BRIDGERLAND APPLIED TECHNOLOGY COLLEGE

FISCAL YEAR 2017
CAPITAL DEVELOPMENT PROJECT REQUEST & FEASIBILITY STATEMENT

BRIDGERLAND APPLIED TECHNOLOGY COLLEGE

design west | architects

July 17, 2015

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BRIDGERLAND APPLIED TECHNOLOGY COLLEGE

FISCAL YEAR 2017
CAPITAL DEVELOPMENT PROJECT REQUEST & FEASIBILITY STATEMENT
PROJECT SCOPE

TYPE OF REQUEST
STATE FUNDED

AGENCY/INSTITUTION
Bridgerland Applied Technology College

PROJECT NAME
Health Sciences and Technology Building

AGENCY/INSTITUTION PRIORITY
ONE (1)

PROJECT SCOPE

Total Project Space (Gross Square Feet)	91,500 Square Feet
New Space Requirement (Gross Square Feet)	91,500 Square Feet
Remodeled Space (GSF)	-0- Square Feet
Space to be Demolished (GSF)	-0- Square Feet

TYPES OF SPACE
The Health Science and Technology Building will be comprised of a combination of classroom and laboratory spaces designed to facilitate cutting-edge health occupation training programs and simulate hands-on patient care for a variety of health care related fields.

CAPITAL FUNDING

PRELIMINARY COST ESTIMATE
$26,765,000

The Ogden Weber Applied Technology College (OWATC) built a comparably sized building in the 2009-2011 time frame. Construction of that facility occurred during unusual and extraordinary economic times, which resulted in favorable outcomes in the bidding process. The total cost of the OWATC facility was approximately the same as BATC's original DFCM generated CBE that has been updated each year for inflationary costs to arrive at the current estimate.

Comparable costs for two to three buildings of similar size and function will be provided during the programming phase of this project.

BATC will provide a copy of the construction budget estimate as soon as we receive a copy of the version that has been updated with current inflationary adjustments. The cost shown above represents the CBE from the FY16 budget request cycle.

PREVIOUS STATE FUNDING
$ UNKNOWN
This will be updated by DFCM

Note: The land for this project was purchased along with the BATC Main Campus facility in 1984. BATC owns approximately 26.5 (Parcel A) acres immediately adjacent to the Main Campus building that is available for this project.

OTHER SOURCES OF FUNDING
$ NONE

FY 2017 REQUESTED FUNDING
$ 26,765,000

ONGOING OPERATING BUDGET FUNDING

INCREASE IN STATE FUNDED O&M

$705,500 (7.71 sq. ft.) 100% of total O&M

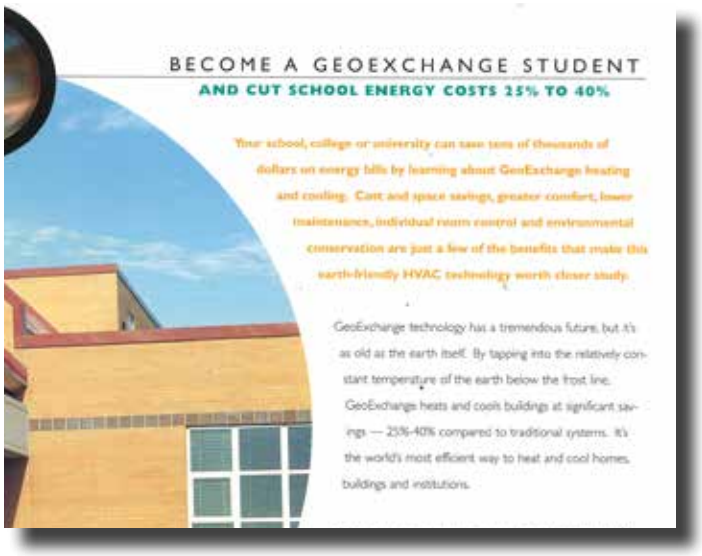
This new Health Science and Technology Building will meet the immediate and future facility needs for BATC Health Science related training programs for many years into the future. Ongoing state funding to heat, light, and maintain this facility throughout its life cycle is imperative.

ENERGY CONSERVATION MEASURES

The State of Utah is aligned with the U.S. Green Building Council (USGBC) in their commitment to constructing sustainable projects by incorporating Energy Conservation Measures. New Projects funded by the State of Utah are required to comply with DFCM's most current High Performance Building Rating System. A minimum USGBC Silver LEED equivalency is the standard. The goal of this Health Sciences and Technology Building will be to implement energy conservation measures to achieve at least a Gold LEED certification or equivalent.

Sustainability workshops will be conducted to strategize Energy Conservation Measures to be incorporated into the project. USGBC modeling and documentation standards will be implemented.

Ground Source Geo-Exchange Heat Pump System. A Geothermal Engineering Investigation has not as yet been conducted for the BATC Campus however; in 2003 a geothermal investigation was conducted on an 11.5 acre site immediately adjacent to, and East of the BATC Main Campus at the site of the Bridger Elementary School. It is believed that the soil conditions would be similar to, if not identical to those found at the BATC.



One of the benefits unique to this site is an opportunity to provide a campus wide mechanical heating and cooling system with the ability to share or trade energy around the campus as differential demands arise. Even the existing main building boiler can be incorporated into the campus wide energy sharing geoexchange system thus reducing the number of subsurface slinky pipe to be installed.

Based on the findings the subsurface investigation, and a Thermal Conductivity Test, the site is a model site for the implementation of a Horizontal Slinkey Pipe (ILO a vertical well) Ground Source System in support of a building Heat Pump System. This system type has a good track record, and only requires maintenance which can be done by custodial personal. It is a proven energy saver and good environmental alternative.

It should be noted that the Bridger Elementary School is both heated and cooled by the earth, or the ground source Geo System. Boilers and chillers are not utilized for heating or for the cooling. The cooling component is a bonus. This strategy reduces the utility costs of heating and cooling to the low cost of running the ground source pumps.

It should also be noted that four new elementary schools located in this same west side plain area have been successfully provided with either a deep well or slinky type horizontal Geoexchange system. The record is clear that such a system is a proven energy use saver.

ONGOING OPERATING BUDGET FUNDING CONTINUED

NEW PROGRAM COSTS
$1.8 MILLION

(phased in over 3-5 years)

BATC anticipates the need for approximately 18.0 FTE staff over a period of three to five years. Faculty and staff will be needed to expand existing programs including:

- Practical Nursing
- Medical Assisting
- Pharmacy Technician
- Medical Office Administration
- Health Information Specialist (which includes Medical Transcription and Coding)
- Dental Assisting

In addition, associated support courses will require expansion and are not limited to:

- Nursing Assistant Training (CNA)
- Phlebotomy
- Medical Terminology
- Drug Dosages & Calculations
- and a host of pre-requisite courses for nursing programs.

NEW FTES REQUIRED FOR O&M AND PROGRAMS

O&M	3.5 FTE
Programs	18.0 FTE

O&M FTE: This new facility will be immediately adjacent to the BATC Main Campus facility, so the need for additional maintenance and custodial staff will be minimal. The addition of this new facility will likely require the addition of one (1) FTE position in the Maintenance Department and two-and-a-half (2.5) FTE in the Custodial Department.

EXISTING FACILITY

With more than 1,100 certificate seeking, short-term, and high school students currently enrolled in health occupation related programs at BATC, the existing facilities are already pushing and exceeding capacity limits.

The allied health programs are currently disconnected and spread across multiple buildings located approximately ¼ mile apart. Many of these programs are forced to share inadequate classroom space that does not support the college's, students', and faculty's unique instruction style. The buildings were originally constructed for purposes other than health technology labs and classrooms, and we have relied on ad-hoc remodels to make do over the past four decades, which do not meet current accreditation standards.

In addition to these inconveniences and inefficiencies, opportunities for interdisciplinary collaboration are limited. The existing facility will be used to accommodate program/student growth in the other 26 content areas offered at BATC.

These areas also have limited classroom and lab space restricting increased enrollment to accommodate the current and expected population growth in the Bear River Region.

In addition, BATC's short-term and Custom Fit course offerings will be expanded into the multi-use areas that will become available when existing health-related programs and courses transition to the new building.

The growth and expansion of allied health occupation courses and programs has encroached on the other training programs at BATC limiting their growth and expansion possibilities. Moving the health programs into a new building will allow existing programs to return to their originally intended use.

EXISTING SPACE CURRENTLY OCCUPIED
25,519 square feet

PROJECT EXECUTIVE SUMMARY

Even before the passage of the Affordable Care Act and the implementation of "Health Care Reform," the health care industry was experiencing unprecedented growth in the past ten years. Now, this industry is expanding to accommodate the rush of new patients at an almost exponential rate.

As the demand for health care services increases, the availability of clinical sites for health care student training is substantially declining, which requires health care related training facilities to incorporate simulation-based or virtual learning opportunities for students.

The demand for health care workers, coupled with the declining availability of clinical sites for experiential learning opportunities, dictates the necessity of updating and modernizing both the capacity and the effectiveness of teaching facilities.

This new 91,500 square feet (approximate) Health Sciences and Technology Building will be immediately adjacent to the BATC Main Campus and will replace existing spaces, which are disconnected and originally constructed for purposes other than heath technology labs and classroom. The college's allied health programs will be housed in this facility including programs that train registered nursing (partnership with WSU), practical nurses, medical assistants, pharmacy technicians, medical office personnel, medical coding specialists, dental assistants, phlebotomists, and emergency services personnel.

BENEFIT TO THE STATE OF UTAH

The Bear River Region population is estimated to triple in the next 30 years and a shortage of health care professionals is expected as the current generation ages. Existing program capacities have been exceeded with FY2009 data identifying program membership hours exceeded prototype capacity by over 53,500 membership hours. Program enrollment wait times are unrealistic with prospective students being forced to wait for months and even years for admittance into health care related programs and a host of other BATC programs. BATC currently serves approximately 356 FTE students in health science-related programs. This new Health Science and Technology building will accommodate approximately 1,275 FTE students and will meet the facility needs for these programs for the next 30 to 50 years.

SATISFYING BATC'S MISSION

The role of BATC since 1971 has been 'Employment through Training.' The mission of the Bridgerland Applied Technology College is to deliver competency-based, employer-guided career and technical education to both secondary and post-secondary students through traditional and technology-enhanced methodologies. This hands-on technical education provides occupational education, skills training, and workforce development to support the educational and economic development of the Bear River Region.

In order to continue its role as a leader in health care education in Utah, especially in the Bear River Region, the BATC needs a purpose-built building with adequately-sized classrooms and labs, cutting-edge technology, and state-of-the-art equipment to support the unique teaching and learning style in the current and future allied health programs. Such a facility will bring together all health technology students and faculty under one roof, thus encouraging interac¬tion and providing greater opportunities for student-to-student mentoring and interdisciplinary collaboration. This building will increase visibility for BATC, and will strengthen its programs' abilities to attract and retain students and faculty.

PROJECT EXECUTIVE SUMMARY CONTINUED

DECISION PROCESS

BATC Administration, in conjunction with the Campus Board of Directors and employer advisory committees, carefully review the facility needs of the College on a regular basis. They review not only the current needs, but the short-term, medium-term, and long-term facility needs.

The College also engages in a regular (at least annually) strategic planning process that involves gathering input from all the different stakeholders in the region and capital facility needs are always included in the cycle.

The decision to pursue construction of a new facility, versus remodel of the existing facility, was simple. The existing facility is significantly undersized and there is substantial demand with the other BATC training programs to expand into any existing space that will become available as a result of this new construction. The allied health programs at BATC are putting a chokehold on the other College programs because of their expansion across the existing facility.

FEASIBILITY/PLANNING

With more than 1,100 students currently enrolled in allied health programs, the existing BATC facilities are pushing capacity limits.

The BATC Strategic Plan (2011-2016) identifies four strategic objectives specifically aimed at maximizing its ability to continue as an educational leader in the Bear River Region:

1. Overcome program boundaries annually (Objective 3),
2. Increase technology-enhanced instruction (Objective 4),
3. Be in total compliance with accreditation standards (Objective 5), and
4. Maximize learning facilities (Objective 7).

Many of the allied health programs are forced to share inadequate classroom space limiting enrollment, which does not support the College's students and faculty's unique instruction style. Many of the buildings were originally constructed for purposes other than health technology labs and classrooms, and have relied on ad-hoc remodels to make due over the past four decades, and do not meet current accreditation standards. In addition to these inconveniences and inefficiencies, opportunities for interdisciplinary collaboration are limited. The departments are disconnected and spread across the Main Campus.

To continue its role as a leader in health care education in Utah, the BATC needs a purpose-built building, with adequately-sized classrooms and labs, cutting-edge technology, and state-of-the-art equipment, to support teaching and learning in the current and future allied health programs. Such a facility will bring together all health technology students and faculty under one roof, thus encouraging interaction, and providing greater opportunities for student-to-student mentoring and interdisciplinary collaboration. The designated site for the new Health Sciences and Technology Building is based on the College's Master Plan that was updated in 2015. The designated site for the new building based on this Master Plan will be at the edge of the campus with open space available providing pedestrian and vehicular connectivity to other campus amenities.

PRIMARY PRIORITIES OF GROWTH

Health care has experienced unprecedented growth and change over the past decade. Schools offering education in health care technologies are playing a vital role in meeting the national workforce demand for more health care technical staff.

Existing BATC facilities are significantly undersized creating unrealistic and unreasonable wait times for prospective students. The facility utilization study using FY2007 audited data identified actual membership hours for BATC allied health programs as exceeding prototype capacity by almost 10,000 hours while FY2009 data identified an overutilization of 53,500 hours. As such, securing a purpose-built building with adequately-sized classrooms with cutting-edge labs and equipment has since been a top priority.

The Bridgerland Applied Technology College has been educating students since 1971, and is a leader in the Utah College of Applied Technology network. BATC plays an important role in meeting the state's demand for health care technical staff. The College's allied health programs educate nurses, medical assistants, pharmacy technicians, medical office personnel, medical coding specialists, dental assistants, phlebotomists, and emergency services personnel.

FEASIBILITY/PLANNING CONTINUED

The administration and faculty recognize with the population of the Bear River Region estimated to triple in the next 30 years there is a critical need for program expansion in order to accommodate the programs' growth and the region's workforce demand.

POTENTIAL IMPACT

BATC provides an extremely positive impact on the community and economic development in the Bear River Region and this is especially true for its impact on health occupations in the region. BATC is a leader and plays an important role in meeting the local demand for technical staff in health care related professions.

No adverse economic community impacts are anticipated as a result of this project.

BATC serves as a valuable member of the Bear River Region training over 1,100 students annually to meet allied health employers' needs. With the regional population estimated to triple in the next 30 years, meeting the needs of those employers will remain the primary component of the BATC mission. Existing facilities, along with obsolete equipment, are limiting the growth and potential of the College's programs. The administration and allied health faculty work closely with local health care professionals to develop cutting-edge training programs and hands-on patient simulation for hundreds of students annually.

FEASIBILITY/PLANNING CONTINUED

TRANSPORTATION CONSIDERATIONS

The BATC is a commuter campus (no on-campus housing available). The BATC is an open-entry/open-exit campus. The BATC student population generally fall into four groups of people.

1. High school students supplement their education through cooperative agreements with the three high schools, and soon to be five high schools, located in the Cache Valley as well as high school students from the four private or alternative high schools. Students are attracted from the surrounding areas including Cache, Box Elder, and Rich counties. Students attend at varying times of the day and access the campus either by personal transportation, school busing, or by the CVTD public transit system.

2. Certificate programs are held day and evening. Students access the campus by personal transportation or the CVTD public transit system.

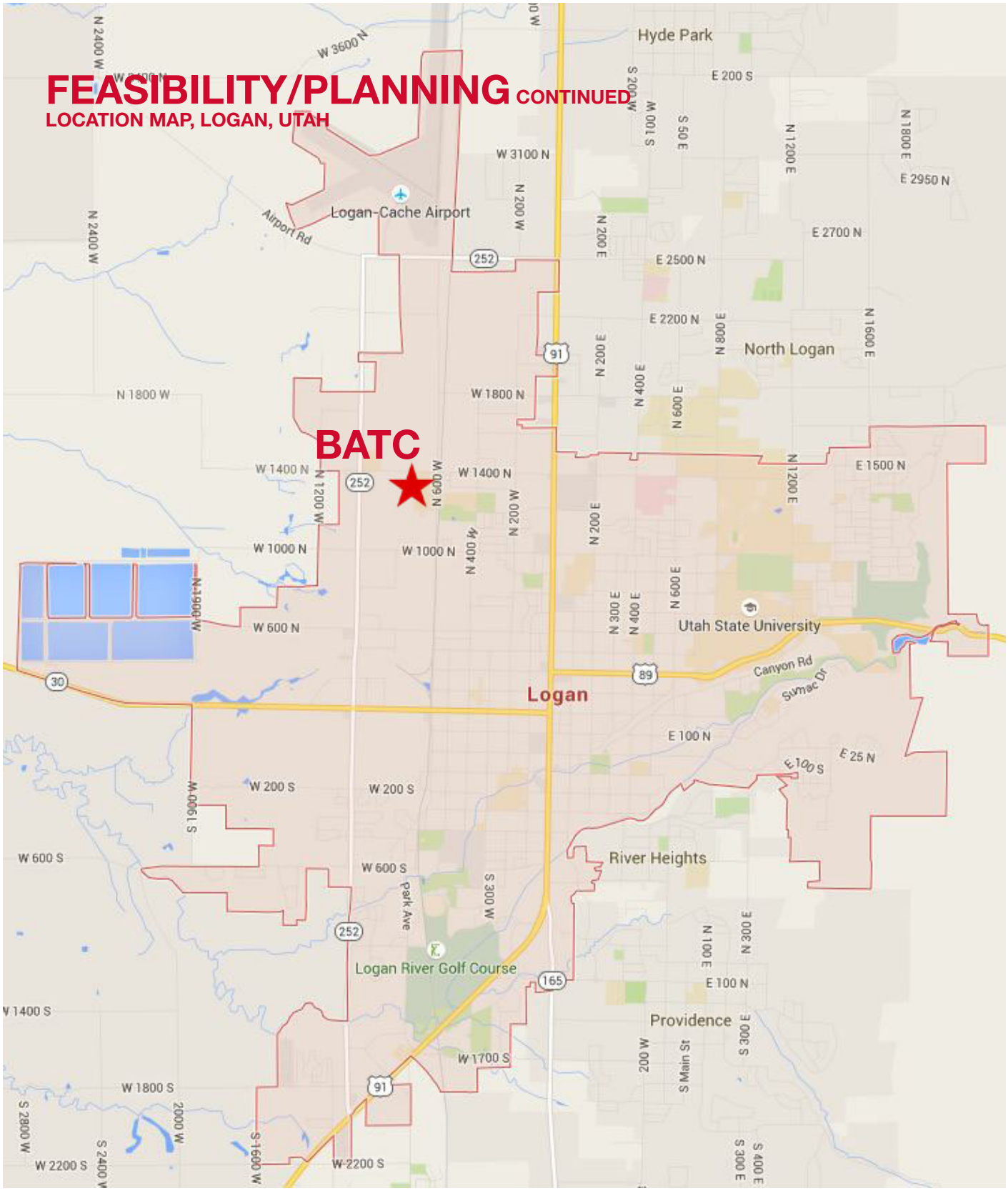
3. Custom Fit programs are in place to provide company-specific training to local business and industry companies. Access to the campus is generally by personal transportation or the CVTD public transit system.

4. Faculty, staff, and visitors to the campus access the campus by personal transportation or the CVTD public transit system.

It should be noted that Logan City is anticipating the completion of the Bike/Trails system expansion connecting to the BATC campus.

FEASIBILITY/PLANNING CONTINUED

LOCATION MAP, LOGAN, UTAH



FEASIBILITY/PLANNING CONTINUED

TRANSPORTATION CONSIDERATIONS

CVTD BUS ROUTES

The extensive Cache Valley Transit District (CVTD) is free to the public and provides hourly stops at two BATC locations. One established stop is located on 1400 North at an existing bus shelter immediately in front of the proposed Health Science & Technology Building. BATC is a short 1.5 miles from the CVTD transit hub.

LOGAN CITY ACCESS

BATC is a short 3/4 mile from Logan City Main Street and located in the 1000 West industrial corridor area.

LOGAN CITY BYPASS EXPRESSWAY

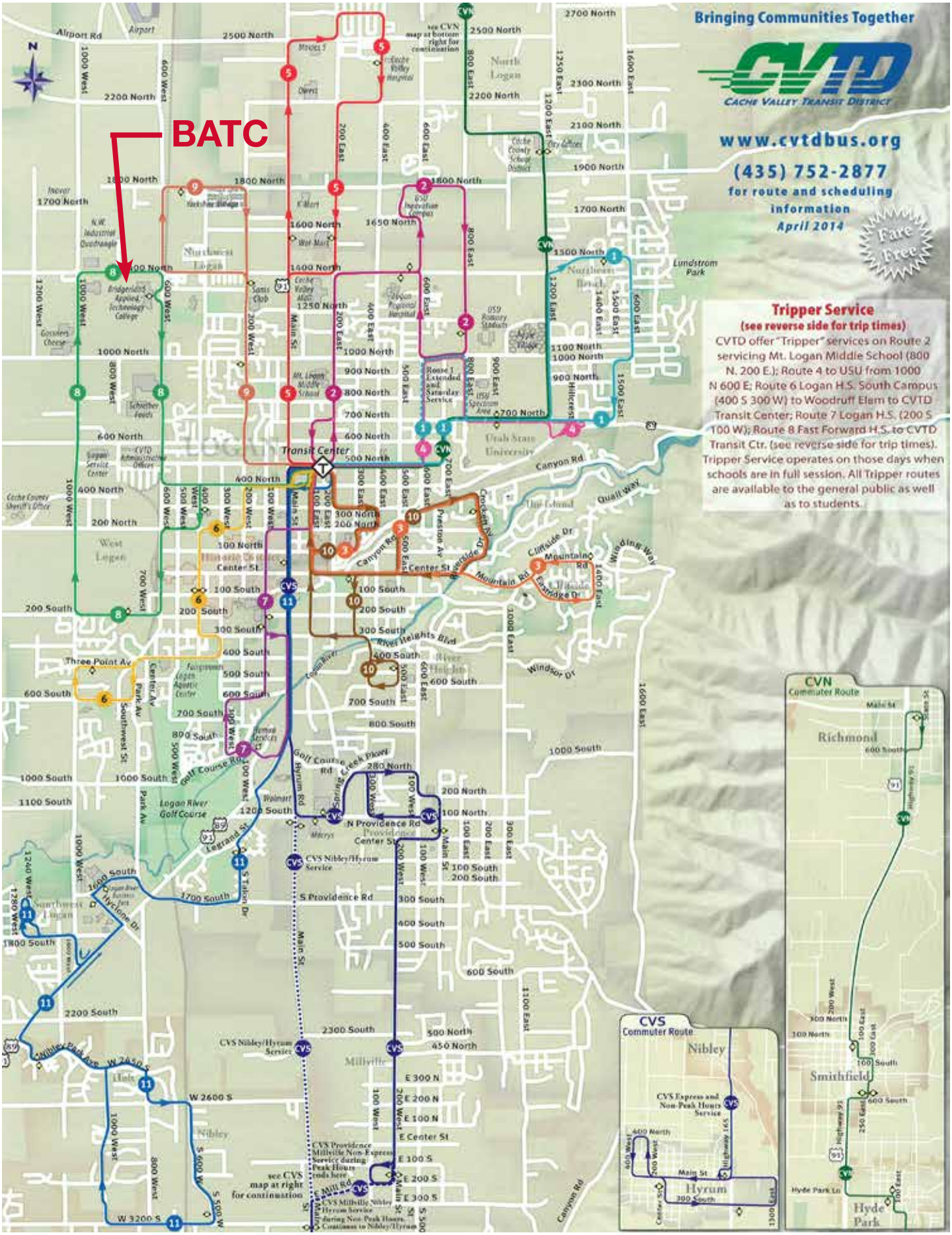
BATC is directly accessible by personal transportation via the new 1000 West corridor connecting BATC from both the south, west, and north ends of Cache Valley's townships. It also serves as an express bypass of the Logan City Center area.

ROADS

BATC hopes to develop an east/west access road between 600 West and 1000 West following the future land acquisition of Parcel B and Parcel C. This would provide an access road to BATC on the south side of the master plan including parking access and future CVTD bus service.

PEDESTRIAN/BIKEWAYS ACCESS

The campus master plan provides for parking at the perimeter of the campus and pedestrian and bikeways through the inner campus. This provides for a pedestrian friendly environment in the heart of the campus, and promotes safety while providing easily accessible parking to all master planned and future master planning of buildings.


BATC
Bringing Communities Together
CVTD
Cache Valley Transit District
www.cvtdbus.org
(435) 752-2877
for route and scheduling information
April 2014
Fare Free
Tripper Service
(see reverse side for trip times)
CVTD offer "Tripper" services on Route 2 servicing Mt. Logan Middle School (800 N. 200 E.); Route 4 to USU from 1000 N 600 E; Route 6 Logan H.S. South Campus (400 S 300 W) to Woodruff Elem to CVTD Transit Center; Route 7 Logan H.S. (200 S 100 W); Route 8 Fast Forward H.S. to CVTD Transit Ctr. (see reverse side for trip times). Tripper Service operates on those days when schools are in full session. All Tripper routes are available to the general public as well as to students.
Transit Center
CVS Commuter Route
Nibley
Hyrum
CVN Commuter Route
Richmond
Smithfield
Hyde Park

FEASIBILITY/PLANNING CONTINUED

TRANSPORTATION CONSIDERATIONS

LOGAN/CACHE MUNICIPAL AIRPORT

BATC is located two miles from the Logan/Cache Municipal Airport.

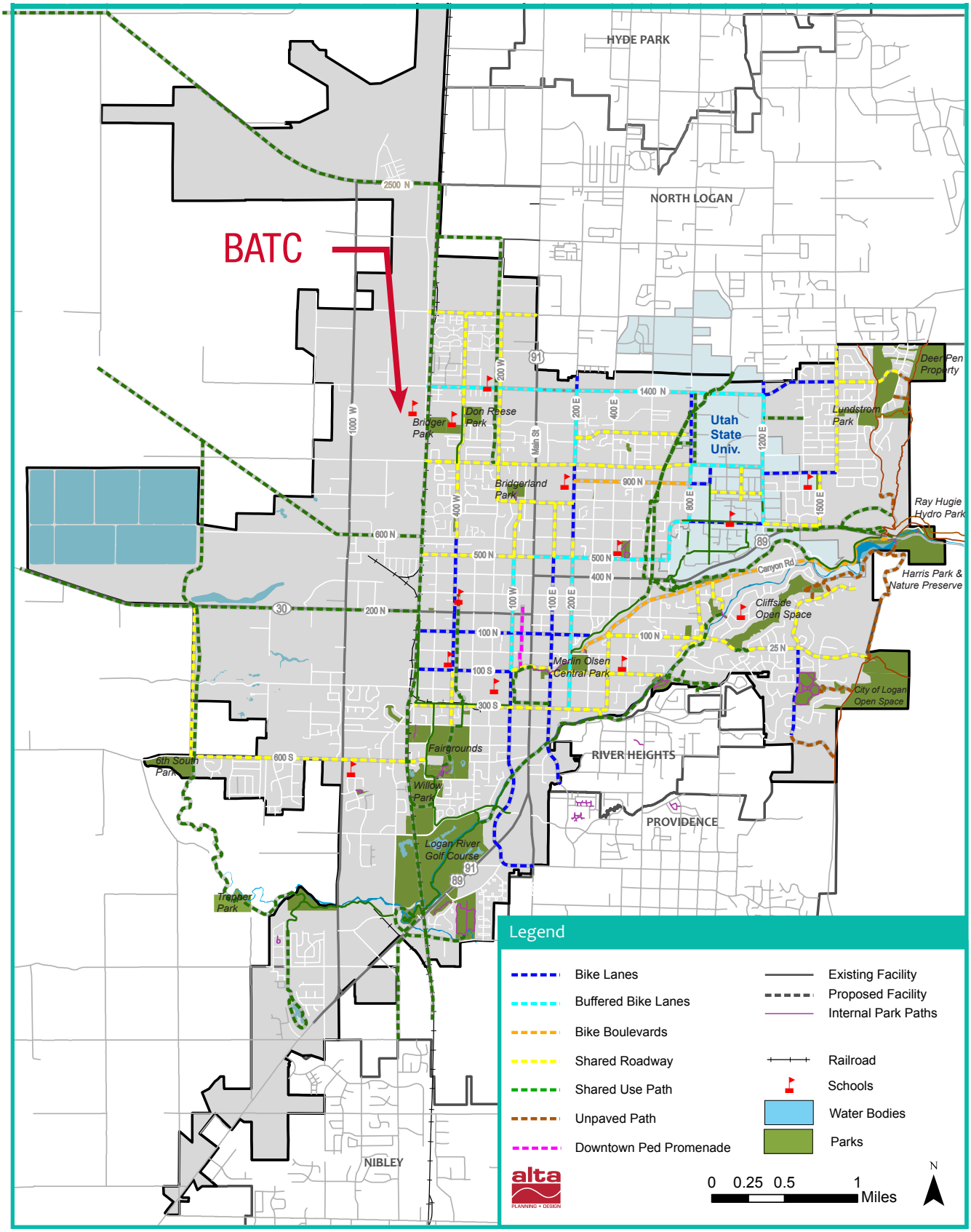
UTAH STATE UNIVERSITY

BATC is located three miles from Utah State University (USU).

FUTURE MASTER PLAN IMPLEMENTATION

BATC is in the process of acquiring the two remaining properties east of the current campus Master Plan. This would extend BATC property west to 1000 West, which is a main north/south corridor for Cache County.

PLANNED BIKE / TRAIL SYSTEM



SURROUNDING COMMUNITY

COMMUNITY CONNECTIONS

- BATC is an integral part of the Logan and Cache County Community. BATC maintains a cooperative relationship with the surrounding school districts (Cache, Logan, Box Elder, and Rich) as well as partnering with Utah State University.

- The new Cache High School and the private Fast Forward High School are located adjacent to BATC.

- BATC also serves as the Northern Utah Police Academy and Fire & Rescue Academy.

- The Custom Fit program provides specialized training for many of the areas business and industrial community establishments.

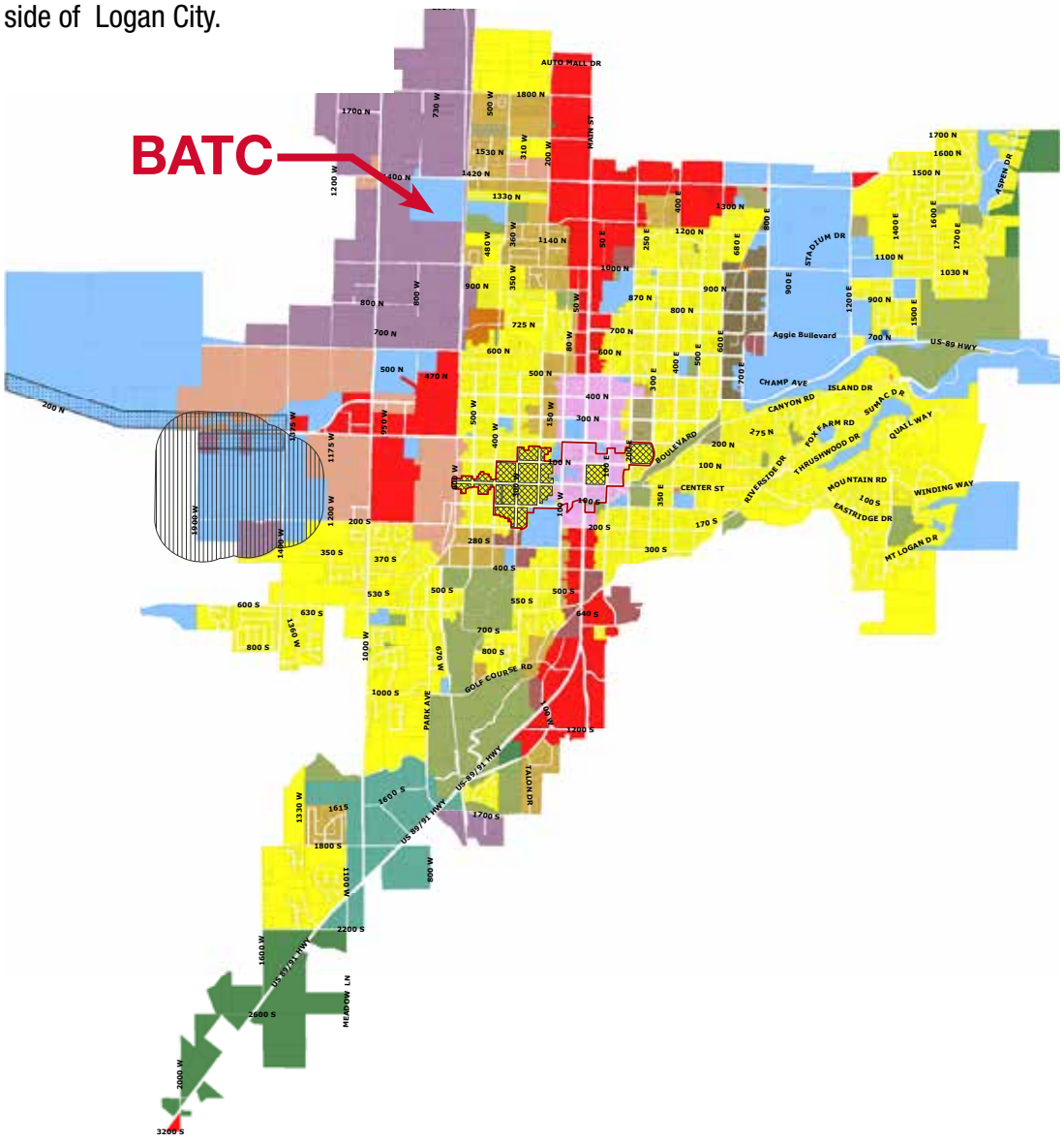
SURROUNDING COMMUNITY CONTINUED

Official Zoning Map

February 4, 2014

ZONING

The site is designated as a Public (PUB) Zone surrounded by an Industrial Park (IP) Zone located on the west side of Logan City. See below.



SURROUNDING COMMUNITY CONTINUED

IMPACTS TO TRAFFIC

BATC has a direct vehicle connection via the 1000 West corridor. It was recently completed with the intent to be a Logan City bypass and is designed to provide a north/south expressway through Logan's industrial zone (IP). Higher traffic has been anticipated; and in fact, the road was constructed to encourage high traffic travel.

SECURITY

Security measures including an electronic access control system along with video surveillance measures will be implemented in the new Health Science and Technology Building. The campus landscape is designed to promote campus safety and minimize places to hide. Standards for security as the Master Plan is implemented will include well lighted pedestrian ways, emergency totems, and security cameras creating a sense of eyes on the campus. Parking lots will also be well lighted and located adjacent to new buildings as the Master Plan develops.

The Main Campus building is essentially a windowless renovation of a piano factory building. The intent of the new Health Sciences and Technology Building and the surrounding campus master plan will be to provide ample windows to visually survey the campus creating a sense of safety and security.

NOISE IMPACTS

BATC is established in the Logan industrial zone, which anticipates a rise of noise due to traffic and new developments. It is noted that BATC is approximately two miles south of the Logan/ Cache Airport directly under approach and departure flight patterns. Noise considerations should be addressed as the campus expands.

LIGHT IMPACT

There will be no adverse impacts from additional night lighting at the expanded BATC Campus. Light pollution is not a detriment to the surrounding industrial community.

The night time use and the planned additional site lighting will actually be an enhancement to the perception of safety and security in this area.

FACILITY SITING

LOCATION

The BATC Campus is surrounded by the industrial zoned area of Logan, Utah, west of the Logan City Center with boundaries of 600 West and 1400 North.

SURVEY

A Boundary Survey including existing buildings, parking, and site utilities has been completed by Landmark Design.

ACREAGE

Main Campus	24.0 acres
Parcel "A" (west of the Main Campus)	26.5 acres
Current Total BATC Land Parcels	50.5 acres
West Campus	10.0 acres
Parcel "B" south of Herff Jones	15.50 acres
Parcel "C" south along 1200 N (new road)	26.25 acres
Potential for land acquisition	41.75 acres
Total potential land development	102.25 acres

LAND PARCELS / ACREAGE

MASTER PLANNING GUIDING PRINCIPLES

FOR DEVELOPING A CAMPUS SITE

1. Create a sense of campus community and branding identity.

2. Vehicular traffic and parking lots are to be located around the perimeter of the campus while providing adjacencies to academic buildings.

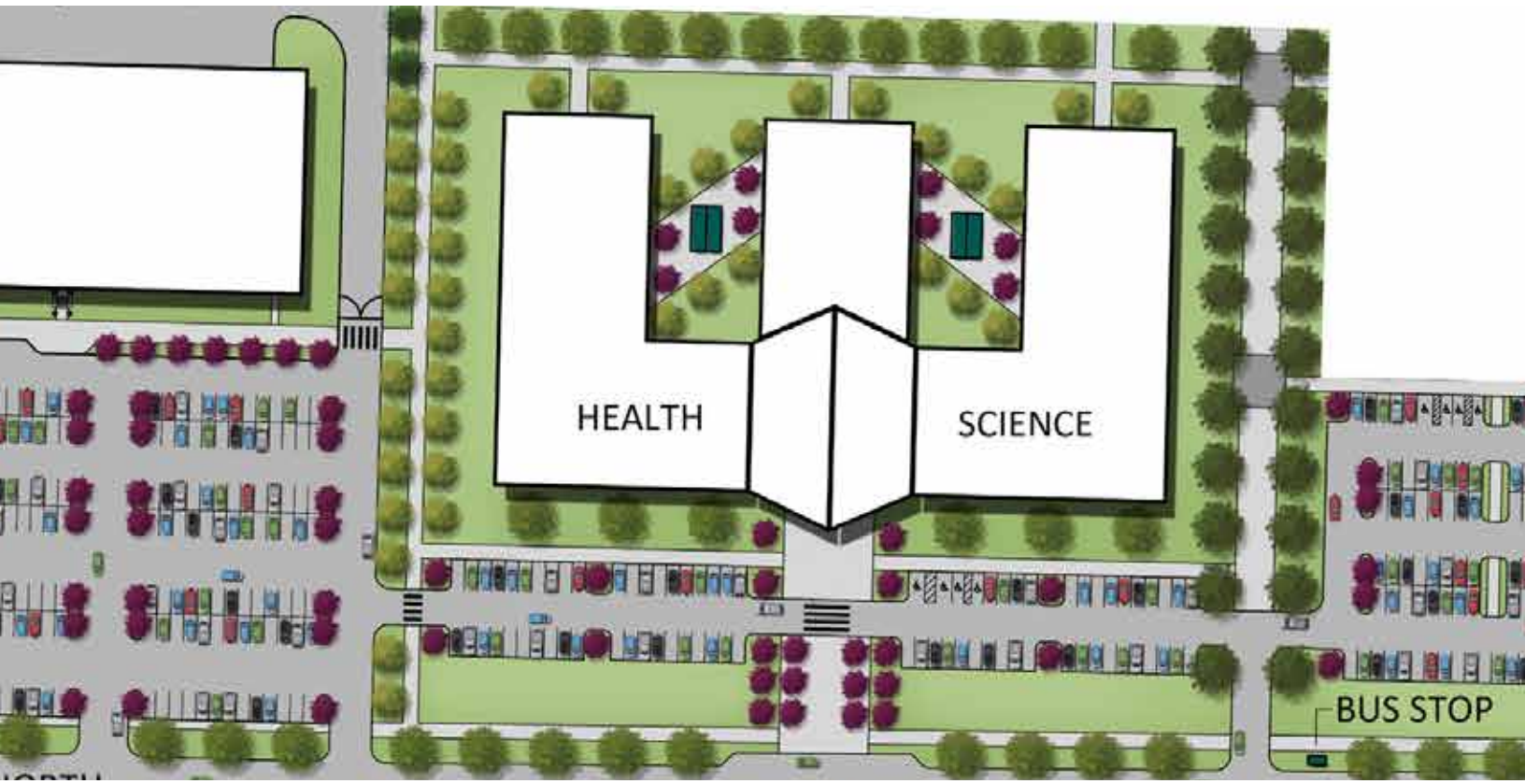
3. The interior of the campus is to be developed as a pedestrian friendly campus with pedestrian splines connecting academic buildings and defining pedestrian ways which will provide direction to extend future campus expansions to the west and south. Making a connection to the West Campus is a high priority.

4. The location of all new campus buildings should define the pedestrian splines and reinforce the campus edges.

5. A hierarchy of social gathering spaces should be provided throughout the campus planning including to encourage social interaction of a variety of sizes and activity groups. This should include a central gathering space.

6. Vista corridors should be considered as well as major site views to the surrounding mountains that define the beauty of the Cache Valley.

7. Climatic considerations should be addressed as they can be extreme in this valley.



MAIN CAMPUS MASTER PLAN

MASTER PLANNING GUIDING PRINCIPLES CONTINUED

Master planning work sessions have been conducted for the Parcel A site immediately west of the Main Campus.

The preferred site is currently an open farm acreage fronting on 1400 North street west of the Main Campus and is providing a connection to the West Campus.

The planning also anticipates BATC acquiring Parcel B west of Parcel A site extending to 1000 West. Parcel C south of the Main Campus extends from 600 West to 1000 West.

SITING ASSETS

The recommended site is currently an open space which is irrigated by a canal system to support farming.

The proposed siting of the 90,000+- square feet single story building provides the following advantages:

1. The new building will provide a connection between the Main Campus and the West Campus. Winter conditions will be mitigated as persons may walk between the main and West Campus through a conditioned space.
2. The location on 1400 North will provide a welcoming iconic building for the College as opposed to the windowless Main Campus.
3. A strategy is created for perimeter roads, parking, and interior pedestrian circulation.
4. The new building is adjacent to an established CVTD bus stop and shelter.
5. The planned Logan City bikeway/trails system connects to BATC on 600 West.
6. 1400 North is an existing main surface collector road providing direct access to the College.
7. 1400 North is equipped with adequate utilities for the development of the new building at the preferred site location.

SITING LIABILITIES

1. This north facing entrance comes with increased concerns for winter safety and snow removal.

2. The Main Campus and Parcel A is bisected by a north/south service road gated at both the entries. The inner space between the existing Main Campus building and any development to the west will require safe and attractive pedestrian passage through the outdoor support area. The gates should remain locked to deter traffic through this area. Public access through this area should be avoided.

3. There is a potential that the site contains areas delineated as wetlands which may require strategies for wetlands mitigation. The extent of remediation is not known at this time and a survey will be required. It should be noted that Cache County is in possession of units of wetland banks available for mitigation purposes.

4. The site is located approximately two miles directly south of the Logan/Cache Airport in the direct path of air traffic. The air traffic is predominantly small personal aircraft category although the airport has potential to attract a daily commuter plane service. Precautions for sound control should be considered.

RECOMMENDED SITING

ALTERNATE SITING OPTIONS

Alternate siting options were investigated but were quickly ruled out as all other locations would require land purchases.

This site provides a strong connecting link to the BATC West Campus.

Placing the new building in proximity to 1400 North will be the least costly site to develop due to its proximity to available utilities. Planned connections to existing utilities can then expand southward to other buildings as the Master Plan is implemented.

CONCEPTUAL RENDERING OF HEALTH SCIENCE & TECHNOLOGY BUILDING

GEOTECHNICAL CONDITIONS

A Geotechnical Engineering Investigation has not been conducted on the site of the BATC Campus. However, in 2003, a geotechnical investigation was conducted on an 11.5 acre site immediately adjacent to and east of the BATC site at the Bridger Elementary School (copy available at the office of Design West Architects). It is believed that BATC soil conditions would be similar if not identical to those found at Bridger Elementary School.

SITE CONDITIONS

The site conditions will allow the construction of a single story masonry wall building.

TOPOGRAPHICALLY

The site slopes to the west at a slope of one to two percent.

GEOLOGIC SETTING

Sub-surface soils appear to be lacustrine silts and clay related to the Provo and Bonneville shoreline. These deposits consist primarily of clay silt and minor fine sands.

Field and laboratory investigations indicate the soil profile is relatively consistent throughout the site.

Ground water / wetlands were encountered typically 3'-7' below natural grade including some surface water supporting wetland type plant material. This may require wetland mitigation strategies to be implemented. Seasonal fluctuations in ground water should be anticipated. Piezometer test holes were provided and monitored at the school site. A record is available from the office of Design West Architects. It is recommended to start an investigation and begin a mitigation process immediately to avoid delaying construction schedules.

A shear wave velocity test was conducted at the school site indicating a Site Class "E" is anticipated.

SEISMIC FAULTING

The site is located approximately 3.5 miles west of the Utah East Cache Fault Scarp. This Fault Zone is capable of generating a magnitude 7.25 seismic event on the Richter Scale.

LIQUEFACTION

The site sub-soil encountered have a moderate liquefaction potential.

FOUNDATIONS

Conventional spread and continuous wall foundations and spot footings may be used for the support of a structure at the subject site. An allowable bearing pressure capacity of 1.5 Kips/sq. ft. on undisturbed soils is anticipated.

RECOMMENDATION

Construct a single story building on approximately 3' to 4' thick maximum engineered fill pad for water table fluctuations. This will ensure the building elevation, at grade, will be dry and will provide adequate drainage away from the building.

GEOTECHNICAL CONDITIONS

CAC CONSULTING ENGINEERS

BORING LOG

West Logan Elementary

BORING No. : B-1	JOB No. : 102164.0	DATE : 1/3/03	SHEET 1 OF 1
PROJECT : West Logan Elementary 1200 North 400 West Logan, Utah	SURF. EL. :	BORE DIA. : 6"	DEPTH : 22'
	WATER EL. :	COORDINATES:	
BORING TYPE : 6" Hollow Stem Auger	CAD FILE : 102164 Figures.dwg		

DEPTH, Ft.	GRAPHIC LOG	SAMPLE	SOIL DESCRIPTION	% FINER No. 200 SIEVE	BLOWS/Ft.	LIQUID LIMIT	PLASTIC LIMIT	MOISTURE CONTENT, %	WET/DRY UNIT WT.,lb/cu.ft.
			Surface~18": Turf underlain by moist Black TOPSOIL.						
			18"~4': brownish Gray silty CLAY (CL); moist, stiff.		18			19.4	
5					19	33	19	21.9	
			4"~13': Brown CLAY (CL); some silt, sand in lenses, wet, stiff to medium stiff.		6			29.6	
10						43	20	36.7	
15			13"~17': Gray CLAY (CL); sand in lenses, wet, soft to medium stiff.		3	49	20	38.1	
			17"~21': Gray fat CLAY (CH); some silt, sand in lenses, wet, soft to medium stiff.						
20			21"~22': Gray and Black silty SAND (SM); trace of clay, wet, loose.	15.7				50.6	
			End at Required 22'					30	
25									
30									

SHEAR STRENGTH, TSF
- ● MINIATURE VANE
- ⊖ RESIDUAL MINIATURE VANE
- ⊗ POCKET PENETROMETER
- ◑ UNCONFINED COMPRESSION(UU)
- ⊕ TORVANE

(OPEN SYMBOLS REPRESENT REMOLDED TESTS.)

1.0 2.0

REMARKS :

REMARKS :

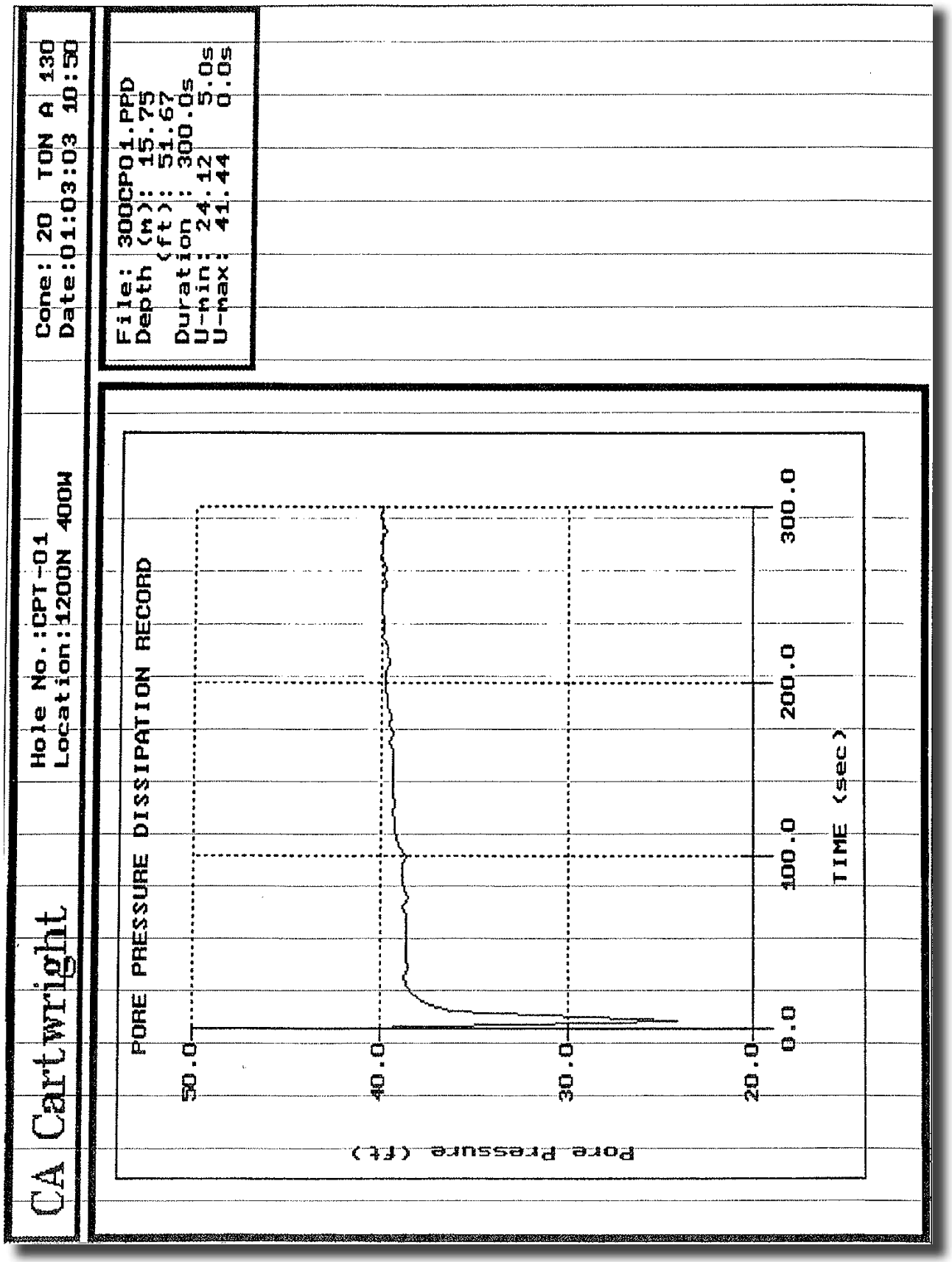
WTR DEPTH @ COMPL. : 4'-8"

FIELD ENG.: Jay Apedaile

COMPLETION DATE : 1/3/03

FIGURE 3

GEOTECHNICAL CONDITIONS



UTILITY SERVICES

SITE UTILITIES
The site survey indicated the following utilities are available to the new building site from 1400 North:

WATER MAIN
10” diameter ductile iron is available in 1400 North.

FIRE LINES
A 10” diameter cast iron fire piping extends around the perimeter of the Main Campus building with fire hydrants. A nearby connection to extend the loop around the new building will be included. There is also a 10” fire line available to the site extending on the south side of the length of 1400 North with two hydrants located at the south and east corners of Parcel A.

FIBER OPTICS
Fiber optics were recently installed in 1400 North anticipating industrial growth in this area and are available to the new building.

SEWER
An existing 18” sewer line is available in 1400 North and an 8” sewer pipe serving the Main Campus building runs through the east side of the proposed new building site.

POWER
A 12,740 V high voltage overhead power is available and has been upgraded in anticipation of industrial growth in this area. A step down transformer will be required.

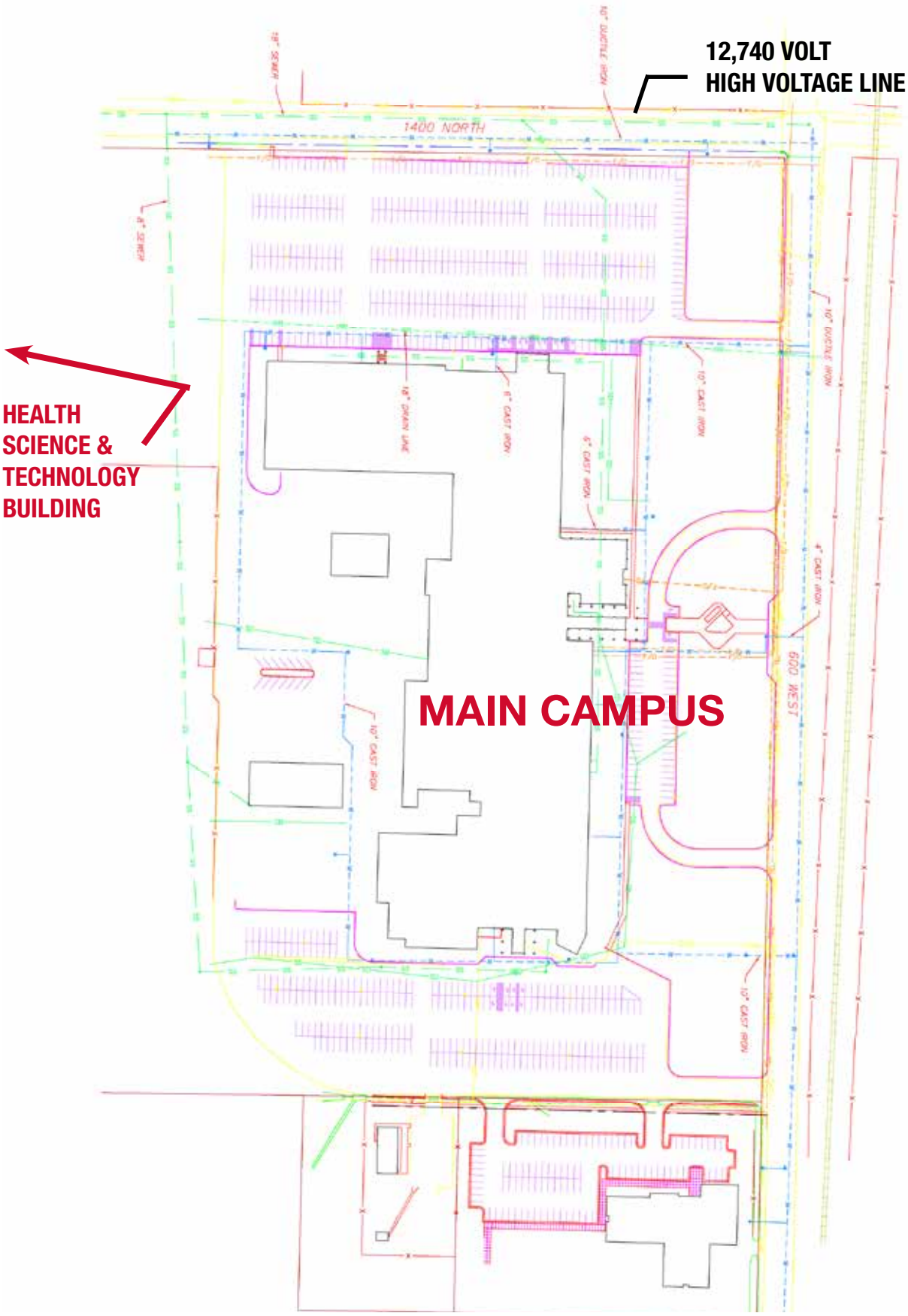
STORM DRAIN
The storm drain from the Main Campus building empties into an existing irrigation canal and runs east to west on the south side of the proposed new building site.

NATURAL GAS
Natural gas is not available on 1400 North but is connected to the Main Campus building from 600 West.

BOILER
The Main Campus building has been upgraded with a new gas fired boiler which is reported to have excess capacity. This boiler could be utilized as a heat source in support of a campus wide Geoexchange heat pump system with a potential for sharing energy between building types and uses.

GEOEXCHANGE
The success of the adjacent Bridger Elementary School has a proven track record indicating the BATC site is a model candidate to install a slinky type Ground Source Heat Pump System. This should be considered as an economical and energy conservation measure for heating and cooling the campus. A good example of such a campus wide system is the Colorado Mesa University, which is implementing energy sharing strategies connecting all new and existing buildings to a Geoexchange system with impressive results.

LAND BANK ACQUISITION REQUESTS
Not applicable to the Health Science and Technology Building Request.


12,740 VOLT
HIGH VOLTAGE LINE
1400 NORTH
HEALTH
SCIENCE &
TECHNOLOGY
BUILDING
MAIN CAMPUS
600 WEST

SCORING ANALYSIS
FOR BUILDING BOARD REQUEST EVALUATION

1. Existing Building Deficiencies and Life Safety Concerns. Suggested Score 4 (1 x 4 = 4)
The deficiencies in the existing building are less than 25 percent of the replacement cost and register a low threat to life and property. The real issue is the capacity of the existing facility. The building is in reasonably good condition, it is simply too small for the existing enrollment load.

2. Essential Program Growth Requirements. Suggested Score 20 (5 x 4 =20)
Enrollment in the Health Sciences programs exceeded the design capacity of the existing facility by more than 10,000 membership hours in FY 2007. When the facility utilization study was updated with FY 2009 membership hour data, the actual enrollment exceeded capacity by more than 53,500 membership hours. In FY10, FY11, FY12, FY13, and FY14 enrollment has been limited by building capacity. As a result, substantial wait times exist for students trying to enroll in Health Science and Technology and a host of other BATC programs. In addition to current enrollment exceeding the existing capacity, the population of the Bear River Region (Box Elder, Cache, and Rich counties) is projected to triple between 2010 and 2060 (Source: Governor's Office of Planning and Budget, 2008 Baseline Projections). To compound the population growth issue, BATC routinely services a higher percentage of the area population than is served in any other region in the state, and this new facility is therefore of paramount importance in accommodating that growth.

The recent introduction of health care reform (regardless of its political popularity) will create an even greater demand for health care workers in the immediate future.

3. Cost Effectiveness. Suggested Score 5 (5 x 1 = 5)
This project is generally considered a "cost-effective design/construction approach appropriate to the facility." However, some additional scoring consideration should be given to the fact that the land, and most other infrastructure costs, are already in place. This request is for a building and some limited parking lot expansion only, and does not require the purchase of a building site.

4. Improved Program Effectiveness and/or Capacity. Suggested Score 10 (5 x 2 = 10)
This project is needed and will provide a substantial improvement in program effectiveness. Please note that the effectiveness in delivering education and training programs is substantially impacted by appropriate facilities. This new facility will provide BATC with the ability to deliver an array of health science and technology training programs to meet the needs of business and industry in the region. Enrollment demand for the current programs already exceeds capacity, and there is over a nine-month waiting period for new students desiring to enter them. While job opportunities do exist, access to the health programs is already limited by facility capacity. The future of these existing and new programs is dependent upon this Capital Development Request being addressed.

5. Alternate Funding Source. Suggested Score 1
To date, no alternative funding is available for this project.

5-YEAR PLAN

Project #1 BATC Health Science and Technology Building 91,500 square foot building at an estimated cost of $26,675,000. This request is for a new Health Science and Technology Building.

Project #2

Project #3

Project #4

Project #5

SUMMARY

This new facility will provide BATC with the ability to deliver an array of health science and technology training programs to meet the needs of business and industry in the region. Enrollment demand for the current programs already exceeds capacity, and there is over a nine-month waiting period for new students desiring to enter them. The buildings were originally constructed for purposes other than health technology labs and classrooms, and BATC has relied on ad-hoc remodels to make due over the past four decades. In addition to these inconveniences and inefficiencies, opportunities for interdisciplinary collaboration are limited.

The allied health programs at BATC are putting a chokehold on the other College programs because of their expansion across the existing facility, which is significantly undersized. There is substantial demand with the other BATC training programs to expand into any existing space that will become available as a result of this new construction. While job opportunities do exist, access to the health programs is already limited by facility capacity. The future of these existing and new programs is dependent upon this Capital Development Request being addressed.