proposed landscaping is clearly depicted, labeled and keyed to a plant schedule that includes the scientific name, common name, size, quantity, etc.
- For additional landscaping requirements where nonresidential districts and land uses abut land in any residential district, please refer to Section 310-59, Landscaping of the City's Zoning Ordinance.
- Site Plan complies with and meets acceptable guidelines set forth in Appendix A - Landscaping and Buffer Zone Guidelines (August 7, 2007).

PHOTOMETRIC PLAN (If Applicable) Not provided per discussion with City Engineer.

- All proposed above ground features are shown.
- Photometric spot elevations or labeled photometric contours of the property are clearly depicted. Light spillage across all property lines shall not exceed 0.5 foot-candles.

CONSTRUCTION DETAILS & NOTES

All details and notes necessary to adequately complete the project including, but not limited to, landscaping, curbing, catch basins, manholes, water line, pavement, sidewalks, trench, lighting, trash enclosure, etc. are provided.

N/A Maintenance & protection and traffic plans & notes for all required work within City streets including driveways, water laterals, sanitary laterals, storm connections, etc. are provided.

N/A The following note must be added to the drawings stating:
"All work to be performed within the City of Watertown margin will require sign-off from a Professional Engineer, licensed and currently registered to practice in the State of New York, that the work was built according to the approved site plan and applicable City of Watertown standards. Compaction testing will be required for all work to be performed within the City of Watertown margin and must be submitted to the City of Watertown Codes Department."

PRELIMINARY ARCHITECTURAL PLANS (If Applicable)

Floor plan drawings, including finished floor elevations, for all buildings to be constructed are provided.

Exterior elevations including exterior materials and colors for all buildings to be constructed are provided. Colors not provided.

N/A Roof outline depicting shape, slope and direction is provided. Flat roof.

ENGINEERING REPORT

**** The engineering report at a minimum includes the following:**

Project location

Project description

Existing & proposed sanitary sewer flows & summary

Water flows & pressure

Storm Water Pre & Post Construction calculations & summary

Traffic impacts

Lighting summary

Landscaping summary

GENERAL INFORMATION

ALL ITEMS ARE STAMPED & SIGNED WITH AN ORIGINAL SIGNATURE BY A PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR SURVEYOR LICENSED AND CURRENTLY REGISTERED TO PRACTICE IN THE STATE OF NEW YORK.

If required, a copy of the Stormwater Pollution Prevention Plan (SWPPP) submitted to the NYSDEC will also be sent to the City of Watertown Engineering Department. When submitted to DEC.

** If required, a copy of all submittals sent to the New York State Department of Environmental Conservation (NYSDEC) for the sanitary sewer extension permit will also be sent to the City of Watertown Engineering Department. N/A no sanitary sewer main extension required.

** If required, a copy of all submittals sent to the New York State Department of Health (NYSDOH) will also be sent to the City of Watertown Engineering Department. When submitted to DOH.

** When NYSDEC or NYSDOH permitting is required, the property owner/applicant shall retain a licensed Professional Engineer to perform inspections of the proposed utility work and to certify the completed works were constructed in substantial conformance with the approved plans and specifications.

Signage will not be approved as part of this submission. It requires a sign permit from the Codes Department. See Section 310-52.2 of the Zoning Ordinance.

Plans have been collated and properly folded.

N/A If an applicant proposes a site plan with multiple buildings and any of those buildings front on a private drive, the City Council will name the private drive by resolution and the building(s) will be given an address number on that private drive by City staff. The applicant may propose a name for the private drive for the City Council's consideration.

N/A Proposed Street Name: _____

Explanation for any item not checked in the Site Plan Checklist.

The landscaping plan is work in progress. Prior to site plan approval the requirements as outlined and discussed with the planning board will be submitted for approval.

Engineering Report

BERNIER CARR & ASSOCIATES

Jefferson Community College

Proposed Residence Hall

Prepared for:

Faculty-Student Association
1220 Coffeen Street
Watertown, NY 13601

Phone No. (315) 786-2353



BERNIER CARR & ASSOCIATES
ENGINEERS ARCHITECTS AND LAND SURVEYORS
327 MULLIN STREET, WATERTOWN, NY 13601
WWW.THEBCGROUP.COM TEL.: 315.782.8130

March 2013

Jefferson Community College

Proposed Residence Hall

March 2013

Table of Contents

SECTION 1.0	EXECUTIVE SUMMARY
	1.1 Purpose of Report
	1.2 Existing Conditions
	1.3 Proposed Project
SECTION 2.0	EXISTING CONDITIONS
	2.1 Proposed Project Location
	2.2 Utilities
	2.3 Soil Conditions
	2.4 Topography and Drainage
SECTION 3.0	PROPOSED PROJECT
	3.1 Project Summary
	3.2 Site Layout Description
	3.3 Proposed Sanitary Sewer Flows
	3.4 Proposed Potable Water Flows and Fire Protection
	3.5 Site Drainage and Stormwater Management
	3.6 Traffic and Vehicle Impacts
	3.7 Site Lighting
	3.8 Landscaping Summary
SECTION 4.0	PROJECT IMPLEMENTATION
	4.1 Implementation Schedule
	4.2 Conclusion
APPENDICES	
	Appendix A USGS Project Location Map
	Appendix B NRCS Soils Information
	Appendix C Hydrant Flow Test Data
	Appendix D Hydrologic and Hydraulic Calculations

**SECTION 1.0
EXECUTIVE SUMMARY**

1.1 Purpose of Report

This Engineering Report was prepared on behalf of Faculty-Student Association (FSA) by Bernier, Carr and Associates (BC&A) to detail and discuss the site plan for a proposed Residence Hall to serve JCC. This building will provide housing for JCC students immediately adjacent to campus. A USGS map depicting the project location has been included in Appendix A.

1.2 Existing Conditions

The project site currently consists of a vacant lot adjacent to the JCC campus at the corner of Cannoneer Loop and Rand Drive in the City of Watertown. The landscape chiefly consists of wood and brush land. A sidewalk currently runs along the south side of Rand Drive to the intersection with street lighting. A pedestrian walking trail cuts through the hill on the backside of the site. The proposed project site is 6.55 acres in size.

1.3 Proposed Project

The proposed project will be a Residence Hall, which will be (2) four story wings with a central common area. This Residence Hall will have 64 suites and 290 beds. Site features around this proposed Residence Hall building include parking areas, driveways, sidewalk, lawn areas, utilities, drainage and stormwater management practices and landscaped areas.

**SECTION 2.0
EXISTING CONDITIONS**

2.1 Proposed Project Location

The project site is on vacant land at the corner of Rand Drive and Cannoneer Loop, east of the JCC Campus in the City of Watertown, New York. A USGS project location map is attached in Appendix A depicting the project location.

2.3 Utilities

There are several existing utilities on the proposed project site. An 8-inch sewer main runs along the eastern and southern sides of the site. An 8-inch watermain is currently located across the maintenance road on the adjacent lot with a fire hydrant at the corner. A storm drainage line that serves much of the JCC campus runs along the eastern side of the site. Overhead electric lines and street lighting are also found along Cannoneer Loop, with additional street lighting along Rand Drive. A natural gas main is located on the maintenance road on the southern side of the site.

2.4 Soil Conditions

The United States Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) soils maps and soils data indicate that soils within the project site consist chiefly of Farmington loam, Hudson and Madison silt/loam soils. These soils are well drained to poorly drained. Ground water typically lies at a depth of 18 inches to greater than 80 inches below the ground surface.

Soil borings performed onsite show deep soils close to Cannoneer Loop which become progressively shallower going further east onsite. Soils are typically clays and silts underlain with limestone bedrock. NRCS Soils maps have been included in Appendix B.

2.5 Topography and Drainage

The project site typically consists of gentle to steep slopes ranging from 1% to 25%. Elevations on site range from 414 feet to 440 feet above mean sea level. Most onsite drainage and uphill drainage from an existing 18-inch culvert under the maintenance road is collected in a central drainage swale that conveys drainage to storm lines on Rand Drive. This drainage eventually flows to a rock crevice on property north of Rand Drive offsite and discharges into the Black River, which is approximately 300 feet from the proposed project site.

**SECTION 3.0
PROPOSED PROJECT**

3.1 Project Summary

As discussed in Section 1.3 of this report, the proposed project will consist of a Residence Hall, which will be a (2) four story wings with a central common area. This Residence Hall will serve JCC and be used to house students on campus. This proposed facility will have the capacity for 64 suites and 290 beds. The site plan includes parking areas, sidewalk, lawn areas, service utilities, drainage and stormwater management practices and landscaped areas.

3.2 Site Layout Description

The proposed Residence Hall will be (2) four story housing wings for JCC students with a single story central common area. The wings are oriented to run parallel with Cannoneer Loop and Rand Drive.

Parking areas will be located primarily at the northern portion of the site. These parking areas have been configured as such to provide 151 parking spaces and sufficient turning and maneuvering room to accommodate the fire equipment utilized by the City of Watertown Fire Department. The proposed parking configuration also provides adequate handicap spaces and access. Two driveways are provided to connect Rand Drive to these proposed parking areas. Sidewalks are placed throughout the site to provide pedestrian access to and from the JCC campus and the proposed Residence Hall. Sidewalks have been designed to comply with ADA standards and provide a safe and direct walking route onsite.

Other prominent site features onsite include stormwater and drainage features as well as landscaped areas. These items are described in subsequent sections of this report.

3.3 Proposed Sanitary Sewer Flows

It is proposed that this Residence Hall connect to the existing sanitary sewer main that runs along Canoneer Loop. Sanitary sewer flows were computed following the guidance provided in the NYS DEC "Design Standards for Wastewater Treatment Works, 1988". Using a per bed flow of 30 GPD at 290 beds the expected Average Daily Flow for this facility can be expected to be approximately 11,600 GPD. Using a peaking factor of 2, the Maximum Daily Flow for this facility could be in the range of 16.1 GPM. The Peak Hourly Flow, with a peaking factor of 4, could be approximately 32.2 GPM.

3.4 Proposed Potable Water Flows and Fire Protection

It proposed that this Residence Hall connect to the existing 8" watermain adjacent to the South side of the project site. This watermain is owned and maintained by the City of Watertown. Hydrant flow tests conducted indicate that the expected static pressure is approximately 85 PSI, with residual pressures at approximately 80 PSI with a flow of approximately 720 GPM. Hydrant flow test data has been included in Appendix C.

In order to meet code requirements of a maximum 100 ft. from Fire Department pumper truck to the nearest fire hydrant, a fire hydrant will be provided adjacent to the common area portion of the proposed parking area. This fire hydrant will be utilized for connection to the Fire Department pumper truck for connection to the building fire sprinkler system.

3.5 Site Drainage and Stormwater Management

Site drainage is achieved on this site through open drainage swales, closed drainage culverts and catch basins and overland flow. Permanent stormwater management practices have been included to provide Water Quality, Run-off Reduction and Quantity benefits as required by the NYS Department of Environmental Conservation. An infiltration basin will be used in the rear portion of the site to handle flows from the new Residence Hall and landscaped lawn areas. Bioswales will be used adjacent to Rand Drive to treat flows from the new parking and driveway areas. Hydrologic and Hydraulic calculations for these structures have been included in Appendix D.

3.6 Traffic and Vehicle Impacts

A traffic study has not conducted for this proposed Residence Hall.

3.7 Site Lighting

Site lighting for this proposed Residence Hall will be provided such that the required lighting intensities will be provided at all parking areas, drives, entrances and sidewalks. Fixtures and luminaries will be specified that achieve these goals and also provide adequate shielding to minimize light pollution and energy usage. The existing street lighting along Rand Drive will be maintained.

3.8 Landscaping Summary

Landscape features for this proposed Residence Hall will generally be selected such that adequate buffering and aesthetic value is achieved. Individual street-scape trees, lawn areas and landscaped beds will predominate the roadside portions of the project site. The rear of the proposed Residence Hall will consist of an open lawn area with shade trees and plantings

**SECTION 4.0
PROJECT IMPLEMENTATION**

4.1 Implementation Schedule

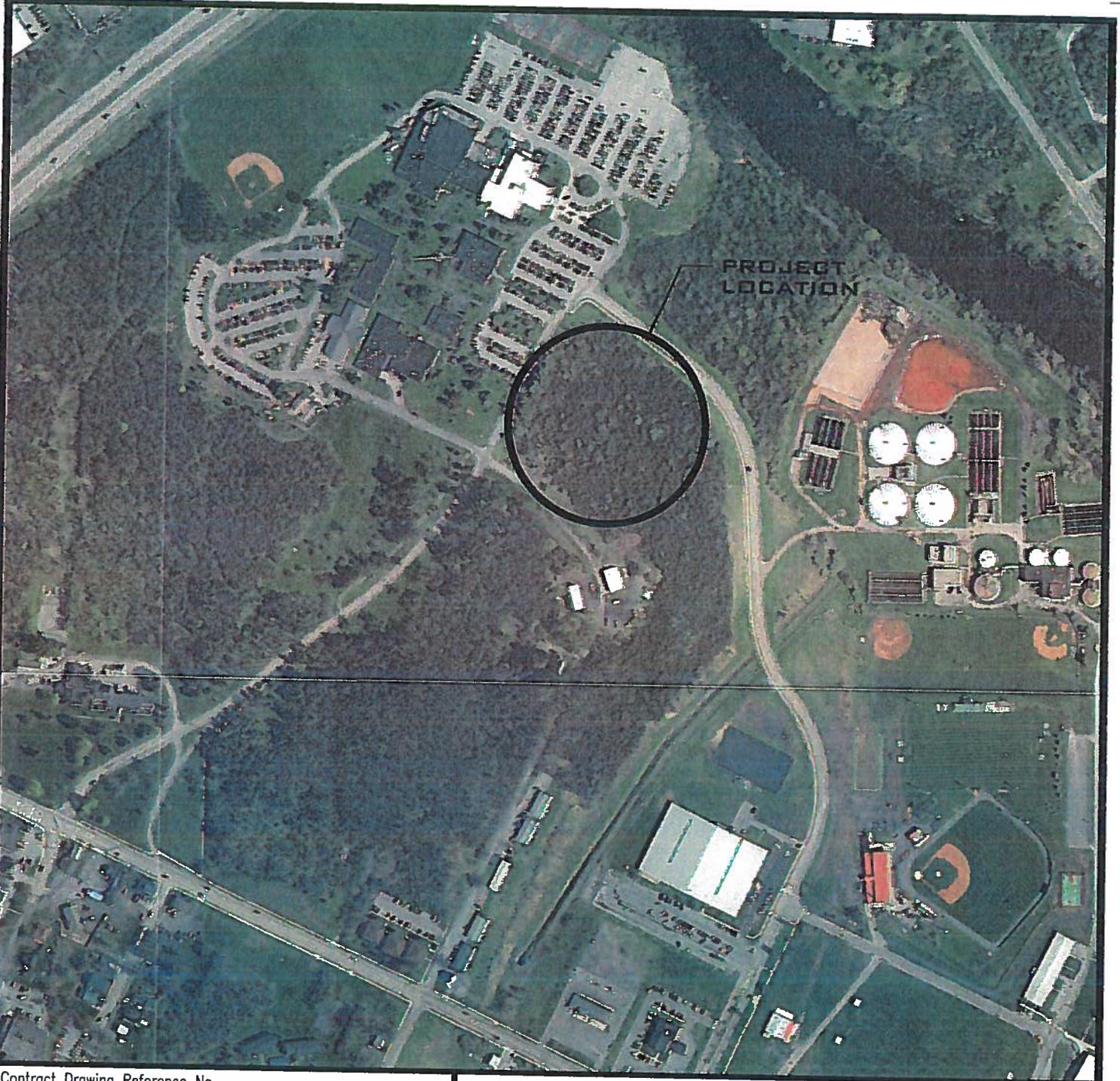
The following schedule denotes suggested key dates for implementation of various project actions. This time frame is based upon estimated dates for final planning, funding procurement, design, regulatory review, and construction, and as such, is subject to modification.

Implementation Schedule	
Activity	Date
Submit Site Plan Application To City of Watertown Planning	March 2013
Receive Site Plan Approval	May 2013
Receive Building Permit	July 2013
Begin Construction	July 2013
Open New Residence Hall	July 2014

4.2 Conclusion

The proposed Residence Hall described in this Engineering Report is intended to provide housing opportunities for JCC students on campus. This building will be located on the corner of Cannoneer Loop and Rand Drive and consist of (2) four-story dormitory wings with a single story common area and have 64 suites and 290 beds. Prominent site features that will augment this proposed Residence Hall include asphalt parking areas, driveways, landscaping areas, lawn areas, paver areas and permanent stormwater management practices.

**APPENDIX A
USGS PROJECT LOCATION MAP**



PROJECT
LOCATION

Contract Drawing Reference No.

LOCATION MAP

Drawn By
JBE

Checked By
JLT

Revisions:

PROPOSED
JCC RESIDENCE HALL

Scale
NOT TO SCALE

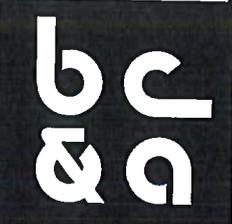
Date
12/17/2012

File No. 2010-088

BERNIER, CARR & ASSOCIATES

Sheet No.

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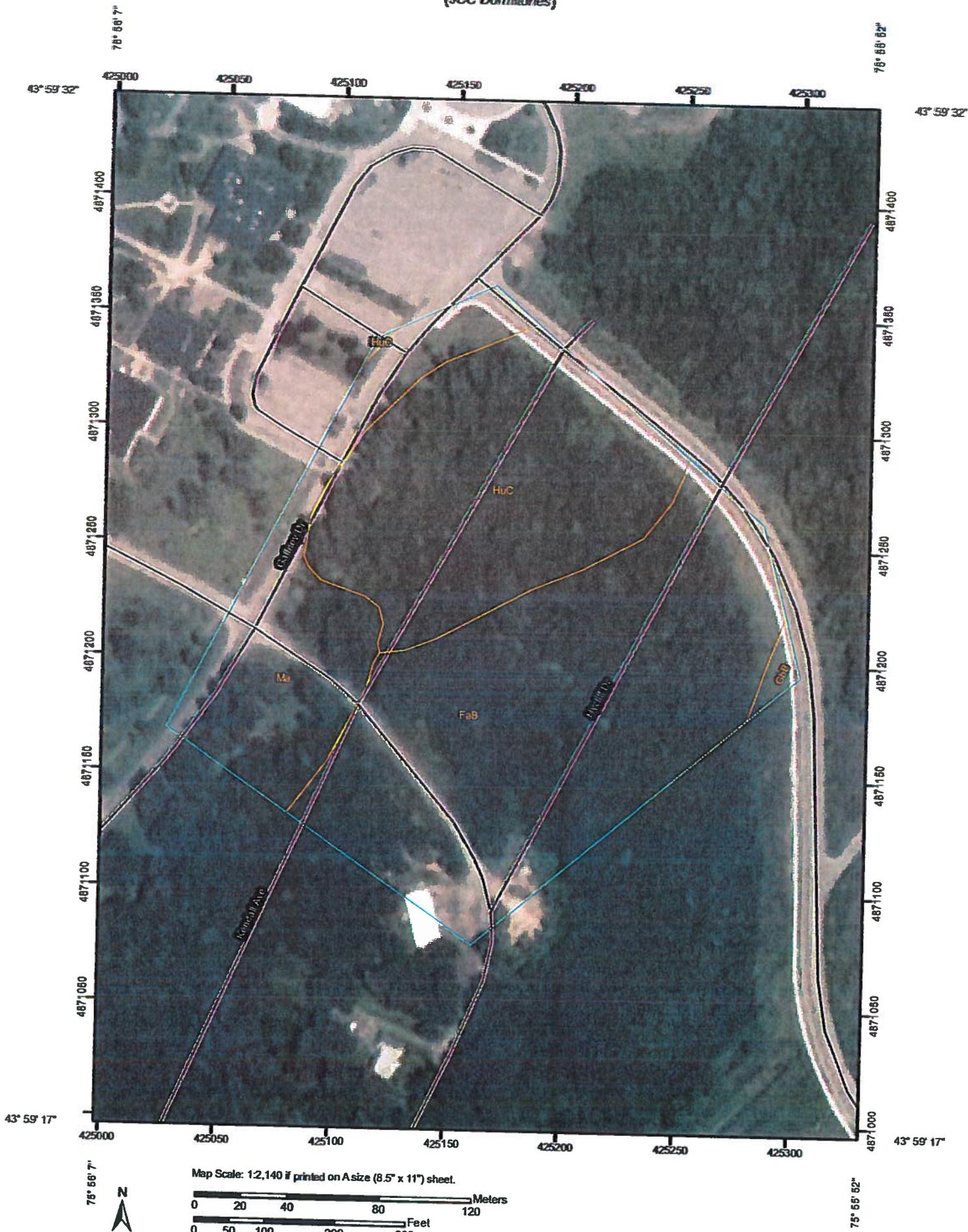


Bernier, Carr & Associates, Engineers, Architects and Land Surveyors, P.C.

COPYRIGHT 2012 - BERNIER CARR & ASSOCIATES, ALL RIGHTS RESERVED. REUSE OF THESE DOCUMENTS WITHOUT THE EXPRESS WRITTEN PERMISSION OF BERNIER, CARR & ASSOCIATES IS PROHIBITED. WARNING - IT IS A VIOLATION OF ARTICLE 145 SECTIONS 7209 AND 7307 OF THE NEW YORK STATE EDUCATION LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A REGISTERED ARCHITECT, LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR TO ALTER THIS DRAWING. IF ALTERED SUCH R.A., P.E. OR L.S. SHALL AFFIX HIS OR HER SEAL, SIGNATURE, THE DATE, THE NOTE "ALTERED BY" AND A SPECIFIC DESCRIPTION OF THE ALTERATION

**APPENDIX B
NRCS SOILS INFORMATION**

(JCC Dormitories)



Map Scale: 12,140 if printed on A size (8.5" x 11") sheet.



MAP LEGEND

 Area of Interest (AOI)	 Very Stony Spot
 Area of Interest (AOI)	 Wet Spot
 Soils	 Other
 Soil Map Units	Special Line Features
 Special Point Features	 Gully
 Blowout	 Short Steep Slope
 Borrow Pit	 Other
 Clay Spot	Political Features
 Closed Depression	 Cities
 Gravel Pit	Water Features
 Gravelly Spot	 Streams and Canals
 Landfill	Transportation
 Lava Flow	 Rails
 Marsh or swamp	 Interstate Highways
 Mine or Quarry	 US Routes
 Miscellaneous Water	 Major Roads
 Perennial Water	 Local Roads
 Rock Outcrop	
 Saline Spot	
 Sandy Spot	
 Severely Eroded Spot	
 Sinkhole	
 Slide or Slip	
 Sodic Spot	
 Spoil Area	
 Stony Spot	

MAP INFORMATION

Map Scale: 1:2,140 if printed on A size (8.5" x 11") sheet.
The soil surveys that comprise your AOI were mapped at 1:16,840.

Warning: Soil Map may not be valid at this scale.
Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
Coordinate System: UTM Zone 18N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Jefferson County, New York
Survey Area Date: Version 9, Sep 21, 2012

Date(s) aerial images were photographed: 7/30/2006

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Jefferson County, New York (NY045)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
FaB	Farmington loam, 0 to 8 percent slopes	5.5	48.8%
GbB	Galoo-Rock outcrop complex, 0 to 8 percent slopes	0.1	0.8%
HuC	Hudson silt loam, 8 to 15 percent slopes	3.5	30.8%
Ma	Madalin silt loam	2.2	19.6%
Totals for Area of Interest		11.3	100.0%

Map Unit Description

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions in this report, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. All the soils of a series have major horizons that are similar in composition, thickness, and arrangement. Soils of a given series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Additional information about the map units described in this report is available in other soil reports, which give properties of the soils and the limitations, capabilities, and potentials for many uses. Also, the narratives that accompany the soil reports define some of the properties included in the map unit descriptions.

Report—Map Unit Description

Jefferson County, New York

FaB—Farmington loam, 0 to 8 percent slopes

Map Unit Setting

Elevation: 100 to 900 feet

Mean annual precipitation: 33 to 50 inches

Mean annual air temperature: 45 to 46 degrees F

Frost-free period: 110 to 170 days

Map Unit Composition

Farmington and similar soils: 80 percent

Minor components: 20 percent

Description of Farmington**Setting***Landform: Benches, ridges, till plains**Landform position (two-dimensional): Summit**Landform position (three-dimensional): Crest**Down-slope shape: Convex**Across-slope shape: Convex**Parent material: Loamy till or congluturbate derived from limestone, dolomite, shale, and sandstone, and in many places mixed with wind and water deposits***Properties and qualities***Slope: 0 to 8 percent**Depth to restrictive feature: 10 to 20 inches to lithic bedrock**Drainage class: Well drained**Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)**Depth to water table: More than 80 inches**Frequency of flooding: None**Frequency of ponding: None**Calcium carbonate, maximum content: 5 percent**Available water capacity: Very low (about 2.6 inches)***Interpretive groups***Farmland classification: Farmland of statewide importance**Land capability (nonirrigated): 3s**Hydrologic Soil Group: D***Typical profile***0 to 8 inches: Loam**8 to 19 inches: Loam**19 to 23 inches: Unweathered bedrock***Minor Components****Unnamed soils, stony, clayey, sandy areas, wet spots***Percent of map unit: 5 percent***Galway***Percent of map unit: 5 percent***Benson***Percent of map unit: 5 percent***Galoo***Percent of map unit: 5 percent***GbB—Galoo-Rock outcrop complex, 0 to 8 percent slopes****Map Unit Setting***Mean annual precipitation: 33 to 50 inches**Mean annual air temperature: 45 to 46 degrees F**Frost-free period: 110 to 170 days*

Map Unit Composition

Galoo and similar soils: 55 percent

Rock outcrop: 25 percent

Minor components: 20 percent

Description of Galoo**Setting**

Landform: Benches, ridges, till plains

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Crest

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: A thin layer of loamy till that overlies limestone or calcareous sandstone bedrock

Properties and qualities

Slope: 0 to 8 percent

Depth to restrictive feature: 2 to 10 inches to lithic bedrock

Drainage class: Excessively drained

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.60 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 1 percent

Available water capacity: Very low (about 1.2 inches)

Interpretive groups

Farmland classification: Not prime farmland

Land capability (nonirrigated): 6s

Hydrologic Soil Group: D

Typical profile

0 to 4 inches: Silt loam

4 to 7 inches: Channery silt loam

7 to 11 inches: Unweathered bedrock

Description of Rock Outcrop**Properties and qualities**

Slope: 0 to 8 percent

Depth to restrictive feature: 0 inches to lithic bedrock

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.60 in/hr)

Interpretive groups

Farmland classification: Not prime farmland

Land capability (nonirrigated): 6s

Typical profile

0 to 60 inches: Unweathered bedrock

Minor Components**Farmington***Percent of map unit: 5 percent***Benson***Percent of map unit: 5 percent***Galway***Percent of map unit: 5 percent***Unnamed soils, stony areas, wet spots***Percent of map unit: 5 percent***HuC—Hudson silt loam, 8 to 15 percent slopes****Map Unit Setting***Elevation: 300 to 1,800 feet**Mean annual precipitation: 33 to 50 inches**Mean annual air temperature: 45 to 46 degrees F**Frost-free period: 110 to 170 days***Map Unit Composition***Hudson and similar soils: 80 percent**Minor components: 20 percent***Description of Hudson****Setting***Landform: Lake plains**Landform position (two-dimensional): Summit**Landform position (three-dimensional): Tread**Down-slope shape: Concave**Across-slope shape: Convex**Parent material: Clayey and silty glaciolacustrine deposits***Properties and qualities***Slope: 8 to 15 percent**Depth to restrictive feature: More than 80 inches**Drainage class: Moderately well drained**Capacity of the most limiting layer to transmit water**(Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)**Depth to water table: About 18 to 24 inches**Frequency of flooding: None**Frequency of ponding: None**Calcium carbonate, maximum content: 20 percent**Available water capacity: High (about 9.5 inches)***Interpretive groups***Farmland classification: Farmland of statewide importance**Land capability (nonirrigated): 3e**Hydrologic Soil Group: C/D***Typical profile***0 to 12 inches: Silt loam*

12 to 16 inches: Silty clay loam
16 to 59 inches: Silty clay
59 to 70 inches: Silty clay

Minor Components**Unnamed soils**

Percent of map unit: 13 percent

Rhinebeck

Percent of map unit: 7 percent

Ma—Madalin silt loam**Map Unit Setting**

Mean annual precipitation: 33 to 50 inches

Mean annual air temperature: 45 to 46 degrees F

Frost-free period: 110 to 170 days

Map Unit Composition

Madalin and similar soils: 75 percent

Minor components: 25 percent

Description of Madalin**Setting**

Landform: Depressions

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Tread

Down-slope shape: Concave

Across-slope shape: Concave

Parent material: Clayey and silty glaciolacustrine deposits

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Poorly drained

Capacity of the most limiting layer to transmit water

(Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)

Depth to water table: About 0 inches

Frequency of flooding: None

Frequency of ponding: Frequent

Calcium carbonate, maximum content: 15 percent

Available water capacity: Moderate (about 8.6 inches)

Interpretive groups

Farmland classification: Farmland of statewide importance

Land capability (nonirrigated): 4w

Hydrologic Soil Group: C/D

Typical profile

0 to 14 inches: Silt loam

14 to 30 inches: Silty clay

30 to 60 inches: Stratified silty clay to silt loam

Minor Components

Livingston

Percent of map unit: 9 percent

Landform: Depressions

Rhinebeck

Percent of map unit: 9 percent

Unnamed soils, sand spots

Percent of map unit: 7 percent

Data Source Information

Soil Survey Area: Jefferson County, New York

Survey Area Data: Version 9, Sep 21, 2012

**APPENDIX C
HYDRANT FLOW TEST DATA**



Customer Name: Bernier, Carr & Associates Date: 08/17/12

Address: Jefferson County Community College

Hydrant Information:

Hydrant Size:

Hydrant #1 - 5¼ Inches Hydrant #2 - 5¼ Inches

Size of Outlets: 2½ Inches Main Size: 8 Inches

Distance Between Hydrants: 100 Yrd Time of Day: Early Morning

Elevation Difference: 0 Feet

Hydrant #1 (Non Flowing Hydrant):

Static Water Pressure - 85 PSI

Residual Pressure @ 1 Flowing - 80 PSI

Residual Pressure @ 2 Flowing - 73 PSI

Hydrant #2 (Test Hydrant):

Test 1

Test Orifice Size - 1¾ Inches

Pito @ 1 Hose Monster Flowing - 62 psi / 702 gpm

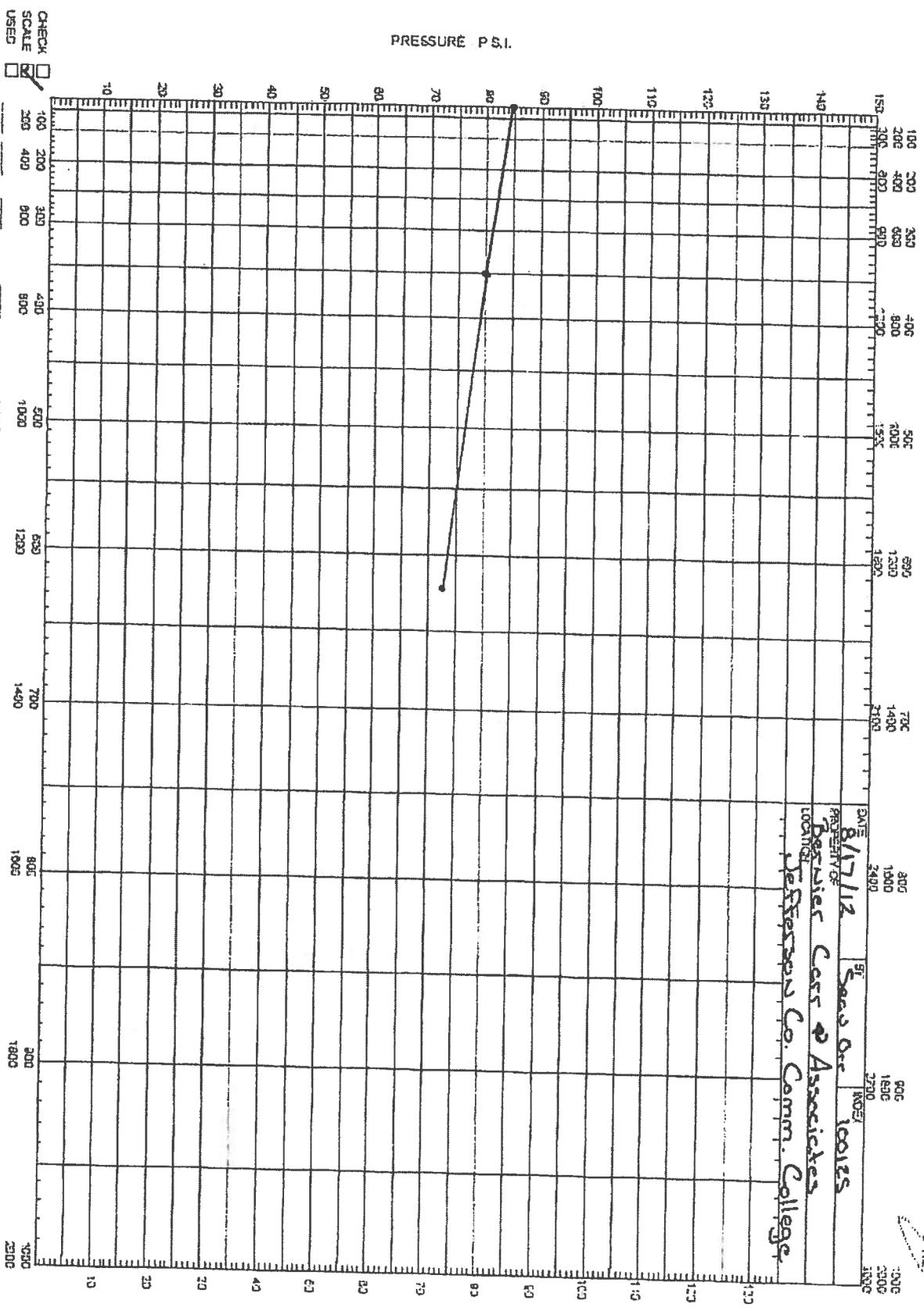
Test 2

Pito @ 1 Hose Monster Flowing - 50 psi / 630 gpm

Pito @ 2 Hose Monster Flowing - 48 psi / 617 gpm

Regional Office: 6500 Joy Road, East Syracuse, NY 13057
Phone: 315.373.0645 Fax: 315.373.0647
Corporate Offices: 1060 Central Avenue, P.O. Box 5429, Albany, New York 12205
Phone: 518.459.2776 Fax 518.459.0068

WATER SUPPLY GRAPH NO. N 1.85



DATE 8/17/12
 PROPERTY OF
 Locust
 Jefferson Co. Comm. College
 SPEC. OR. 100125
 P.O.C. 1800
 1800
 2700
 1000

CHECK SCALE USED FLOW - G.P.M.

APPENDIX D
HYDROLOGIC AND HYDRAULIC CALCULATIONS

**Jefferson Community College
New Residence Hall
Project No. 2010-088
Hydrologic and Hydraulic Calculations**

Water Quality Treatment Volume:

Required:

$$WQv = P \cdot Rv \cdot A / 12$$

$$P = 0.9$$

$$A = 6.55 \text{ acres}$$

$$A_1 = 2.07 \text{ acres}$$

$$I = A_1/A = 32\%$$

$$Rv = 0.05 + 0.009 I$$

$$Rv = 0.338$$

$$WQv = 0.166 \text{ ac.ft.}$$

Water quantity treatment volume will be achieved through the use of infiltration practices and filtering practices, specifically utilizing an infiltration basin and two bioswales.

Run-Off Reduction Volume:

Maximum Run-off reduction required:

$$RRv_{\max} = WQv$$

$$RRv_{\max} = 0.166 \text{ ac.ft.}$$

Minimum Run-off reduction required:

$$RRv_{\min} = P \cdot Rv^* \cdot A_i / 12$$

$$Rv^* = 0.05 + 0.009 (100\%)$$

$$Rv^* = 0.95$$

$$A_i = (S)(A_{ic})$$

$$A_{ic} = A_1$$

$$S = 0.2 \text{ (HSG D)}$$

$$A_i = 0.414 \text{ ac}$$

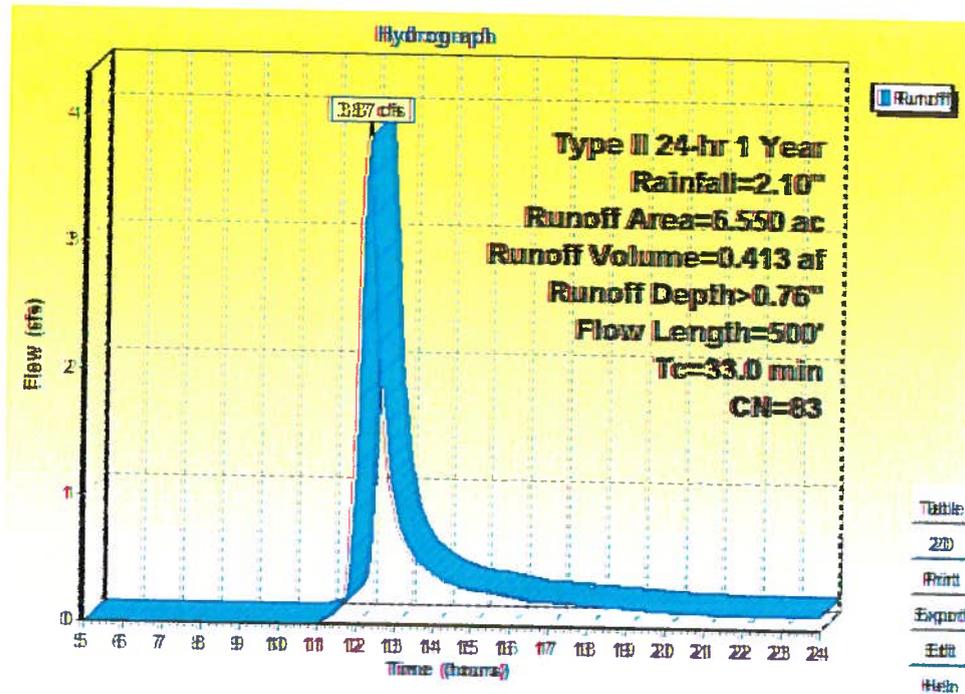
$$RRv_{\min} = 0.029 \text{ ac.ft.}$$

Utilizing infiltration basin and bioswales, approximately 0.145 ac.ft. of the Water Quality Volume reduced through soil infiltration and groundwater recharge.

Water Quantity Volume: Water Quantity Calculations were made utilizing HydroCAD Storm Modeling Software

1-Year Extended Detention Volume:

Required detention volume – Can be no larger than 0.413 ac. ft. (See HydroCAD Figure Below):



Post Developed Runoff Volume (See HydroCAD Printout Below):

Inflow Area = 6.551 ac, 31.60% Impervious, Inflow Depth > 0.20" for 1 Year event
 Inflow = 1.23 cfs @ 12.07 hrs, Volume= 0.108 af
 Primary = 1.23 cfs @ 12.07 hrs, Volume= 0.108 af, Atten= 0%, Lag= 0.0 min
 Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

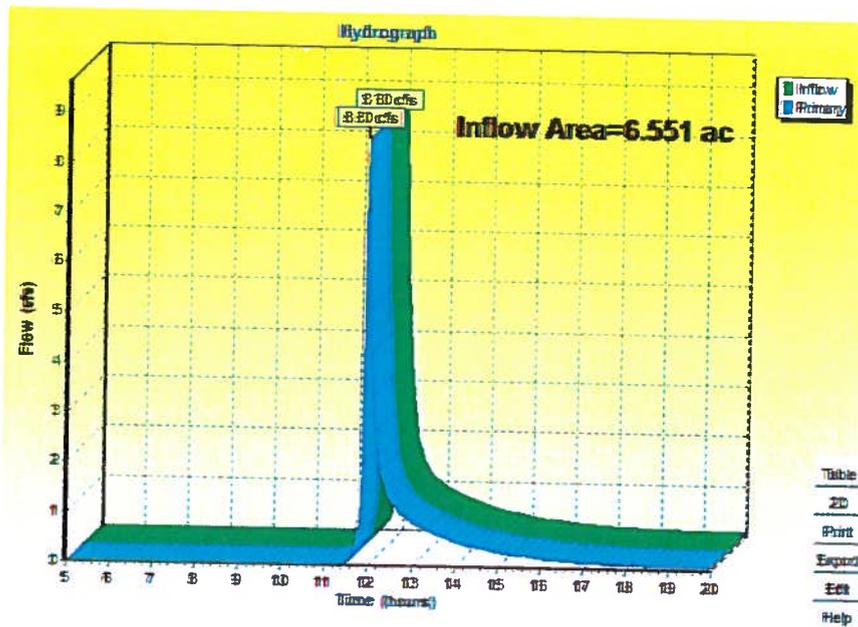
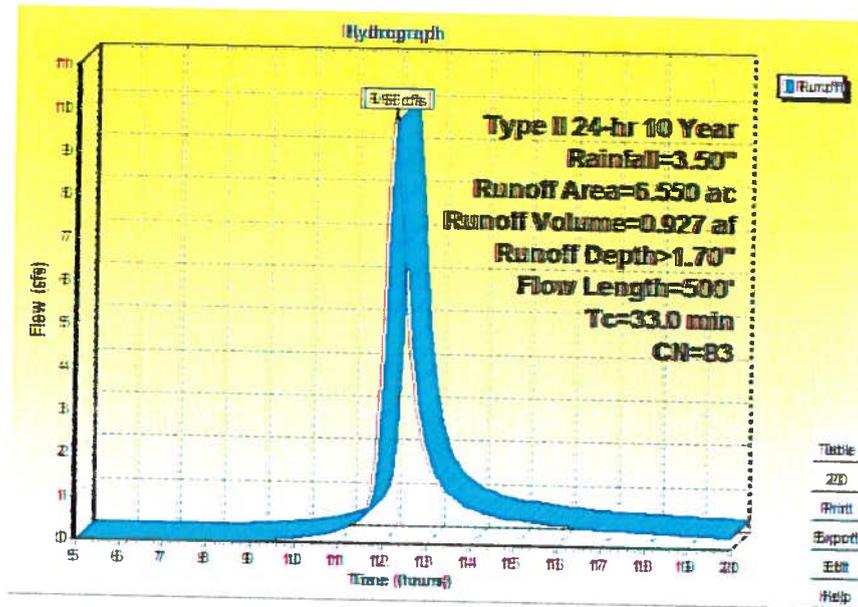
10-Year Channel Protection:

Predevelopment Peak Flow -
Postdevelopment Peak Flow -

9.86 CFS

8.60 CFS

Pre. Vs. Post. Figures:



100-Year Extreme Flood Control:

Predevelopment Peak Flow -
Postdevelopment Peak Flow -

14.98 CFS
13.90 CFS

Pre. Vs. Post. Figures:

