OCTOBER 2016

RENTON TECHNICAL COLLEGE

CAMPUS MASTER PLAN

RTC

McGRANAHAN architects

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1.0
EXECUTIVE SUMMARY

1.0 Executive Summary

1.1 BACKGROUND & PURPOSE OF PROJECT

Renton Technical College was established as a war production school in 1942 providing pre-employment career training and continuing education to service members returning to civilian life from the military. In the 75 years since its inception, RTC has flourished into a premier technical college. In 2015, the college received one of the highest accolades available to such institutions; named to the list of Top Ten community colleges in the nation by the Aspen Institute.

Along with a growing reputation for providing quality technical education, Renton Technical College's campus facilities have correspondingly expanded into a 30+ acre site in the center of one of the fastest growing regions in the state of Washington. To keep up with educational demand, an additional satellite campus property was acquired in 2004, adapting a King County courts building into a facility referred to as the Annex. In addition to the Annex, a number of Basic Skills satellite classrooms dispersed around the college's service area bring accessible remedial education to Renton and the surrounding community.

As RTC has demonstrated over the past seven decades, institutions of higher education must continuously re-examine best practices for delivering quality learning opportunities to match the employment needs of the contemporary workplace. In just the last two decades, educational strategies at all levels have been heavily influenced by business and industry's demand for STEM-savvy graduates with the ability to work collaboratively in teams.

In order to respond to changing educational needs, as well as establish priorities for development and improvements on campus, the state's community and technical colleges are encouraged to undergo comprehensive facilities master planning approximately every 10 years. RTC's last comprehensive master plan was completed in 2005. A primary goal of the master plan is to objectively analyze immediate and future program needs and space requirements based on anticipated growth of the institution, as a result of projected growth of its service area and other factors.

This facilities master plan report serves several important purposes. In addition to providing the institution a road map for future decision-making, the The State Board of Community & Technical Colleges (SBCTC) uses a college's master plan needs-analysis to substantiate requests for the funding of capital projects through the biennial Project Request Report process (PRR). See the PROGRAM NEEDS ANALYSIS section of this report. Internally, the master plan helps the college determine how funding allocations can be best utilized to support its goals. Finally, local jurisdictions frequently request colleges to submit their master plan to show compliance with municipal codes and support of local urban planning initiatives. Although the City of Renton requires no formal submission of RTC's master plan report, a meeting to discuss the implications of future college projects was conducted to foster lines of communication and help anticipate city-imposed cost impacts for inclusion in funding requests to the state.

1.2 PLANNING PROCESS

The most practical facility master plans are living documents, studies that carry forward strong concepts from previous planning efforts while introducing relevant new ideas to reflect an institution's ever-changing program needs. In 2014, to help provide a framework for its facility master plan update, the college also updated its academic plan including a strategic checkup, copies of which can be found in the Appendix of this report. The Academic plan helps to identify trends in the workplace and demographics of the area that can inform decisions about expanding, adding or eliminating educational programs.

In addition, a Master Planning Committee comprised of key administrative staff and academic faculty was convened in order to provide feedback for aligning facility recommendations with overall visions for the college. This committee met regularly over the course of seven months to evaluate the planning process, establish criteria for decision-making and prioritize the recommendations presented in this report. Another important step in the planning process included conducting 10 individual department tours and interviews, and convening several times with the college deans & directors group, and an executive planning committee. See APPENDIX b to reference individual program interview notes.

1.3 GOALS & OBJECTIVES

Early in the planning process, Master Plan Goals were created by the Planning Committee. These goals were purposefully crafted to directly align with the RTC's Core Themes which focus on 4 components: Student Success, Workforce and Basic Skill Education and Institutional Stainability. A complete list of these are located in the PROJECT GOALS section of this report.

1.4 CONCEPT PLANS

Concept campus plans were developed as a part of the facility master plan to address infrastructure deficiencies, program space needs, and functional and aesthetic improvements. Working in conjunction with consultants in the areas of Traffic, Civil and Electrical Engineering, Landscape Design and Wayshowing, recommendations were established and recorded in a conceptual Implementation Schedule. Campus plans included in this report show existing conditions as well as proposed locations for the next three proposed Capital Projects. More information on projects and a Preliminary Implementation Schedule can be found in the RECOMMENDATIONS section.

This 2016 Master Plan is especially significant as it kicks-off Renton Technical College's 75th anniversary celebration; acknowledging the rich history of the college while charting a course for future campus transformation.

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2.0
PROJECT GOALS

2.0 Project Goals

The purpose of facility master planning is to anticipate future program needs by integrating college strategic and academic plans with a finger on the pulse of emerging educational trends. Recognizing that the needs of any institutions are in a constant state of flux, a useful facilities master plan must be specific enough to provide a road map for decision-making, yet flexible enough to easily adapt to changing needs.

This facilities master plan was designed to fully align and support the learning outcomes and overall mission, vision, values of the Renton Technical College as outlined below.

2.0 RTC LEARNING OUTCOMES

Renton Technical College faculty, staff and administration are committed to the employability of our certificate and degree graduates. We promote the knowledge, habits and skills leading to success in a diverse, technological, information-driven society.

Responsibility

- Display honest and ethical behavior in all actions.
- Practice accountability for performance.
- Apply appropriate work habits and attitudes.
- Articulate a plan for career pathways.

Collaboration

- Participate effectively within groups.
- Articulate the value of diversity and equity.
- Use communication skills that encourage all the members of the team.
- Work productively with diverse populations.

Performance

- Utilize content-specific skills.
  Perform competencies to program-specific or certification standards.
- Employ knowledge, skills, and abilities for matriculation or employment.

Problem Solving

- Use multiple resources to find pertinent information.
- Organize information into a usable format.
- Apply decision-making strategies to come to reason able solutions.

Communication

- Demonstrate clearly understood purpose.
- Analyze audience appropriately and recognize diverse needs.
- Deliver information accurately.
- Interpret feedback constructively.

2.1 RTC MISSION, VISION, VALUES

OUR MISSION

Renton Technical College prepares a diverse student population for work, fulfilling the employment needs of individuals, business and industry.

OUR VISION

Renton Technical College will be the premiere technical college in Washington State preparing students for certificates, associate and baccalaureate technical degrees.

OUR VALUES

- Student Focused - their success is our success
- Quality - without compromise
- Integrity - to say and do what is right
- Respect - for the diversity of people and feelings, ideas and resources
- Service - to our customers and community
- Teamwork - together, we will accomplish more

2.2 RTC CORE THEMES

Renton Technical College is committed to the following core themes as we fulfill our mission and move towards our vision:

Student Success

Renton Technical College provides student access that reflects the diverse demographic makeup of its community. Equity is achieved by high success and completion rates of all students, data-informed decision making and student-centered policies and practices throughout the institution.

Workforce Education

Renton Technical College delivers workforce education programs that fulfill student and industry needs through preparation for viable career pathways. Industry needs are met through competency and outcomes based teaching, learning, and hands-on training facilities that reflect workplace best practices. Students become resilient workers by completing innovative educational programs that incorporate current industry trends.

Basic Skills Education

Renton Technical College offers basic skills courses that support the transition of students to college-level study and career pathways. Student progression is supported through ESL instruction, high-school completion options, college-readiness instruction, and integration of basic skills instruction into workforce programs.

Institutional Sustainability

Renton Technical College cultivates, manages and prioritizes its financial, human & physical resources to advance the mission of the college. An optimal learning environment is created through a diverse and innovative faculty and staff, deployment of technologies that enhance teaching and student engagement, and financial planning that supports the college's strategic priorities.

2.3 MASTER PLAN GOALS

Goals specific to Facilities Master Planning were established at the onset of the nearly yearlong process. Crafted by the Master Plan Committee, the following goals intentionally align with and support RTC Core Themes:

MASTER PLAN GOALS BASED ON RTC CORE THEME 1: STUDENT SUCCESS

- Strengthen intra-campus circulation and wayfinding
- Provide a safe and accessible place for learning
- Create spaces that encourage health and wellness
- Create a welcoming environment for all who arrive on campus
- Create student-centered spaces that strengthen the relationship between students and the college

MASTER PLAN GOALS BASED ON RTC CORE THEMES 2 & 3: EDUCATION

- Improve the overall aesthetic and functional quality of campus facilities
- Maximize flexibility to easily respond to changing program needs
- Invite collaboration and the sharing of educational and social spaces
- Create greater identity and cohesion of basic studies to facilitate transitions into programs
- Increase visibility and transparency of programs
- Create a campus environment that supports partnerships with local business and industry

MASTER PLAN GOALS BASED ON RTC CORE THEME 4: INSTITUTIONAL SUSTAINABILITY

- Incorporate sustainable strategies in all projects to conserve natural resources and reduce life-cycle building costs
- Create a sequenced plan of development that continually reinforces RTC's Mission and core themes
- Optimize operational and maintenance efficiencies
- Create guidelines to strengthen college identity and facilitate decision-making
- Improve the college's presence within the surrounding neighborhoods of our service area

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3.0
EXISTING CONDITIONS

3.0 Existing Conditions

3.1 COLLEGE HISTORY

The Early Years

Renton Technical College was established in 1941 as a War Production Training School. Throughout World War II, the college provided customized pre-employment training, job upgrading and retraining to service-members reentering civilian life. Following the war, RTC became a state-funded vocational school under control of the Renton School District with the mission of assisting industry as it transitioned into a peace-time economy. For two decades following the war, the college primarily conducted continuing education and retraining courses for veterans, and a number of other high quality trades programs.

In 1965, Renton Technical College moved to its current campus north of 4th Street between Jefferson and Monroe Avenues. The new campus opened with three new buildings, two of which, Buildings A and B, are still utilized today.

Buildings D, E, and F were constructed over the next several years between 1968 and 1978.

First Major Expansion

By 1984, the college had begun planning expansion of its six-building campus to meet the demands of increasing student enrollment. In order to expand its facilities, the college requested and obtained from the city a rezone of the north property, converting it from Single-Family to a Public Use designation.

Subsequent to the approved rezone, the remainder of the southern half of campus was constructed. Buildings K and L were completed in 1987, while Buildings I and J were completed in 1988. By the time Building H was finished in 1993, the college had accrued over 400,000 square feet of facility space to accommodate a remarkable student body growth of nearly 500 percent since 1968.

ROTOGRAVURE SECTION
The Seattle Sunday Times
DECEMBER 19, 1948

RENTON • Seattle's Close Neighbor, A City of Many Industries

INDUSTRIAL payrolls are the lifeblood of Renton. The Lake Washington city, a manufacturing center in its own right, also is the home of the Boeing B-29 plant, now being reactivated for assembly of C-97 stratofreighters for the Air Force. Roofs of this ultra-modern factory are visible in the left foreground. In the open space beyond is the school district's new stadium. To the right are airport runways. Cedar River, dividing the city in two parts, is spanned by several bridges, of which the newest, on Logan Street, was completed last fall. *(Lower)* Third Av. looking west from Walla Walla Av.

The Renton School District met wartime demands for trained labor by opening a "War Production Training School". Postwar, facilities like Renton Technical College (formerly RVTI) were needed to retrain G.I.s to enter the contemporary workforce. Industries dominating the City of Renton in 1948 included Boeing and Pacific Car & Foundry.

As seen in the photos from the 1970's above, the strength of vocational training at Renton Technical College has always been hands-on access to the most current technology. Faculty is traditionally comprised of professionals in the trades fields, enabling students to learn in real-world settings. This approach to training has resulted in a consistently high job placement rate for RTC students.

Birth of a Technical College

A significant milestone in the development of Renton Technical College occurred in 1991 as Washington State converted its five remaining vocational-technical institutes into technical colleges. As a part of the reorganization, governance of the institution shifted from the Renton School District to the redesignated State Board for Community and Technical Colleges (SBCTC). In conjunction with this reorganization, the college was authorized to grant two year, sub-baccalaureate degrees and certificates of completion.

Newer additions to the main campus, since being converted to a technical college, include Buildings C, N and K3. The Technology Resource Center (TRC), located at the southeast corner of campus, includes an auditorium and a large, modern library. Building N, on the opposite end of campus that opened in 2005, houses the Facilities Department. A major renovation of Building K, the Automotive Technologies Complex, will be complete in the Spring of 2017. The project includes a replacement of K3 with a state-of-the art automotive shop and classroom building.

The Annex

In 2004, college facilities were expanded beyond the main 30-acre campus to include a 2-acre property one half mile to the south on 2nd Avenue. Formerly a King County courthouse, the 9,950 SF single-story structure which was built in 1984 was remodelled in 2005 to accommodate classrooms. Referred to as the Annex, the building currently houses the Construction Center of Excellence and Roofing program. Other portions of the building are available to lease for private events; and events that are frequently catered by the RTC Culinary Arts department.

In addition to the Annex site, the college also operates several satellite facilities in Renton, Kent and Seattle for providing Basic Studies courses to the RTC service area.

RTC Today

Western Washington's Eastside has been one of the fastest growing regions in the state, and Renton Technical College has reflected that growth with facilities that now encompass approximately 436,700 GSF. The main campus houses fourteen permanent facilities ranging in size from 3,240 to 61,963 GSF. Eleven of the permanent facilities are considered instructional/academic facilities, one is an administrative and student support facility, and two are maintenance facilities.

The college currently offers 53 associate degrees, 90 certificate options and 1 bachelor's degree. Certificates can be earned in more than sixty programs. Renton Technical College was recognized nationally as an educational leader achieving the Aspen Institutes's Top Ten Award for Community College Excellence in 2015.

3.2 CAMPUS BOUNDARIES

RTC's main campus is located in the Renton Highlands neighborhood east of Interstate 405, situated on a bluff northeast of the city's downtown core. The main campus is approximately 30 acres, occupying a narrow strip oriented in the north/south direction. It is bounded by the Monroe Avenue to the east, Kirkland Avenue to the west, 7th Street to the north and 4th Street to the south. The adjacent neighborhood is predominantly single family residential to the north and west, with multi-family residential and limited commercial to the east. Small commercial developments, with a focus on automobiles and fast-food restaurants, border the southern side of the campus along 4th Street which is a 5-lane major arterial. The City of Renton has indicated that redevelopment of this roadway will eventually include widening to include a central boulevard, bus pull-outs, re-signalization at the intersections of Jefferson/4th and Monroe/4th and landscaping along both sides. Despite a campus address of 3000 NE 4th Street, no vehicular access is allowed to campus from 4th Street since the two existing driveways have been permanently blocked. Most vehicles access campus from the east on Monroe Avenue. One additional minor access drive exists from 7th Street on the northern perimeter.

A newer campus satellite facility, located approximately one-half mile to the south of the main campus, was acquired by RTC in 2004. Referred to as the Annex, the building was previously a King County courthouse. The Annex houses the Roofing program and space is rented to community groups. The site is accessed off 2nd Avenue, from Monroe Avenue.

3.3 NATURAL FEATURES

Topography

Campus topography slopes gently from a low elevation of 320 feet near the southwest corner at 4th Street and Jefferson Avenue, to a high point of 375 feet near the northeast corner of the site. Portions of the hillside within the campus have been identified as steep slopes. Any development in these critical areas must be closely coordinated with the City of Renton.

The Annex parcel is relatively flat, with only a few feet of grade from east to west.

Soils

Near-surface soils on campus are typically glacial recessional out-wash; silty, gravelly sand. Much of this material was placed as fill, with minimal compaction, during past property development. Underlying soils are mostly glacial till at depths varying from two to several feet below the surface. Historically, there have been no problems with groundwater.

Based on anecdotal evidence, it is not anticipated that any planned development will require special structural foundations, provided the existing sub-grade is properly prepared.

3.4 LAND USE

History

The original use of the site was single-family housing which was platted as “Rainier Acres” in 1906. When the land was acquired by the Renton School District in the 1940’s most of the houses were removed, although there were remnants of this use still present on site prior to the 1987 north campus expansion. When the college sought to expand in 1985, a rezone was requested to change the zoning from Residential (R-1) to a Public-Use (P-1). An extensive environmental impact analysis was required as a part of the re-zone request, and the change in use was contested by residential neighbors to the west.

A condition of accepting the rezoning required construction of an extensive earth berm and landscape buffer along the west and north boundaries of campus. The development conditions also required construction of a secure fence with no pedestrian gates and emergency access only vehicle gates along the west and north property boundaries.

Current Zoning

In 2015, Renton Technical College campus was rezoned by the City of Renton from Light Industrial-Public (IL-P) to Commercial Arterial (CA). The CA zone provides for a wide variety of retail sales, services, and other commercial activities along high-volume traffic corridors. The intent of the CA zone is to transition away from a strip commercial linear business district to a business area enhanced by site planning and pedestrian orientation, efficient parking lot design, coordinated access, amenities and boulevard treatment with greater densities. The CA designation permits outright the development of “Other Higher Education Institution”(s).

A condition of the former Public-Use (P-1) designation required notification of planned development to all adjacent property owners and, if warranted, a public hearing. In light of the 2015 rezone to CA, enforcement of this requirement is likely nullified. However, all development plans should be verified with the city for clarification. A history of voiced objections by surrounding neighbors suggests that any significant campus development could potentially be subject to public scrutiny. However, following recent inquiries about future development on campus, the City of Renton indicated that there are no restrictions imposed on the RTC campus outside of those stated in the municipal zoning codes. During a master planning meeting with the city, a request was made by the college for Renton city planners to tour the main campus to observe how restrictions placed on vehicular and pedestrian movement throughout the site (when it was designated P-1) is in direct opposition to new CA zone goals of creating pedestrian-friendly development.

Existing Easements

Because campus property was originally a residential development, a number of easements for sanitary and water utilities cross the site from east to west in the vicinity of the old platted roads. These have not typically been an impediment to development as subject utilities have been moved and easements adjusted to reflect the relocation.

Of significant impact to current and future campus development is a wide easement for overhead power transmission lines controlled by Puget Sound Energy (PSE) that were originally granted in 1929. This right-of-way easement permits the utility to construct and operate two multiple-conductor high-voltage transmission lines along the eastern portion of the site. The restricted easement width for each line is 50 feet from the centerline. The easement severely restricts all development in the right-of-way and is perpetual with the land, making an area 100 foot wide from the north to south boundary of the site unusable for anything but surface parking. It has been calculated that the impacted area totals approximately 217,500 sf (5-acres) which is nearly 20% of the total campus site area.

In response to huge new power demands taking place in this region, PSE has instigated an upgrade project referred to as *Energize Eastside*. The purpose of this project is to bring new higher capacity electric transmission lines to communities between Redmond and Renton. The Renton Technical College site is part of the route selected for this new high voltage transmission line. At the time of writing, construction was slated to begin in 2017 and be fully operational by end of the year, 2018. However, the *Energize Eastside* project has been met with substantial resistance from communities to the north which may delay the projected schedule.

Construction activities will likely include removal of existing poles, installation of new poles, stringing of higher voltage wires, expansion of existing or construction of new substations, and property restoration. According to PSE, powerline replacement will be confined as much as possible to normal daytime working hours during the week, with the possibility of some work on Saturdays. However, jurisdictional requirements will dictate the schedule of construction. When working on or along roads, signs and flaggers will help direct traffic. PSE does not anticipate any scheduled power outages during construction, however, if an outage is needed, customers will be notified in advance of the outage.

During master planning, requests were made to shift the lines to the east to be parallel with Monroe Avenue instead of making a diagonal swath across campus. This request was denied, although PSE has indicated that it will work with the college to determine the best placement of the new power poles. Regardless, one potential benefit of the transmission line replacement is that the number of necessary power poles may be reduced and placed in spots less detrimental to campus circulation. Proposed replacement lines will utilize a single row of double-armed poles that are taller and can be more widely spaced than the existing poles. This may provide opportunities for improving vehicular circulation on campus. See TRAFFIC & CIRCULATION RECOMMENDATIONS.

More information and updates regarding the *Energize Eastside* project can be found on-line at:http://www.energizeeastside.com/

Municipal Zoning Codes for CA (Commercial Arterial)

Lot Coverage

- Maximum lot coverage for buildings is 65% of total lot area or 75% if parking is provided within the building or within an on-site parking garage.

Setbacks

- Minimum: Front and side yards; 10 feet.
- Note that the minimum setback may be reduced to zero through the site plan review process provided that blank walls are not located within the reduced setback.
- Maximum: Front yard setback; 15 feet, Side yard; None.

Gross Area

- Zoning indicates no maximum floor area

Requirements

See Building Orientation under Urban Design Regulations in the City of Renton Municipal Code for requirements of modulation, building placement and development of required public amenities. One significant public amenity specified by the city is development of a public plaza at the intersection of 4th Street and Monroe Avenue. Early discussions with the City of Renton suggested that creating a plaza on the east edge of campus will not be a requirement for new buildings proposed as capital projects on the southwest quadrant of campus. It was noted during discussions with the city that the corner of 4th and Monroe did not seem to be an ideal place for a public plaza since that the area is encompassed by parking and a noisy arterial and is physically dominated by a city-owned brick pump-station enclosure.

3.5 BUILDINGS & LANDSCAPE

Architecture

Campus buildings are a mix of architectural styles due in part to the variety of decades in which they were constructed and in response to their primary function as either shop or classroom space. The southern portion of campus is distinguished by single-story, flat-roofed masonry block and brick buildings that are industrial in appearance, comprised of simple box shapes, limited modulation and minimal glazing. The newer central and northern sections are generally two-story pitched-roofed buildings of wood frame construction, clad in synthetic stucco siding and cement tile roofs. Located on a highly visible site at the corner of NE 4th Street and Jefferson, the more recent Technology Resource Center Building C, completed in 2003 re-energized the south campus by introducing a bold multi-storied scale, with substantial visual transparency and a harmonious palate of new materials that blend well with the existing campus context. Likewise, a new K3 Building, part of the revitalized Automotive Technologies Complex complimented the palette of materials on campus by utilizing standing seam metal roofing and corrugated metal siding.

Building Conditions

The condition of each campus facility is evaluated by the SBCTC every two years, with results reported in a Facility Condition Survey (FCS). The last RTC survey was performed in 2015. Results of the survey are summarized in the table on the following page and a full copy of the report can be found in the digital version under APPENDIX g.

The Facility Conditions survey includes two main focus areas; the identification and evaluation of facility deficiencies that require capital funding which are scored and ranked to identify projects that will be proposed in the capital budget, and the evaluation of campus sites and buildings to determine the asset conditions. Buildings across the community and technical college system are scored using uniform criteria. This data is a key determinant the SBCTC uses to validate a college's request for major project funding.

2015 SBCTC FACILITY CONDITION SURVEY RESULTS

BUILDING DESIGNATION	BUILDING NAME	CONSTRUCTION/REMODEL DATE	GROSS AREA (SF)	2015 FCS SCORE	2013 FCS SCORE
A	McCormick	1966/-	26,183	366	375
B	Health Occupations	1966/2002	46,435	444	432
C	Technology Resource	2003/-	46,597	170	170
D	Basic Studies	1978/1997	9,810	238	242
E	Houser	1973/-	13,334	308	315
F	Anderson	1975/1997	18,465	274	274
G	Central Heating	1966/-	3,240	262	254
H	Business Technology	1993/-	50,200	194	194
I	Campus Center	1988/-	50,364	222	194
J	Chuck Demoss	1988/-	61,963	258	206
K	Paul Greco	1987/-	58,007	436	436
L	Al Odem	1987/-	31,035	244	261
M	(Renton Public Health)			N/A	N/A
N	Facilities/Ece	2005/-	11,088	182	194
O	Courthouse Annex	1984/2005	9,948	308	327

CONDITION KEY

SUPERIOR	146-175
ADEQUATE	176-275
NEEDS IMPROVEMENT/ADDITIONAL MAINTENANCE	276-350
NEEDS IMPROVEMENT/RENOVATION	351-475
REPLACE OR RENOVATE	476-730

Recent Facility Additions and Upgrades

Opening in the spring of 2017, the Building K Automotive Technologies Complex upgrade includes a new replacement K3 Building featuring state-of-the art automotive facilities for auto body and repair. Buildings K1, 2 & 4 include renovated instructional and shop space, and the addition of an entry vestibule on the south side of K1 to encourage pedestrian circulation in the north/south direction through the automotive facility.

LANDSCAPE

The campus is fully developed and has no areas of native or undisturbed landscaping. Primary planting areas are located in the steeper areas along the eastern perimeter and within the landscape buffer along the west and north boundaries. Currently, there is not a formally adopted landscape master plan, although recommendations and design guidelines sections included in this report suggest ways for beautifying the campus while reducing maintenance and water use.

Planting in parking areas is limited and consists mainly of low-growing juniper. Most of the existing parking lots on campus lack landscaping that meets current city standards. Revisions or reconfiguration of existing parking may trigger city-imposed landscaping upgrades which could reduce available parking stalls.

There are several areas of open landscape/hardscape. One is located south of Building I which features rows of ornamental trees and a metal sculpture. The second is a triangular area between Buildings D and F that also features a sculpture. The entry to the Technology Resource Center Building B, has been developed as a hardscape plaza with art and seating integrated into the landscape.

Trees Canopy & Vegetation

Currently the campus has a tree canopy of about 5 acres of the 30-acre site. Large coniferous trees line much of the campus perimeter. Internally, landscaping on campus consists mainly of large traditional lawn areas and large shrubs.

Recent Landscape Additions & Upgrades

Newly installed landscape around the K Automotive Technologies Complex are indicative of the new approach to campus landscape that introduces a more diverse palette of low maintenance, drought tolerate species.

See LANDSCAPE DESIGN GUIDELINES for additional information.

RTC campus - **30 acres** tree canopy coverage - **~5 acres** planting and lawn coverage - **~8 acres**

3.6 PROGRAM DISTRIBUTION

Zones

RTC's main campus can be roughly divided into three zones; the southern portion is dominated by academic and trades buildings, the middle section is primarily academic space and student services, and the most northern section is trades programs, with Facilities Building N on the northern boundary.

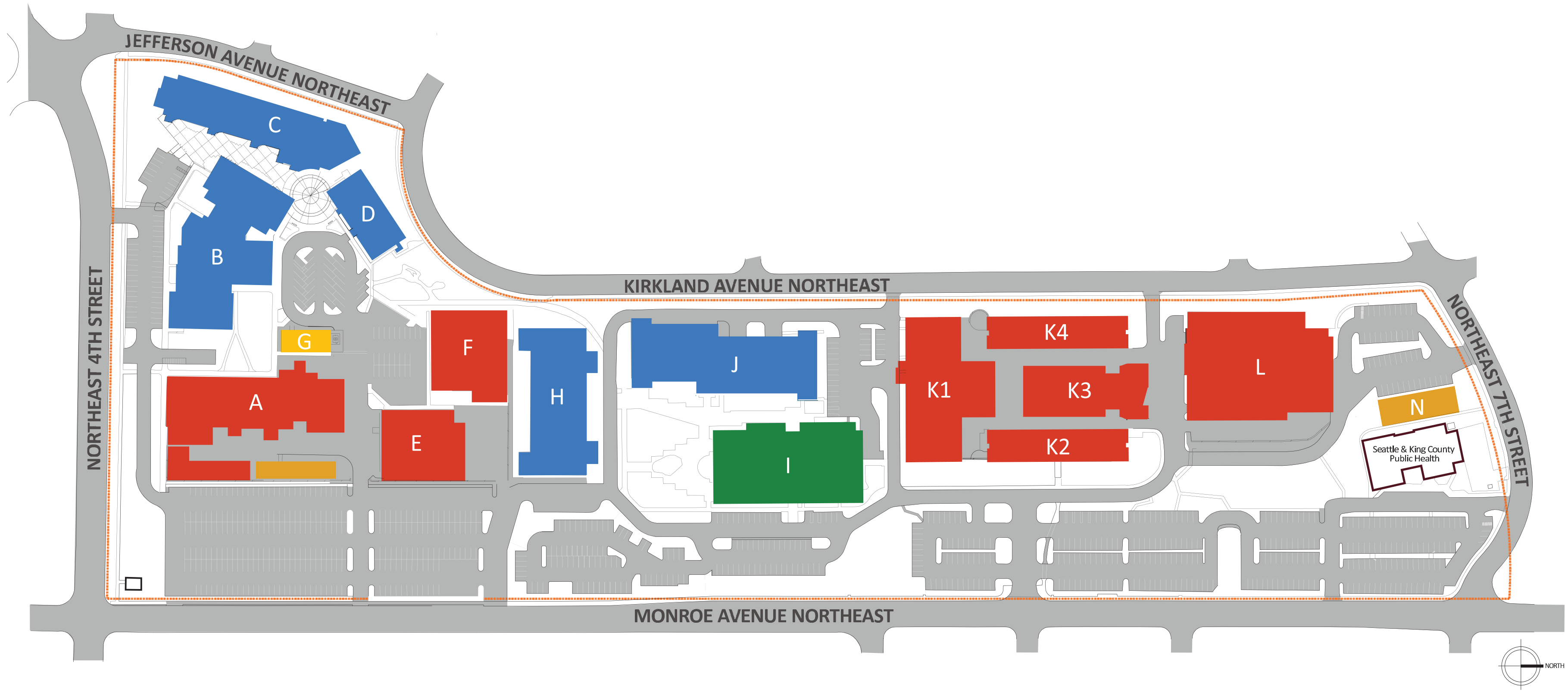
Following industry and educational trends, the new K3 Automotive Technologies Building supplements shop space with affiliated classrooms to encourage collaboration and the ability to move seamlessly from theoretical concepts to practical implementation of learning concepts.

Collaboration

Previous RTC master planning studies attempted to group related programs in closer proximity to one another, a desire that was reiterated by the 2016 Master Planning Committee. The following page indicates how programs are currently distributed across campus. The committee suggested that more collaborative opportunities will result between students and instructors if related program spaces and faculty are physically next to each other or even co-located. Encouraging greater collaboration will be further advanced by creating dedicated casual social spaces within new and existing facilities. These spaces should include comfortable, moveable tables and chairs that can be arranged into multiple configurations, and white boards or smart boards for the sharing and recording of ideas.

See following page for PROGRAM DISTRIBUTION DIAGRAM.

PROGRAM DISTRIBUTION



LEGEND

- TRADES/TECHNICAL EDUCATION
- ACADEMIC PROGRAMS
- ADMINISTRATIVE/STUDENT SERVICES
- FACILITIES/CUSTODIAL

RTC RENTON TECHNICAL COLLEGE

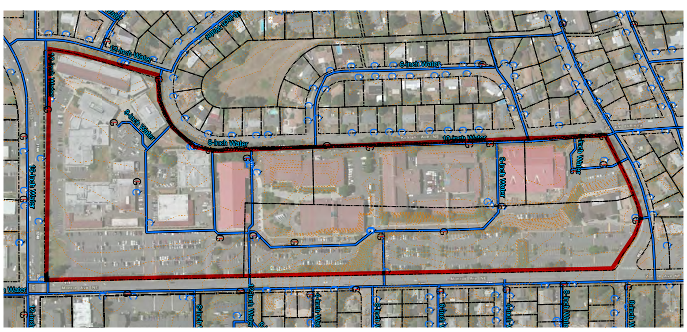
3.7 UTILITIES

The main campus and annex sites are served by the City of Renton for domestic and fire protection water, sanitary sewer and storm sewer. Puget Sound Energy provides electricity and natural gas to the campus. Systems are summarized below. Full engineering reports and existing utility plans are located in APPENDICES c & d.

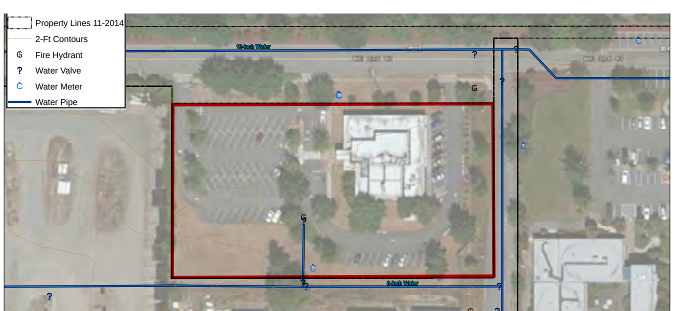
Water

Main lines are in adjacent streets and several cross through the campus in easements. Each building is separately metered for domestic and fire protection services. New development and significant renovations of existing buildings will require review and likely upgrade of backflow protection devices on the existing services.

The District has an easement for a water booster station located on the campus at the southeast corner. Available pressure is at least 100 psi and is projected to be adequate for all future development needs.



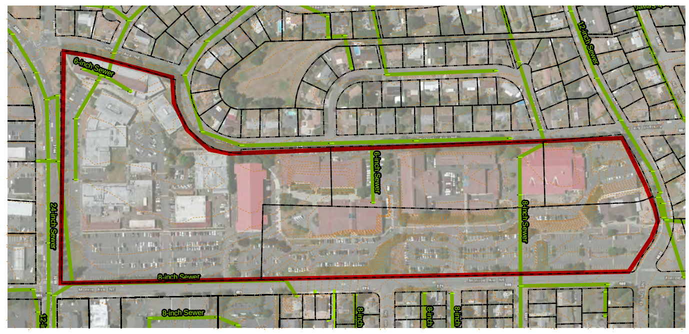
City water system at main campus



City water system at Annex

Sanitary Sewer

Sewer mains are in adjacent streets, and several city mains cross through the campus in easements that are typically under existing drive aisles. Each building is separately served by side sewers to the city mains. In general, unless a proposed development encroaches on an existing main's easement, the sewers are adequate for new and future projects.



Sanitary sewer at main campus

Sanitary sewer at Annex

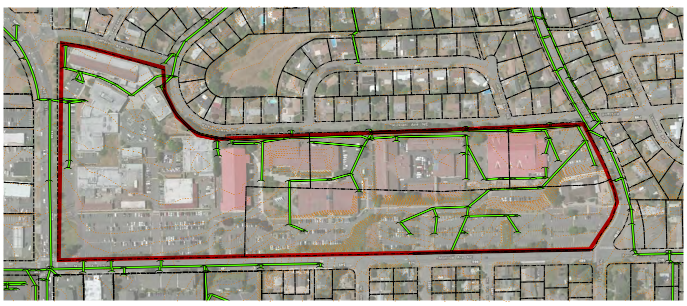
Storm Water

Campus is largely covered by paved parking and buildings; no significant undeveloped areas exist. The property directly discharges storm water to the city storm system, with no flow control or water quality treatment facilities in the system. Recent projects including Building C, Building N, and the renovated Building M (leased by Seattle & King County Health) have been developed to city standards current at the time of the project.

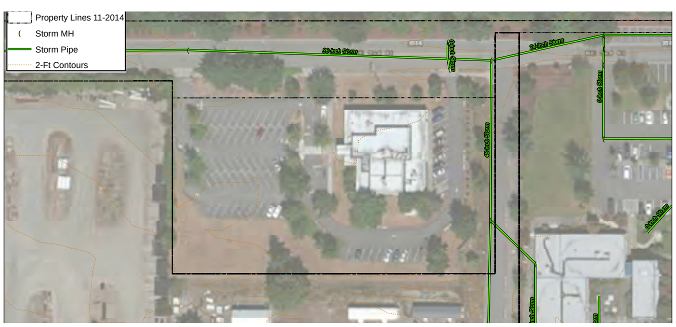
The college is located within a city storm water basin that is largely developed. Projects in this basin generally need to mitigate only for the increased impervious surface added and match expected peak storm water flow rates to the existing, developed condition. New or replaced pollution generating surfaces over 5,000 SF must provide treatment of water collected off of them prior to being discharged from the campus. For this campus, a pollution generating surface is typically any vehicle use pavement.

For storm water compliance, all projects or improvements to the campus are permitted through the City of Renton. City regulations dictate improvements needed to mitigate for new impervious surfaces. New impervious surfaces must be mitigated for flow control and if they are pollution generating - typically from vehicular use - treated also for water quality.

The city requires new development and redevelopment projects to incorporate low impact (green) storm water control measures wherever possible. Green roof, porous pavements, rain gardens and other low-impact storm facilities should be considered in any redevelopment project.



Storm water at Main Campus



Storm water at Annex

Site Pavements

Typically, there are two site pavement systems in use on the campus. Drive aisles and parking lots are typically paved in asphalt. Pedestrian walks and plazas are typically paved in Portland cement concrete and were installed with the buildings they serve. Details and thicknesses of the pavements within the campus are typically based on the City of Renton standards effective at the time the installations were made.

Power

The College's primary power distribution system consists of underground medium voltage cable installed in open-loop configuration with load break junction points tapping off to individual building service transformers. The primary power system is in fair working condition with adequate capacity to support future campus growth. Information on specific building power systems is found in the Existing Electrical Infrastructure Assessment in APPENDIX d.

Data

Telecommunications

- The existing system consists of a cable and conduit distribution system serving a variety of building systems. Those systems include the College Data Network, Telephone System, Security System, Fire Alarm Management System, and Building Control System.

3.8 MULTI-MODAL TRANSPORTATION & PARKING

Parking

A majority of parking is located on the east side of campus, directly beneath Puget Sound Energy's power transmission lines. These parking areas are arranged with full-size stalls oriented at ninety degrees with two-way traffic throughout. Entrances to the parking lots are from Monroe Avenue with the exception of one entrance from 7th Street at the northeast corner of the campus.

A parking study was conducted several weeks into the 2016 Winter Quarter to determine current demands and utilization, and to identify current and future parking needs in conjunction with master plan recommendations.

RTC Campus Master Plan

Existing Conditions

A trip generation study was also conducted to determine overall vehicular distribution and access/egress patterns of students, employees and guests. The study indicated that peak hourly volumes generated by the campus occurred from 7:00 to 8:00 am which equates to 1.88 trips/1,000 SF of gross floor area. These observed vehicle trip generation rates are significantly lower than published rates in the *Trip Generation Manual, 9th Edition, Institute of Transportation Engineers (ITE), 2012*, for Junior/Community College land uses, which have published rates of 2.99 trips/1,000 square-feet in gross floor area during the morning peak hour.

Currently, there are 997 stalls provided on-site at the main RTC campus, including 42 stalls designated as accessible. The Annex supplies an additional 68 stalls. In total, off-street parking supply is approximately 1,065 stalls for RTC programs. In addition to these stalls within parking lots, parallel parking along the street frontages of Jackson Avenue, NE 5th Place/ Kirkland Avenue, and Monroe Avenue were also utilized by the RTC Campus. Including observed off-campus parking, the average peak demand was approximately 1,047 stalls at 11:00 am, resulting in a utilization rate of approximately 98%.

PARKING LOT	STANDARD STALLS	ADA STALLS	TOTAL
P1	82	4	86
P2	309	8	317
P3	33	4	37
P4	40	2	42
P5	7	0	7
P6	75	0	75
P7	49	6	55
P8	24	2	26
P9	53	0	53
P10	112	5	117
P11	9	1	10
P12	87	2	89
P13	41	1	42
east L	23	0	23
behind J	11	7	18
Annex	65	3	68
street Monroe	51	0	51
street Kirkland	20	0	20

			TOTAL
Main Campus	955	42	997
Annex	65	3	68
TOTAL on Campus	1020	45	1065
TOTAL On-Street	71	0	71

RTC parking count

Parking lot designations on campus

City of Renton Municipal Parking Code

The City of Renton's Municipal Code, per Table D in section 4-4-080, requires Colleges and Universities to provide:

A minimum and maximum of 1 stall per employee plus .5 stalls for every full-time student not residing on campus.

Modifications to the number of parking stalls may be granted for non-residential uses through site plan review if the applicant can justify the reduction to the Administrator through documentation of actual use or the parking standards of nearby cities per RMC 4-4-080c.

Parking Increase for First Capital Project

Capital Project One: New Allied Health Replacement Building. Increase in FTEs estimated at 50.

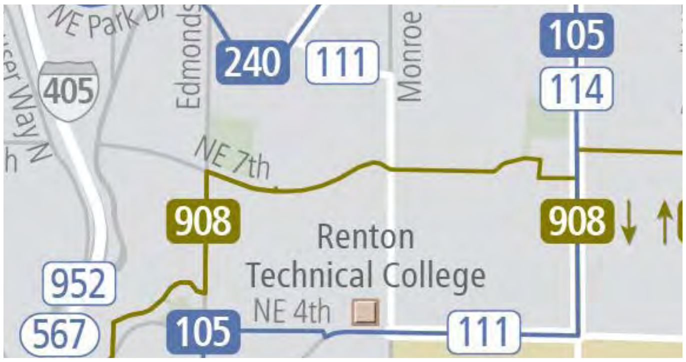
Acquisition of the new property across 4th Street provides ample space to accommodate the parking stalls needed for FTE increase and loss of parking in the conversion of Parking Lot P3 into a commons/greenspace.

Bicycles

The City of Renton also has bicycle parking regulations in its Municipal Code. The quantity of parking spaces mandated is 10% of the required number of off-street parking stalls. Bicycle facilities shall include a rack permanently affixed to the ground that supports the bike at two or more points. See RMC 4-4-080b for additional Bicycle Parking Standards.

Public Transit

The RTC main campus can be accessed by King County Metro Transit buses 105, 111, and 908 which run on frequent schedules.



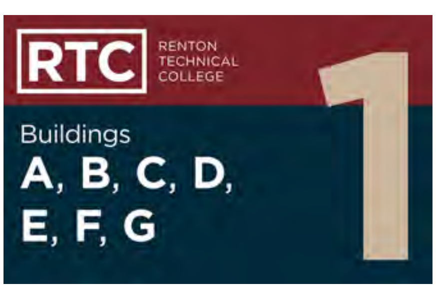
Metro Transit Bus Routes to RTC

View the complete PARKING & TRAFFIC REPORT located in APPENDIX e.

3.9 WAYFINDING

Attractive, well-functioning signage is instrumental in conveying an institution's identity and creating a welcoming message to all who enter campus. In the Spring of 2016, RTC commissioned the design of a signage improvement package to coincide with the college's 75th anniversary celebration.

Highlights of the new signage package include retrofitting the 4 internally lit entrance signs along Monroe Avenue with graphics sporting bold numbers and easy-to-read text and new I-SPOT campus directories with crisp, high definition contrast maps for increased legibility. New building ID signs were simplified, tall pylon signs, and existing pointer signs were updated with 3 color graphics complementing other new signs.



See also; WAYFINDING RECOMMENDATIONS & GUIDELINES.

3.10 FUTURE DEVELOPMENT CHALLENGES

There are limited open spaces on the campus that can be developed for buildings.

A 100-foot-wide right-of-way easement for Puget Sound Energy's high-voltage power lines dating from 1929 exists along the eastern the portion of campus. Building development within the easement is prohibited and restrictions are also imposed on structures within 35 feet of the easement. Other minor utility easements and fire access routes similarly restrict development.

Topography presents another challenge, especially impacting development of shop space that requires large flat areas with ground level access and abundant exterior storage.

Landscape buffers and limited access points on the western portion of campus, dating back several decades, are still being maintained.

RTC borders single-family zoning to the west and north. When the college expanded in 1985 significant opposition from the neighbors resulted in development restrictions being placed on the campus. In addition, pedestrian and vehicular access limitations were put in place on the west and south perimeter following the Environmental Impact Statement (EIS) submittal for expansion. Recent discussions with the city have indicated that future development has no additional restriction than those imposed normally through municipal zoning. Noting a conflict between existing impediments to the west and the Commercial Arterial (CA) zoning designation which advocates pedestrian-friendly circulation, the city may be responsive to repealing these past development restrictions.

Future capital projects, in particular buildings that substantially increase overall FTE's, will require additional parking stalls. State funding typically excludes allocation for structured parking. The college may choose to provide more off-site parking by acquiring adjacent properties as they become available or opt for self-funding of a structured parking garage through the COP process.

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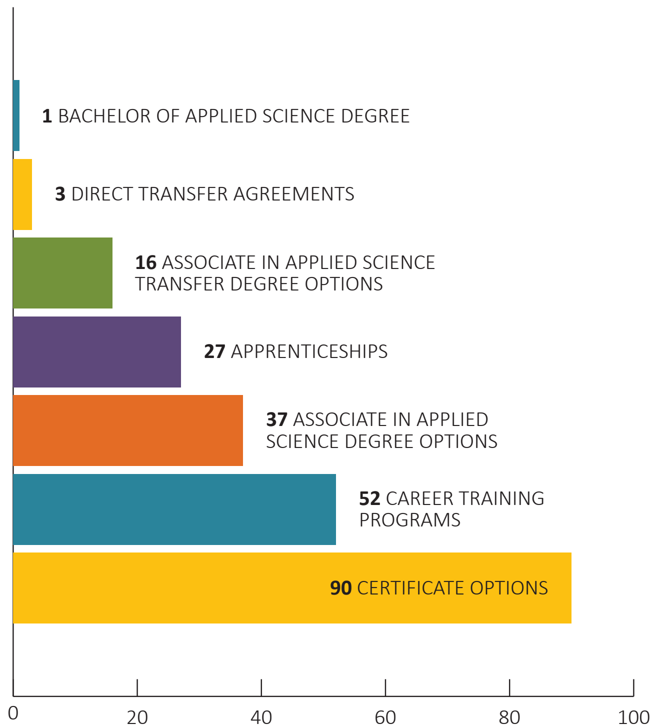
4.0
PROGRAM NEEDS ANALYSIS

4.0 Program Needs Analysis

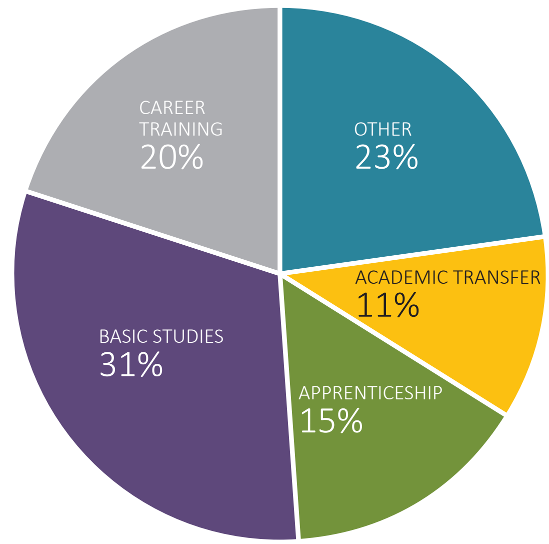
4.1 PURPOSE FOR ATTENDING

Originally established as a workforce training institution, the role of RTC has been dramatically expanded over the last 75 years to offer a large variety of degrees, training programs and certificates, with the breakdown as follows:



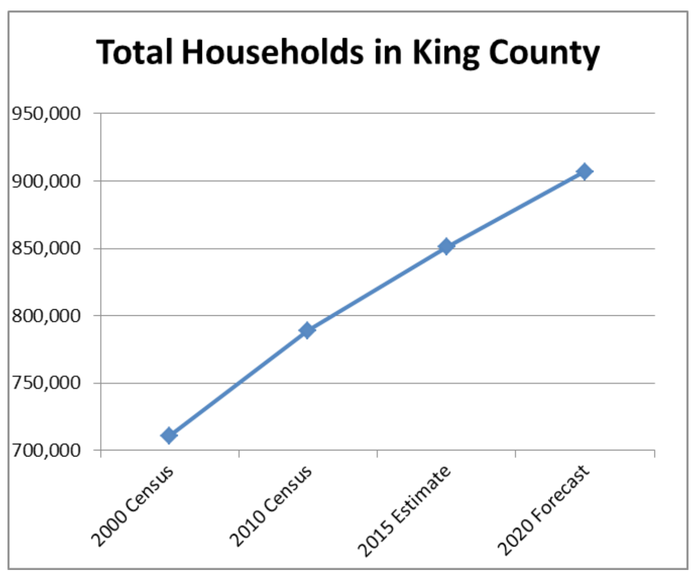
Student purpose for attending has also shifted from almost exclusively trades instruction, to a balance of academic and workforce training. (See pie chart at top right) The demand for Basic Skills alone has increased tenfold, reflecting a greater population of students working toward a GED or improving English speaking skills.

The need for additional General Education courses, especially in the area of math and science, has resulted from greater demand for transfer programs with students completing their bachelor degrees from four-year institutions.



4.2 GROWTH OF SERVICE AREA

Washington State's Eastside is one of the fastest growing areas in the state. From 2010-2015, incorporated King County grew 6.7%, independent of annexations. The number of households in King County is anticipated to grow by 6.4% between 2015 and 2020 to 906,000. (Sources: Puget Sound Trends & Economic Council of Seattle and King County)



The number of households in King County has grown dramatically since the 1940s, increasing in population by 11% between 2000 and 2012. Correspondingly, the college has seen similar consistent upticks in student enrollment and total headcount. (Source: www.kingcounty.gov & www.census.gov)

4.3 ENROLLMENT PROJECTIONS

During the 2015-16 school year, Renton Technical College served 10,584 unduplicated students, an increase of 4.2% over the 10,160 students enrolled the previous school year. Specifically, Fall Quarter of 2015 saw an even more significant jump in enrollment by more than 8%, at 5,676 up from a maximum 2014 enrollment of 5,232 during Winter Quarter. RTC has an estimated 85% placement rate.

The State Board of Community and Technical College (SBCTC) has projected an enrollment growth at RTC of 105% over the next ten years which equates to more than 50 additional FTE's per year.

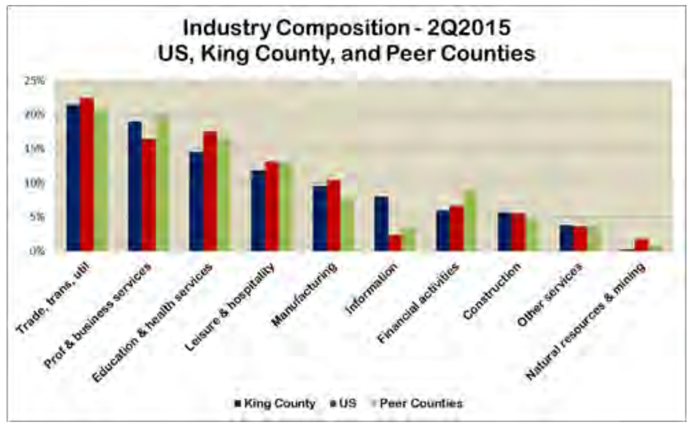
4.4 PROJECTION OF FACILITY NEEDS

The following list of program needs, which are proposed as the next three capital projects requests, are the greatest spatial deficiencies of RTC based on growth expectations and current facility conditions as well as business and industry trends;

- **Allied Health**, including an expanded Medical Assistant program requires a new replacement building that will more efficiently group together health program spaces into a state-of-the-art facility. Enrollment trends on campus reflect the urgent need for trained health care employees in the workplace. Allied Health are among the most popular degree programs on campus, with 600-700 students enrolled each year and another 80-90 students on the waitlist.
- **Trade & Industry Programs** have been growing rapidly with increases of 15% to 24% from year to year, based on program enrollment. Most programs are over-enrolled with waitlists over the last 4 years averaging 21 students. FTE's for these programs would increase with additional classroom, shop and storage space. Specific examples of over enrollment include Welding at 140% capacity, Machining/CNC at 129% capacity and Aerospace Metrology which has a capacity of only 10 students due to spatial constraints. The age and condition of current Trades facilities, specifically Buildings A & E, also compromise safety and functionality with poor sightlines and limited electrical capacity.
- **Basic Studies** comprises the largest percentage of RTC's overall headcount. Over 30% of all enrolled students at the college participate in Basic Studies courses. Due to under-scaled facilities, Classrooms and Labs are spread across campus in multiple buildings, limiting collaboration and sharing of resources and making it difficult for students (who are often non-native English speakers) to find them.

New Programs Under Consideration

The industry composition of King County is indicated below.



Note that RTC's program focus areas align with the top 5, including health services, hospitality and manufacturing. In response to these trends, RTC is evaluating the introduction of new programs in the following areas:

- Bachelor of Applied Sciences in Technology
- Social Media Marketing
- Robotics
- Food Service Management
- Cosmetology and Esthetics
- Machining

The college has an estimated placement rate of 85%.

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5.0
RECOMMENDATIONS

5.0 Recommendations

Project recommendations outlined below are the result of dozens of site tours and interviews with program leaders, meetings with the Master Planning Committee, discussions with the executive oversight group and the expertise of multiple consultants familiar with campus facilities and infrastructure. Each of the recommendations meets one or more of the Master Planning Goals originally established by the Master Planning Committee to align with the college's Core Themes. The intent of the Recommendations sections is to identify potential facility improvements for consideration when funding opportunities arise.

Master plan diagrams on the following pages illustrate general locations established for proposed Capital Projects, Minor Program Improvements and Repairs, and Locally-funded Improvements. An accompanying Project Implementation Schedule outlines potential target dates for submitting Project Request Reports (PRRs) to the state as well as commencement of design and construction phases.

5.1 FACILITY RECOMMENDATIONS

The number of Capital Projects funded each biennium by Washington State's Legislature has diminished significantly following the economic recession of the mid-2000's. This cutback to the state's Higher Education budget has forced the SBCTC to re-think how it had traditionally been awarding projects to the 34 colleges in the community and technical college system. In an effort to reduce the number of institutions applying for limited funds, the SBCTC began restricting the number of applicants in the process to just 10 pre-approved colleges each biennium.

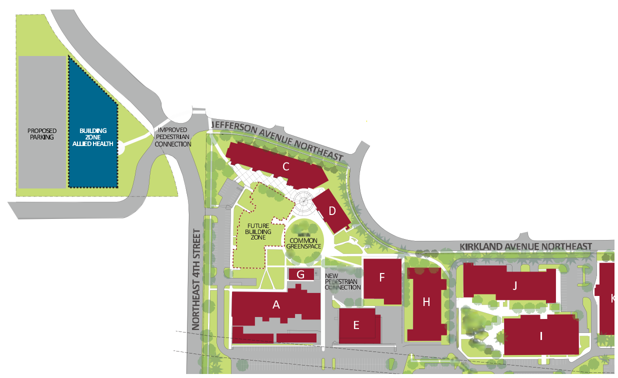
With an improving economic forecast, the SBCTC has once again contemplated revisions to the formal funding process; revisions they anticipate to launch for PRR's by the 2021-2023 biennium. Although specific modifications are still being vetted, anticipated changes include creating an on-going pipeline or continuous queue for granting project requests such that each institution is virtually assured a project every 8-10 years.

CAPITAL PROJECTS

Three potential Capital Projects have been identified for future funding requests. For more information, see MASTER PLAN DIAGRAMS & PROJECT IMPLEMENTATION SCHEDULES that follow project descriptions.

Project One: New Allied Health Replacement Building

Submit Project Request Report (PRR) in December 2017. If funding is approved, design would occur in 2019-21 with construction following in the 2021-23 biennium.



Proposed location of Capital Project One - a New Allied Health Replacement Building. (See full campus plan on page 38.)

- Proposed site is a newly acquired property (former King County Health Building) located across NE 4th Street, directly south of the main campus.
- Prior to replacement building funding approval, avoid any significant investment in improvements to Building B since any improvements would be short-lived should the building be replaced.
- Short-term priority for the Allied Health Programs is the addition of a Computer Lab. This could be a shared space located in Building D. Other projects identified include a small renovation to improve the functionality of the Phlebotomy & Surgery Tech Classrooms and improve the privacy in Office Suite B119.

In the PRR, consider bundling these related infrastructure, program and site improvements;

- Pedestrian cross walk improvements across 4th Street and Jefferson Avenue.

- Develop a new quad greenspace in the current location of Parking Lots P3 & P4. See LANDSCAPE RECOMMENDATIONS - Turf
- Create a dedicated pedestrian walkway between Buildings A and E connecting parking lots to the east with the new greenspace in front of the new replacement building.
- Replacement of the irrigation system on the entire campus, or as a phased project beginning with the southern portion near the new development. (Note that at the time of this report, the SBCTC is advocating infrastructure repairs. Adding infrastructure projects to a PRR does not increase the building cost for comparison purposes.)
- Repair uplifted concrete utility vaults on west edge of campus.
- Renovate current educational spaces in Buildings H and J into alternative uses following relocation of Health programs into new replacement building.

In the PRR, consider bundling these related infrastructure, program and site improvements:

- Renovation of any program spaces in other buildings that will be located in the new replacement building.
- Improve pedestrian walkway and landscaping between the 4th Street/Jefferson Avenue intersection and existing entry plaza on the east side of Building C.

Proposed concept for pedestrian walkway from 4th Street/Jefferson Avenue Intersection to plaza at Building C

Project Two: New Trades & Industries Replacement Building

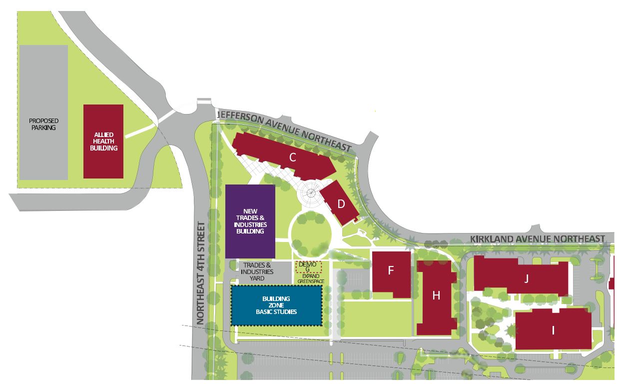
Submit Project Request Report in December 2023, or thereafter if prior milestones have not been met. With funding approval, design would begin in the 2025-2027 biennium with construction following in 2027-2029 biennium.

Proposed location of Capital Project Two - a Trades & Industries Replacement Building - on the current site of Building B. (See full campus plan on page 39.)

- Proposed site is existing location of Building B, along 4th street.
- With the SBCTC's anticipated revisions to the project funding process, the proposed PRR submittal timelines for Capital Projects Two and Three may need to be adjusted accordingly.

Project Three: New Basic Studies Building

Submit Project Request Report in 2029. With funding approval, design would take place in the 2031-33 biennium with construction occurring in 2033-35.



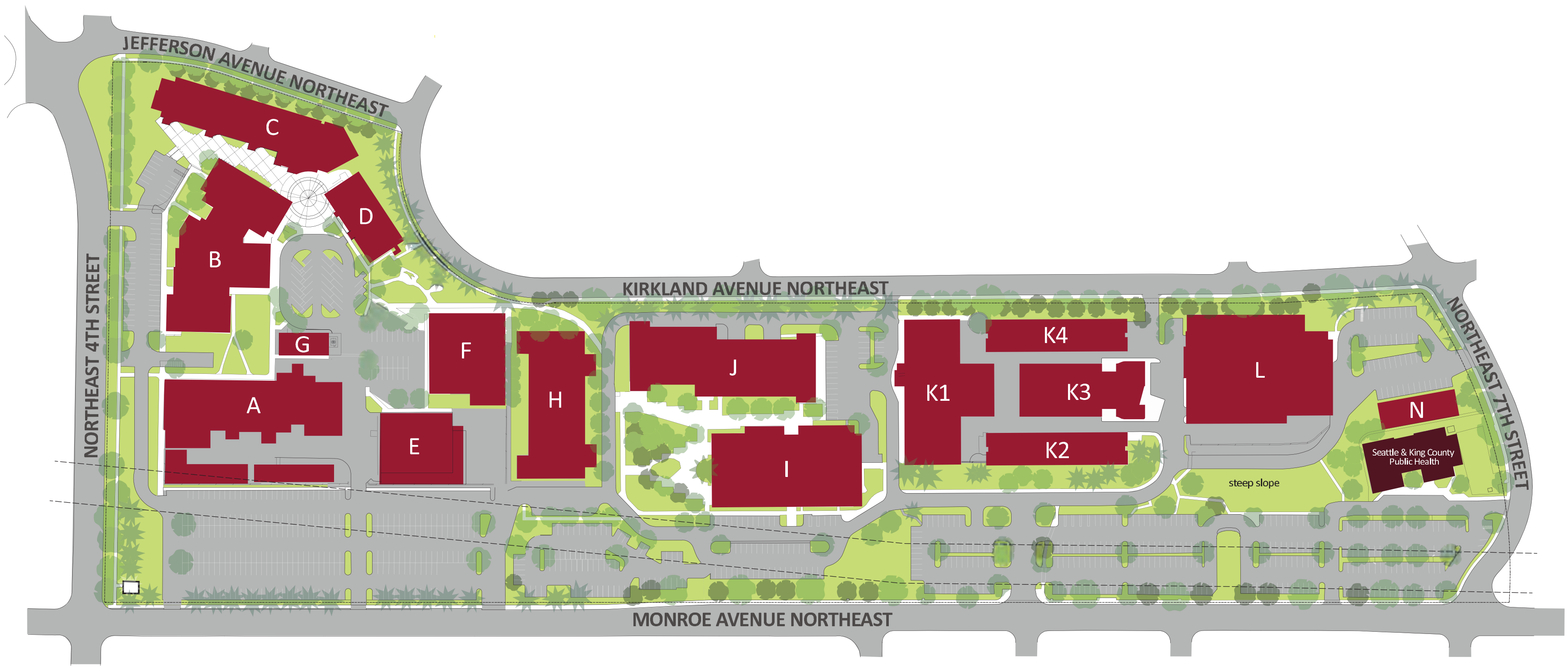
Proposed location of Capital Project Three - a New Basic Studies Building - on the current site of Building A. (See full campus plan on page 40.)

- Proposed site is current location of Building A, which will have been replaced in Capital Project Two.

In the PRR, consider bundling these related infrastructure and site improvements:

- Replacement of facilities Building G and remaining HVAC conversion projects associated with demolition and removal of Building G.

EXISTING CAMPUS PLAN



LEGEND

- EXISTING BUILDING
- PROPOSED BUILDING ZONE
- PROPOSED DEMOLITION
- BUILDING LEASED TO TENANT
- NEW/REPLACEMENT BUILDING
- PARKING
- OVERHEAD POWER LINES

N

RTC RENTON TECHNICAL COLLEGE

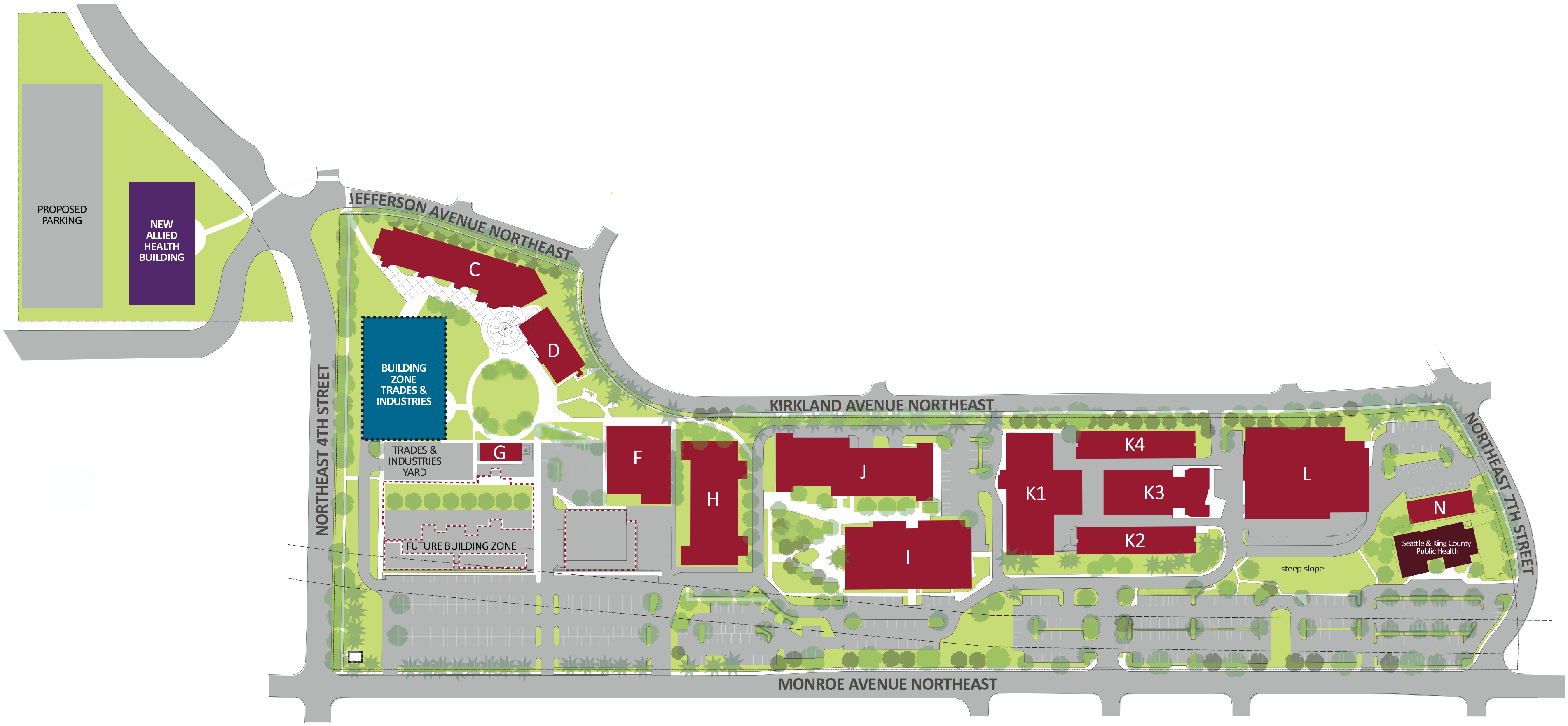
CAPITAL PROJECT ONE — ALLIED HEALTH REPLACEMENT BUILDING

LEGEND

- EXISTING BUILDING
- PROPOSED BUILDING ZONE
- PROPOSED DEMOLITION
- BUILDING LEASED TO TENANT
- NEW/REPLACEMENT BUILDING
- PARKING
- OVERHEAD POWER LINES

RTC RENTON TECHNICAL COLLEGE

CAPITAL PROJECT TWO — TRADES & INDUSTRIES REPLACEMENT BUILDING

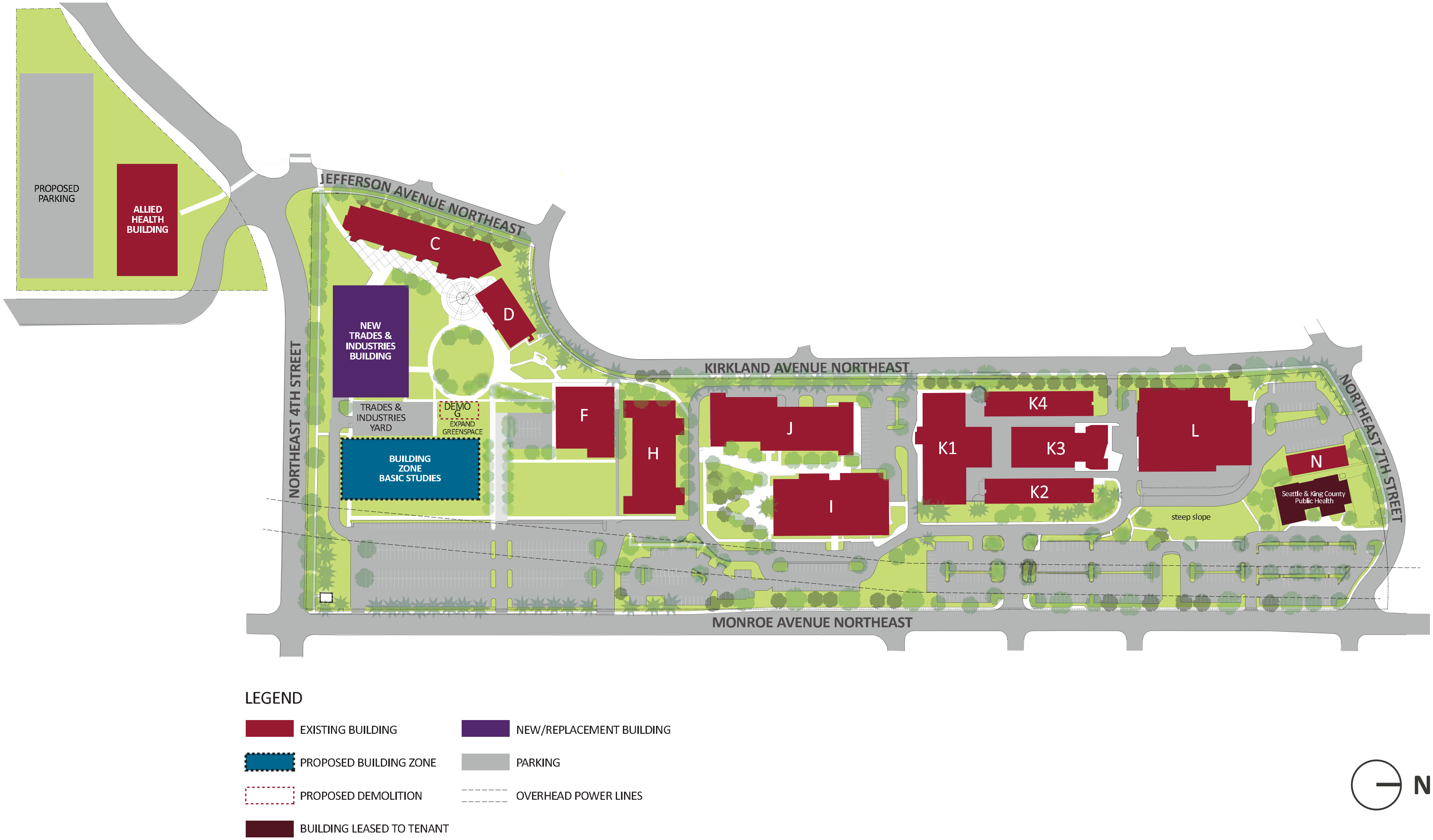


LEGEND

- EXISTING BUILDING
- NEW/REPLACEMENT BUILDING
- PROPOSED BUILDING ZONE
- PARKING
- PROPOSED DEMOLITION
- OVERHEAD POWER LINES
- BUILDING LEASED TO TENANT

RTC RENTON TECHNICAL COLLEGE

CAPITAL PROJECT THREE — NEW BASIC STUDIES BUILDING



RTC RENTON TECHNICAL COLLEGE

LONG-TERM CAMPUS MASTER PLAN

RTC RENTON TECHNICAL COLLEGE

HIGHEST PRIORITY MINOR IMPROVEMENTS/REPAIRS/ LOCALLY-FUNDED PROJECTS

Projects are listed below with no established order of completion, understanding that facility priorities will shift to accommodate changing program needs and funding opportunities.

For more specific project information, see SPACE USE DIAGRAMS beginning on page 45 and PROGRAM INTERVIEWS located in APPENDIX b.

Basic Studies - Building J

See page 53.

- Consolidate Program Spaces on Third Floor of Building J Through Partial Renovation (Design Guideline: Districts)

Reconfigure the south end of Building J's 3rd floor into a group of general Classrooms and Science Labs. BASIC STUDIES requires approximately a dozen teaching spaces plus at least 2 science labs at any given time; far exceeding what is available in Building D alone.

Consolidation of BASIC STUDIES will unify the program, which now is scattered across campus, improving security for students and faculty who often participate in evening classes. This condensed grouping at the center of campus will simplify wayfinding for new RTC students who first arrive in the adjacent Building I for course enrollment.

Closer proximity to Building I will also help to improve BASIC STUDIES student engagement on campus by locating them closer to the hub of student services.

Aerospace - Building A

See page 45.

- Relocate the shop-oriented Aerospace program from Building J into Building A, which is more accommodating to shop operations. Renovations will be required.

General Education Science Lab - Building F

See page 50.

- Create new Lab in Building F

Locate new science lab adjacent to existing Gen. Ed. Anatomy Lab 101 to create a science cluster and facilitate the sharing of resources and support spaces.

Computer Science & Networking Programs - Building J

See page 53.

- Partially Renovate First Floor of Building J

Improve spatial layout, flexibility and program adjacencies. Eliminate under-utilized spaces such as storage/kitchenette rooms that are shared between the classrooms. Reduce the area of individual Classrooms and Labs spaces to accommodate actual class sizes. Many of the rooms are technically under-utilized because the space is too large for typical student enrollments. Improve program synergies by grouping related program spaces in close proximity to each other.

- Convert Land Surveying 204 to Anatomy & Physiology Lab
- Determine best use of spaces 206, 207
- Convert Classroom 312 to Physics Lab

Student Services - Building I

See page 52.

- Improve the user experience of Student Success and Enrollment Services by arranging spaces to match steps in registration process.
- Consolidate other Student Services into Building I

Upon entering the existing registration area, the order of spaces is reversed from the actual steps in the enrollment process. Position Student Success directly off the atrium and create a welcome desk to greet students, answer questions and provide directions.

Relocate Student Government (ASG) into Building I from Building J and expand the size of the Financial Aid Office. Consolidate the Bookstore for improved efficiency. Study potential alternate uses, such as Offices and Conference Rooms, for portions of the under-utilized File Room. Incorporate informal collaboration and social spaces to improve student engagement on campus. Add dedicated quiet Reflection Spaces to accommodate the diverse student and staff population.

Executive Administration - Building C

See page 47.

- Relocate President & VPs to Building C.

The south end of the first floor of Building C is an ideal location for the Executive Administration since it has convenient parking and ample space in a more contemporary facility.

Reorganization allows for the co-location of the President, Vice Presidents, RTC Foundation and Institutional Advancement, and it frees up space in Building I to consolidate Student Services. This move offers the opportunity to improve the security, function, and identity of the President's Suite. Several Gen Ed Classrooms will likely need to relocate from Building C to Buildings H or J.

Band Instrument Repair (BIRT) - Annex

See page 58.

- Relocate Program from Building J to the Annex.

The Annex will provide BIRT with needed individual practice rooms and sound separation to avoid acoustical conflicts with other classroom spaces. One challenge with the move is relocating the solvent tanks from Building J.

Culinary Arts - Building I

See page 52.

- Expand bakery to increase program FTEs by adding additional work stations. Enlarge space by removing existing office to the north.

IT & Custodial Departments - Building N

See page 57.

- Group all campus support departments in Building N

Convert upper floor of Building N to IT and Custodial Departments with shared conference room to accommodate 12 staff members. Benefits include simplified communication of maintenance-related departments within a newer, more seismically sound building. Building N is an ideal location for these departments as the topography of campus makes this part of campus more difficult for students to regularly access.

Student Center - New Facility

See page 41 for potential building zone.

- Create a Student Center through a combination of COP and community partnerships.

Campus Landscape

- Replace aging irrigation system through a phased plan. Improve efficiency with new water saving sprinklers and controls.

Add portions of the project to future Capital Project Requests. Cost for complete replacement has been estimated at approximately $500,000- $800,000.

Electrical

- Upgrade buildings that have not yet been retrofitted to LED lighting.
- Prepare comprehensive site lighting study.

Civil

- Repair uplifted concrete utility vaults. Add to future Capital Project Request.
- Repave miscellaneous parking lots as required.

Traffic

- Re-stripe to add parking capacity by improving efficiency of existing lots.
- Add stalls along NE 4th Street in available areas including vacated driveways.

Seek approval from City of Renton to vacate 2-3 driveways to 4th Street and Monroe Avenue that cannot be used. This will increase parking and also reduce driver confusion over campus access points.

BUILDINGS WITH FEW OR NO PROPOSED RENOVATIONS

Building A - Building to replace Trades & Industries (A) is proposed as Capital Project Two, therefore make no major improvements. Short-term request: Make more space for Welding by relocating Construction Trades/Property Management or relocating classroom.

Building B - Building to replace Allied Health (B) is proposed as Capital Project One, therefore make no major improvements. Short-term requests include a Shared Computer Lab, possible privacy upgrades to Office Suite, and Phlebotomy/Surgery Tech Lab upgrades.

Building E - Building to replace Trades & Industries (E) is proposed as Capital Project Two, therefore make no major improvements.

Building G - Systems provided in Building G to be a phased relocation concurrent with Capital Projects One, Two and Three. Building to be demolished with Capital Project Three.

Building H - Consider future best use for Catering Meeting Rooms 102-105. Convert Basic Studies Classroom 304 and Math Lab 303 into Science Labs to create a cluster of (3) Science Labs. Convert Gen Ed/Work First Classroom 302 into an additional Math Lab adjacent to existing Math Lab 301.

Building L - Current program spaces are satisfactory. New stair to Carpentry Lab requested.

Building K - Recent new construction and renovations to Automotive Technologies Complex to be completed Spring 2017.

Requested General Amenities

During program tours and interviews, several requests were mentioned by a number of program leaders including:

- Student spaces for casual interactions, events, and club meetings
- Additional shared, mid-sized conference rooms
- Computer Lab for proctored, on-line courses
- Additional shared computer labs
- Dedicated tutoring spaces including a Math and Writing Center
- Quiet reflection spaces
- Health/Wellness spaces for low-impact fitness programs and a Mother's Nursing Room

Requested General Technology/Power Upgrades

- Wire all classrooms to support a Computer Lab configuration, with more switches and routers.
- Improve campus wireless connectivity especially to lower levels of some buildings and portions of Building B.
- Install fiber to each classroom to support HD multimedia delivery.
- Classrooms with electrical wiring only at wall locations hinders efficient classroom layout.
- Provide secure locations for all IDFs.

BUILDING A

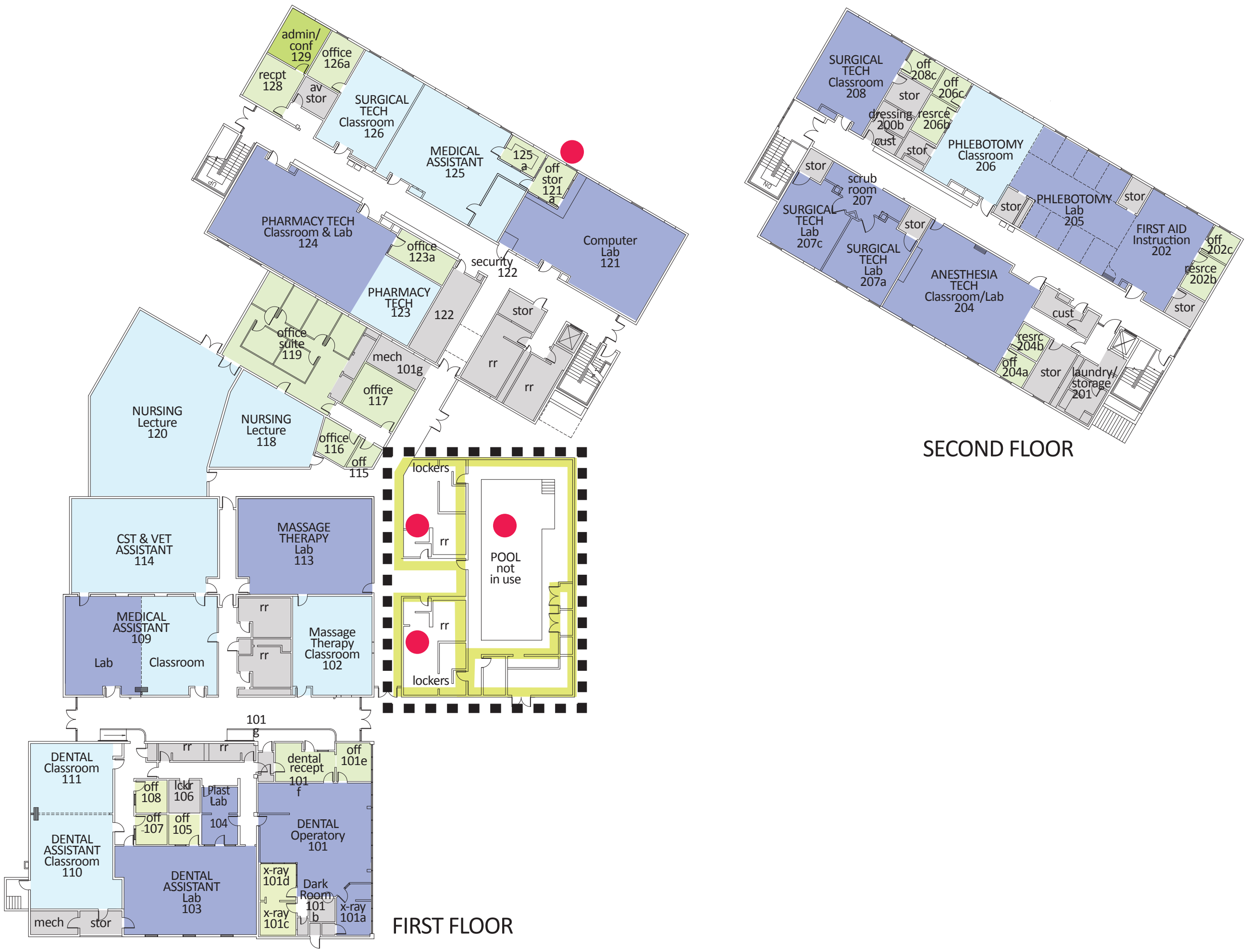
EXISTING SPACE USE DIAGRAM WITH PROPOSED RENOVATIONS

LEGEND

- CLASSROOM
- COMPUTER LAB
- WORKSHOP/LAB
- STUDENT SERVICES
- TUTORING
- PUBLIC SERVICE/RENTAL
- FACULTY/STAFF OFFICE
- CONF ROOM/LOUNGE
- SUPPORT
- UNDERUTILIZED SPACE
- PROPOSED RENOVATION

A

RENTON TECHNICAL COLLEGE

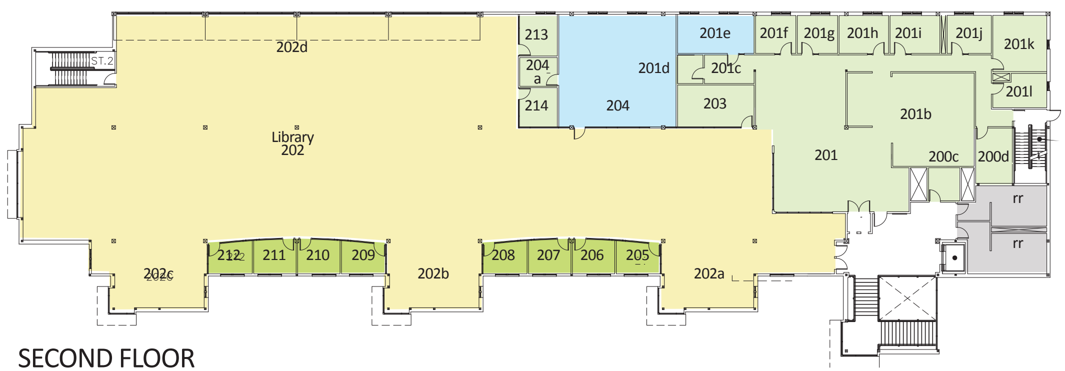


LEGEND

- CLASSROOM
- COMPUTER LAB
- WORKSHOP/LAB
- STUDENT SERVICES
- TUTORING
- PUBLIC SERVICE/RENTAL
- FACULTY/STAFF OFFICE
- CONF ROOM/LOUNGE
- SUPPORT
- UNDERUTILIZED SPACE
- PROPOSED RENOVATION

RENTON TECHNICAL COLLEGE

B



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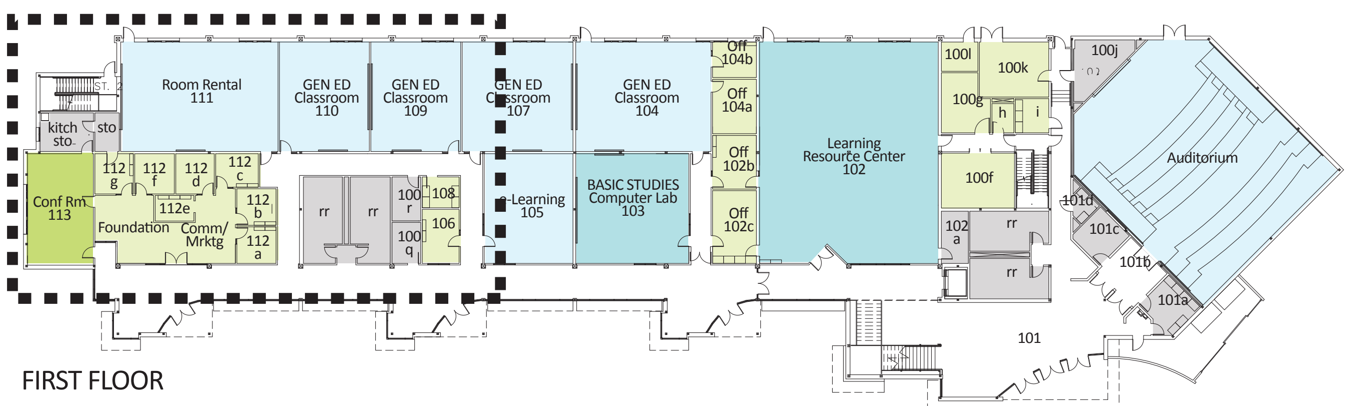

FIRST FLOOR

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LEGEND

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- COMPUTER LAB
- WORKSHOP/LAB
- STUDENT SERVICES
- TUTORING
- PUBLIC SERVICE/RENTAL
- FACULTY/STAFF OFFICE
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- SUPPORT
- UNDERUTILIZED SPACE
- PROPOSED RENOVATION

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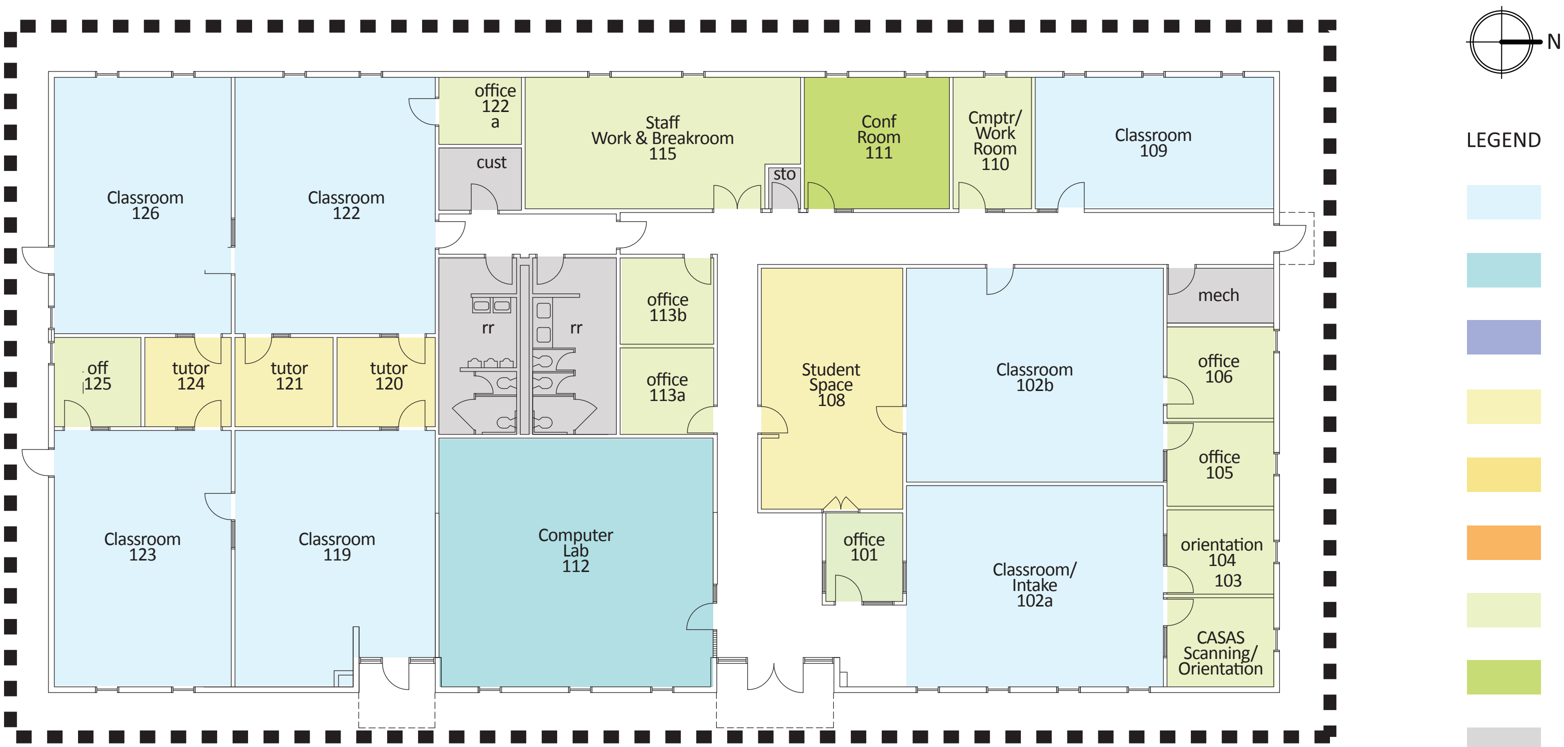

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- PROPOSED RENOVATION

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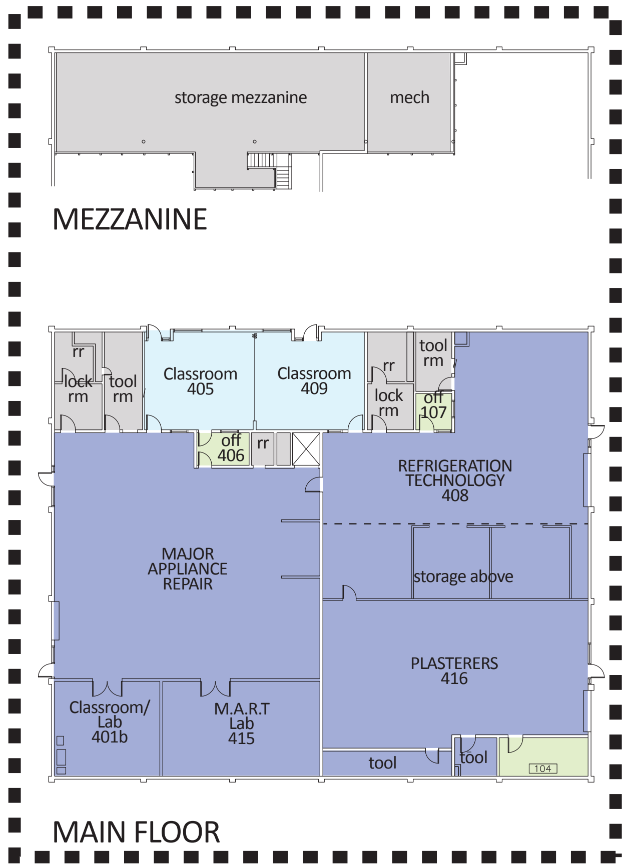

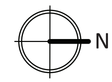

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- PROPOSED RENOVATION

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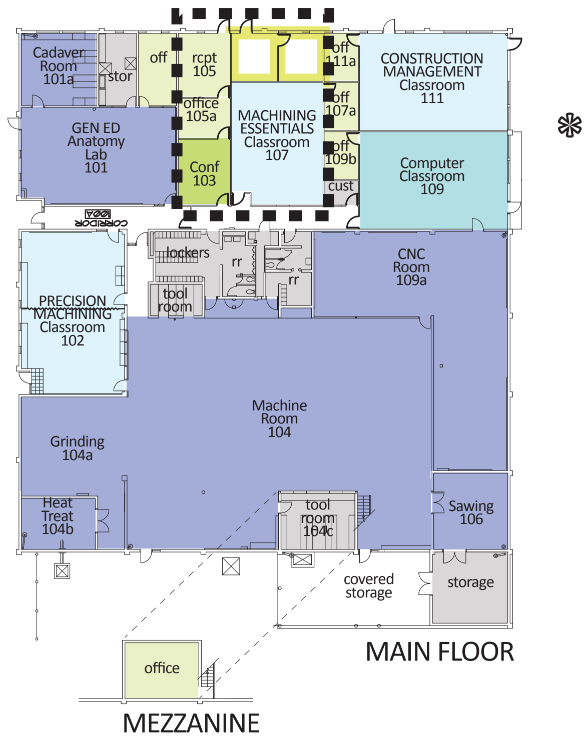

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LEGEND

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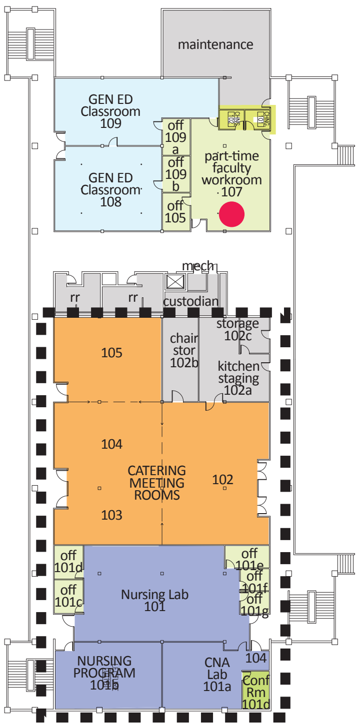
- COMPUTER LAB
- WORKSHOP/LAB
- STUDENT SERVICES
- TUTORING
- PUBLIC SERVICE/RENTAL
- FACULTY/STAFF OFFICE
- CONF ROOM/LOUNGE
- SUPPORT
- UNDERUTILIZED SPACE
- PROPOSED RENOVATION

RTC RENTON TECHNICAL COLLEGE

F

EXISTING SPACE USE DIAGRAM WITH PROPOSED RENOVATIONS



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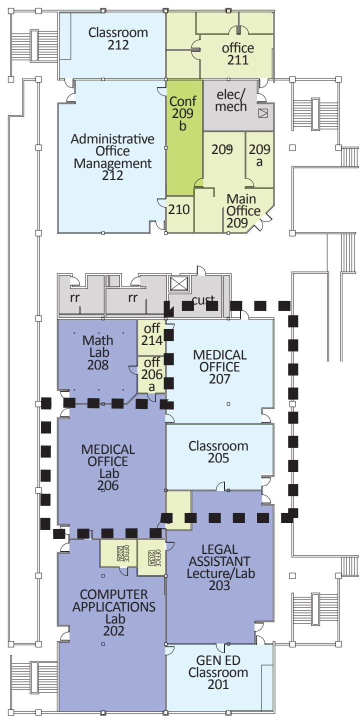

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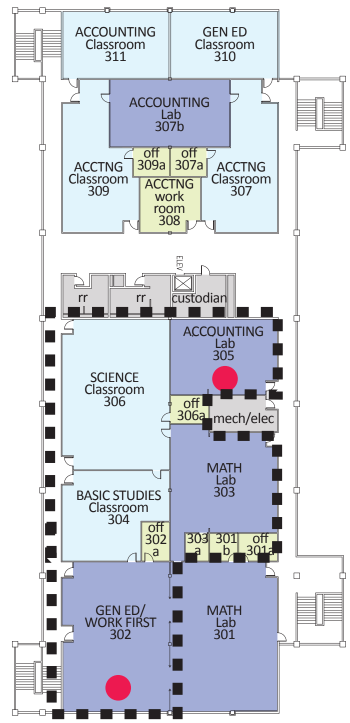

THIRD FLOOR

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LEGEND

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COMPUTER LAB

WORKSHOP/LAB

STUDENT SERVICES

TUTORING

PUBLIC SERVICE/RENTAL

FACULTY/STAFF OFFICE

CONF ROOM/LOUNGE

SUPPORT

UNDERUTILIZED SPACE

PROPOSED RENOVATION

H

RTC RENTON TECHNICAL COLLEGE

EXISTING SPACE USE DIAGRAM WITH PROPOSED RENOVATIONS

SECOND FLOOR

FIRST FLOOR

N

LEGEND

- CLASSROOM
- COMPUTER LAB
- WORKSHOP/LAB
- STUDENT SERVICES
- TUTORING
- PUBLIC SERVICE/RENTAL
- FACULTY/STAFF OFFICE
- CONF ROOM/LOUNGE
- SUPPORT
- UNDERUTILIZED SPACE
- PROPOSED RENOVATION

RENTON TECHNICAL COLLEGE

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LEGEND

- CLASSROOM
- COMPUTER LAB
- WORKSHOP/LAB
- STUDENT SERVICES
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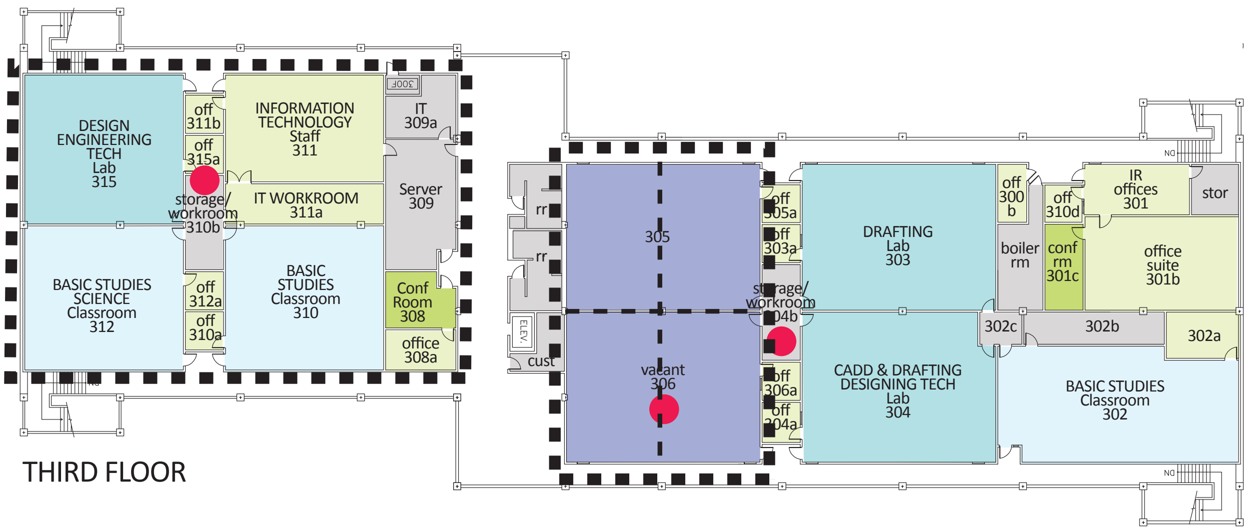
RENTON TECHNICAL COLLEGE



THIRD FLOOR

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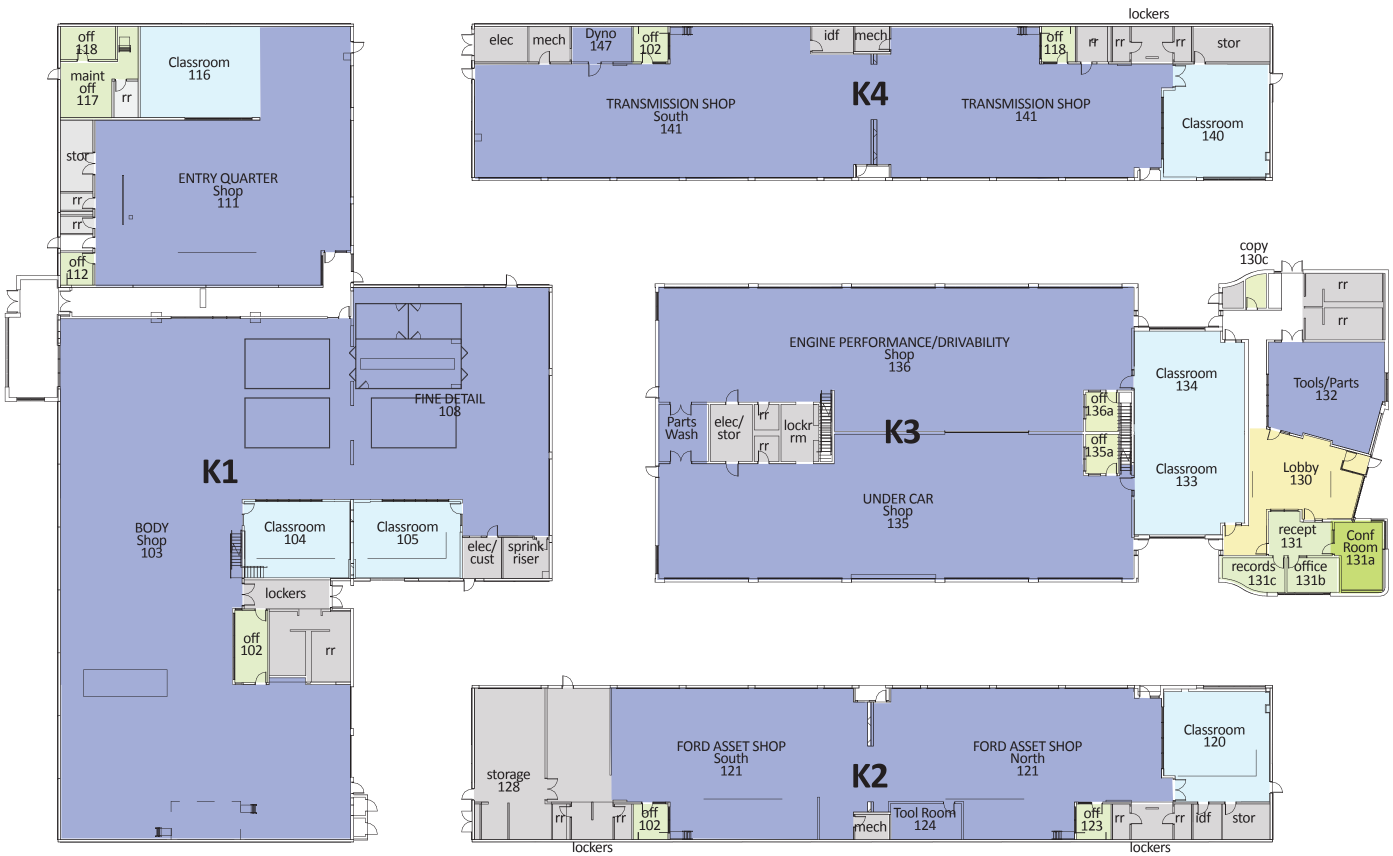
- SUPPORT
- UNDERUTILIZED SPACE
- PROPOSED RENOVATION

RENTON TECHNICAL COLLEGE

BUILDING K

EXISTING SPACE USE DIAGRAM WITH PROPOSED RENOVATIONS



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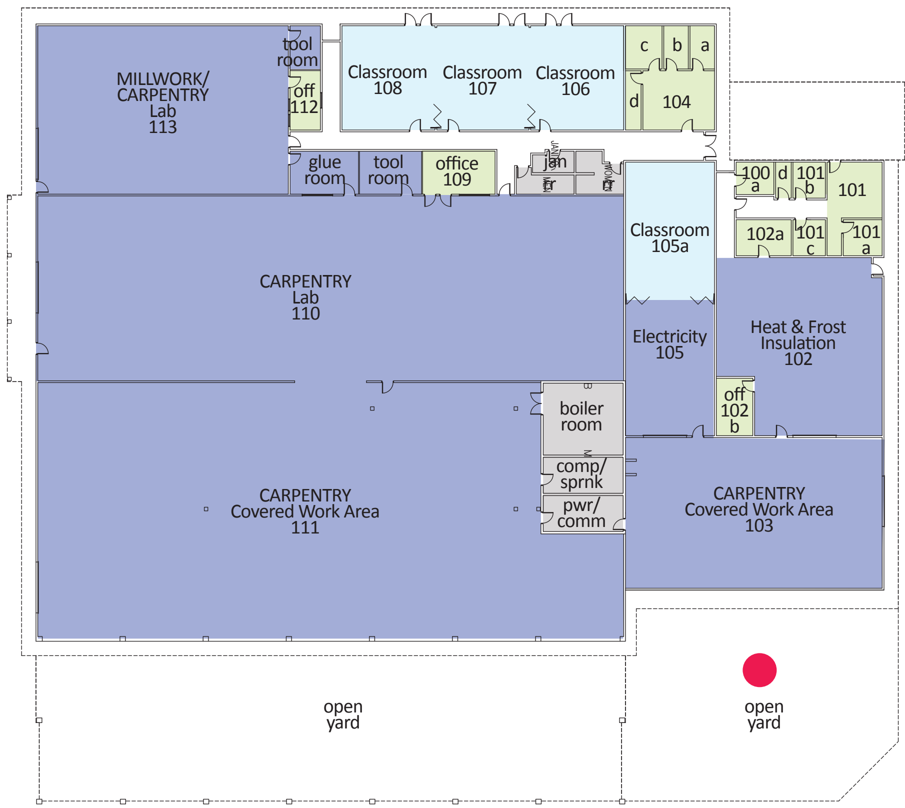
- FACULTY/STAFF OFFICE
- CONF ROOM/LOUNGE
- SUPPORT
- UNDERUTILIZED SPACE
- PROPOSED RENOVATION

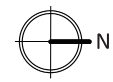
K

RENTON TECHNICAL COLLEGE

BUILDING L

EXISTING SPACE USE DIAGRAM WITH PROPOSED RENOVATIONS





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- PUBLIC SERVICE/RENTAL
- FACULTY/STAFF OFFICE
- CONF ROOM/LOUNGE
- SUPPORT
- UNDERUTILIZED SPACE
- PROPOSED RENOVATION

RTC RENTON TECHNICAL COLLEGE

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LEGEND

- CLASSROOM
- COMPUTER LAB
- WORKSHOP/LAB
- STUDENT SERVICES
- TUTORING
- PUBLIC SERVICE/RENTAL
- FACULTY/STAFF OFFICE
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- PROPOSED RENOVATION

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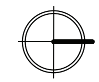
RTC RENTON TECHNICAL COLLEGE



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ANNEX

5.2 INFRASTRUCTURE RECOMMENDATIONS

The following recommendations include larger infrastructure projects that can be included in PRRs, as well as Minor Improvement or Repair requests and wish-list items that would be helpful for future planning and campus maintenance, but may be too costly to immediately fund.

CIVIL

Existing Conditions Survey

Lack of good documentation of as-built conditions is a formidable challenge when planning site work around campus. Record drawings on campus are not current and tend to focus on the individual buildings that installed specific elements of the site utilities. Anecdotal evidence suggests that there is a gap between what is shown in these design drawings and where systems were ultimately installed. However, creating as-builts of underground systems would likely be prohibitively costly to produce.

Topographic Survey

There is no complete campus topographic survey and ordering a professional report would be an expensive undertaking. One approach to obtaining a complete campus survey would be making it an on-going class project for the Land Surveying Program. (Note however, that an individual site survey will still be required for any area of campus under redevelopment.)

REPAIR PROJECTS

Asphalt Pavement

Although aging, most of the asphalt paving on campus is in good condition. The large south parking lot was overlaid and re-striped in 2013. Other parking areas around campus have had spot repairs made as needed. The majority of the remaining asphalt on campus appears to be original. Specific areas to address:

- The drive/parking aisle west of Building J has two parallel trench patches running nearly the entire length of the drive. While adequate for now, cuts and patches like these in the wheel paths of vehicles with narrow strips between them are subject to more rapid degradation. Tree roots in this area are also problematic for this pavement; a more permanent tree root solution should be explored to eliminating recurring damage. Consider a grind, patch and overlay of this area.
- Spot repairs may be needed in an area at the north end of the Visitor parking outside of the administration building. This area already has a small concrete patch in it now, and the asphalt surface is starting to break up. The area involved is less than 100 SF.
- In front of Building M, a tree growing too close to the planter island curb is uplifting the curb and asphalt. This is a tripping hazard now, and as the tree continues to grow the condition will worsen. The improper location of this tree will make this a on-going issue.

Concrete Pavement

The concrete is generally in good shape, but some areas have issues with trees and roots uplifting the panels. These areas should be looked at and dealt with if they become unsafe, either grinding off the edges or replacing panels. In some cases, trees may need to be removed or the path re-positioned if possible to keep the problem from recurring.

PREVENTATIVE MAINTENANCE

Water Services

The college is responsible for maintenance of the water systems from the meters to the buildings, including regular testing of the backflow prevention devices that are associated with these services in the newer building on campus. These devices, which prevent water from flowing backwards from private piping into the city system, should be inspected annually by a certified tester. Test reports are to be provided to the City Public Works department.

Storm Water Collection and Piping

The entire storm infrastructure within the campus is owned by the college, and it is responsible for maintenance and upkeep. The on-site storm water system should be regularly inspected before the beginning of each rainy season, ideally completed in August or September. The catch basins should be cleaned out so the sumps have room to collect debris and leaves that may flow in once the rains start.

If a pipe or area of drainage appears to be running slowly or backing up, video investigation of the pipe system may be warranted. Grates and other lids should be checked to make sure they are in place correctly and not rocking or otherwise out of location.

Sanitary Side Sewers

Grease traps should be regularly inspected - quarterly or monthly - depending on the history of the system, and cleaned of grease when the volume exceeds 25% of the rated size of the structure. Removed grease should be disposed of by an authorized hauler, per City and County standards. The baffles and piping should also be observed and repaired as needed.

Records should be kept available for review by the City and other agencies having jurisdiction including State and County departments of Health & Ecology. Other programs with special waste needs, such as automotive and medical programs, may need pretreatment or separation of waste streams before discharge from the site.

Asphalt Pavement

Asphalt pavements should be reviewed annually, and conditions where the surface is beginning to crack or “alligator,” allowing water to penetrate the surface, should be noted and watched. Winter can be hard on pavements. Inspections and patching of small failing areas may extend the life of a larger area of existing pavements. Review of the asphalt at the end of the winter, and minor maintenance before the next winter is recommended.

Continued maintenance and seal coat or overlay of paving is recommended to preserve and extend the life of the asphalt pavement. A significant issue for the replacement of a vehicular use paving area is new storm water treatment regulations. If an existing pavement is removed and replaced from the subgrade (underlying soil) up, any areas over 5,000 sf must have a water treatment system installed to clean the discharged water of oils and metals left by vehicles. For a large parking lot, adding this treatment can become a significant part of the project and limit funds available for other elements that may need upgrading. This can be mitigated by keeping up the condition of existing pavements, and re-surfacing without removal, before they become so degraded that they must be replaced.

Concrete Pavement

Concrete pavements should be regularly reviewed and large shifts or cracks in panels remedied. Concrete changes are not as seasonal as asphalt, but reviewing both at the same time is recommended. Regularly repair areas of concrete where tree roots are uplifting the panels. Existing pavement can be removed and an air spade used to excavate around tree roots. Some roots can be cut and the area around the roots can be backfilled with graded base. In the future, use root barrier or rigid foam under paving to avoid uplift.

For additional information on Civil Infrastructure, See full CIVIL REPORT in APPENDIX C.

ELECTRICAL RECOMMENDATIONS

See full ELECTRICAL REPORT in APPENDIX D.

Telecommunications Survey

Complete a survey of campus telecommunication wiring infrastructure. Remove all old, abandoned telecommunication cable to free up pathway space. This task should start when funding is available.

Exterior Lighting Survey

Conduct an exterior illumination survey to identify areas with inadequate illumination levels. Add additional lighting fixtures in these areas to support building programs for night time operation. This task should start when funding is available.

PREVENTATIVE MAINTENANCE

Conduct biannual preventive maintenance tests on the 15 kV power distribution system. The test should include transformer oil test, visual and infrared temperature scan of the 15 kV cable connection and terminations.

5.3 LANDSCAPE RECOMMENDATIONS

(See ALSO LANDSCAPE DESIGN GUIDELINES for General Strategies and Approved Plant List)

GENERAL RECOMMENDATIONS

Irrigation

Replace the Campus Irrigation System:

- Follow a phased implementation plan to replace the irrigation system including adding irrigation upgrades as part of future in PRR for capital projects.
- Most of the campus is irrigated, but due to the age of the system, lines are regularly broken and a comprehensive location map does not exist. Since the current system lacks water sensors, it is difficult to locate leaks resulting in high water bills and wasted staff resources spent identifying and repairing breaks.

GROUNDS MANAGEMENT

Establish Ecological Goals for the Campus and Incorporate an Integrated Pest Management (IPM) Plan:

- Ecological goals for facilities and landscape on campus should complement and support the overall sustainability targets established for campus.

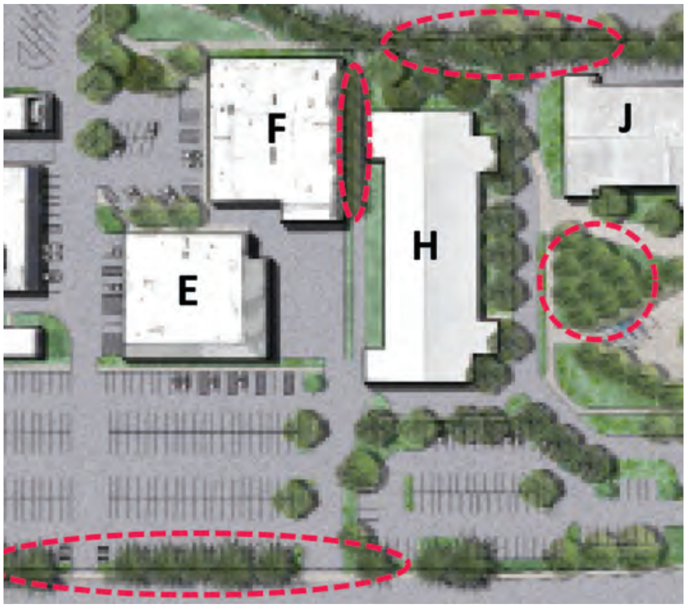
MAINTENANCE

- Reduce the amount of mowing, shearing, and edging as this accounts for a high percentage of the grounds maintenance's resources.
- Reduce small areas of lawn such as those in parking lot islands. Replace with drought tolerant and hardy ground cover, low-growing shrubs, and herbaceous plants. This will reduce the need for irrigation and mowing.
- Think of the campus as zones: core campus, perimeter (parking areas), and edges. Most maintenance should occur in the core campus area followed by the perimeter and edges.

PROPOSED PROJECTS

The following pages summarize higher priority landscape projects on campus addressing 5 major components: Trees, plants, turf, walkways, and rain gardens.

Proposed landscape project locations



Trees

Develop a Tree Management Plan:

- Work with an arborist to manage both individual trees and the overall urban forest on campus.
- Develop campus-wide ecology goals. As part of these goals, determine a target percentage of tree canopy coverage on campus. Of the college's 30-acre campus, approximately 5 acres is currently tree canopy coverage.
- Create a tree diversity planting plan.

Identify Potential Trees for Removal or Replacement:

- Consider tree removal in certain areas, especially along Monroe Avenue to improve sightlines to buildings and entrance signage. Also evaluate the trees along the north elevation of Building F where tall cedars are planted too close to the building foundation and are creating roofing problems.
- For existing concrete uplift, paving can be removed and an air spade used to excavate around tree roots. Some roots can be cut and the area around the roots can be backfilled with graded base and the concrete replaced.
- Refer to LANDSCAPE DESIGN GUIDELINES for other tree planting suggestions and a list of approved small and large trees.

Consult with an arborist.
Develop a tree management plan to outline management steps identifying potential trees for removal, maintain a certain percentage of tree canopy, and develop a tree diversity planting plan.

Coniferous trees along Monroe Avenue are over-scaled and planted too close together, blocking sightlines to campus access drives and new entry signage. Consider removing the 7 trees indicated, as well as chain link fence and adjacent shrubs to make this edge of campus more inviting to the public.

Mature trees, originally planted too close to Building F, are creating problems with roofing and adjacent paving. Consider replacing this row of trees with a lower-growing variety.

Plants

Increase the diversity of plants on campus creating less emphasis on woody shrubs:

- Shrubs can quickly outgrow their beds or require constant pruning to maintain their size. Shrubs also tend to grow in the 3 to 8 foot height zone that should be avoided according to CPTED (Crime Prevention Through Environmental Design) guidelines. Replace plants around Building D with shorter, lower maintenance species.
- To eliminate bare ground, provide weed resistance and prevent soil erosion, choose a variety of densely spaced herbaceous plants. Planting a high quantity of plants gives the added benefit of immediate fullness.
- Improve perimeter landscaping to facilitate readability of entrance signage and strengthen campus image within the community.
- Consider propagating plants on the main campus or at the Annex to save time and money. Little space and equipment is required to start a propagation program at either property.
- See LANDSCAPE DESIGN GUIDELINES for a selection of low growing plants that will complement the colors and scale of the new signs.

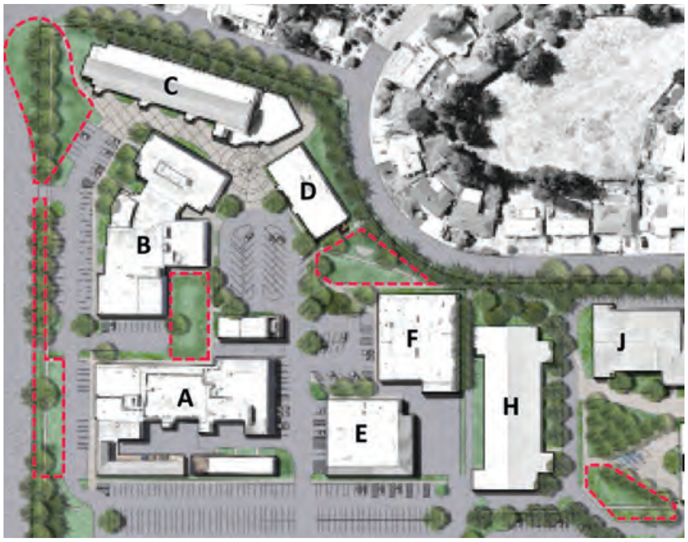
Existing Condition

Proposed Concept

Proposed Concept: Replace shrubs on the east side of Building J with a variety of grasses and perennials to add color and interest to the adjacent plaza and improve penetration of natural light to the lower level.

Concept photos and revegetate the planting beds beneath the new signs selecting a variety of colorful, herbaceous, low-growing species.

Provide a variety of plant species, densely spaced, to minimize weeding. Focus maintenance resources on areas that provide the greatest benefit such as at the core of campus and in high traffic areas.



Existing condition

Proposed concept with Eco-Lawn and diverse, herbaceous plants

Turf

Convert large expanses of traditional grass to Eco-Lawn:

- Traditional lawns can be resource-draining in terms of both natural resources and staffing hours. Eco-Lawn is an environmentally sound substitute that is rapidly growing in popularity on campuses across the Pacific Northwest.
- Eco-Lawn is not identical in appearance to traditional manicured turf since it contains a variety of other plants such as rye and clover. The color varies from deeper green in the rainy winter months, to a more variegated look in dryer summer months. It tends to look best planted in big areas, outlined by a variety of low-growing herbaceous plants.
- The benefits of Eco-Lawn are many; when properly hydrated it is a durable turf for student uses, it requires a fraction of the water of traditional lawns and mowing half as frequently. Traditional lawns can be easily converted to Eco-Lawn by simply overseeding a traditional lawn.

Create a Common Greenspace on the South Campus:

- Restrict vehicles to the edges of campus and dedicate the core to student interaction by creating a casual social, meeting and outdoor learning space in the current location of Parking Lot P3. Plant with Eco-Lawn.

  See page 70 for conceptual plan.

Installing informational signage around re-landscaped zones will educate students, staff and faculty about the ecological trend toward of choosing low maintenance, drought-resistant vegetation as part of an overall campus sustainability plan.

Walkways

Establish a continuous north-south pedestrian corridor through campus.

Look for opportunities to create social nodes and places for outdoor learning throughout campus.

Improve Sight Lines:

- Choose plants that do not restrict sightlines. Keep a zone between 3 and 8 feet off the ground clear of vegetation per guidelines established by CPTED (Crime Prevention Through Environmental Design).
- Focus first on the east side of Building D. Replace tall, woody shrubs with low-growing herbaceous plants. See LANDSCAPE DESIGN GUIDELINES for a list of approved plants.

Create a Plant Understory:

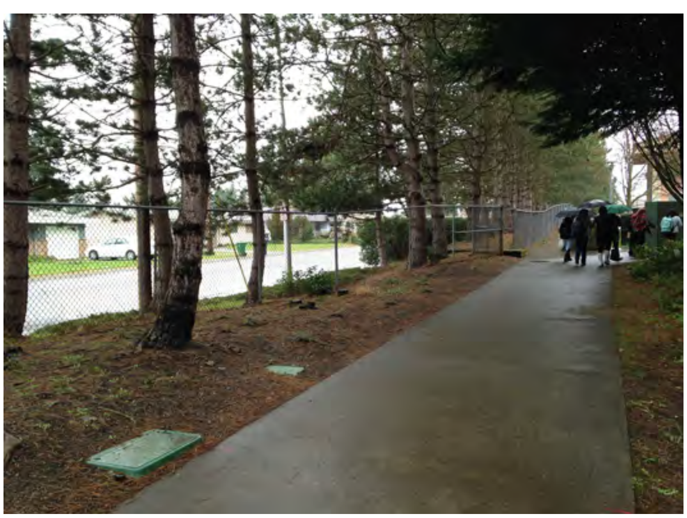
- Avoid areas of bare ground under tall trees. Plant shade-loving species, tightly spaced, to minimize weeding and slow the run-off of water during rainstorms.
- The walkway to the west of Buildings J and H would benefit both functionally and aesthetically, from of variety of plants to cover exposed soil.

Select plants to maintain clear sightlines, especially near building entries and primary walkways. Avoid vegetation that obliterates views between a height of 3 to 8 feet off the ground.

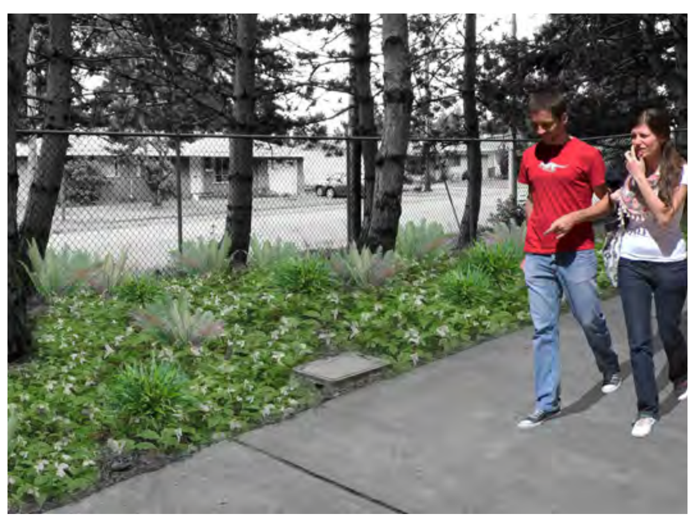
Proposed concept: A colorful palette of plants lining a pedestrian walkway from the intersection of 4th Street and Jefferson Avenue will provide a welcoming gateway onto campus.

Choose Paving Materials to Differentiate Functions:

- Create a network of connected pedestrian routes. Add sidewalks to complete the main north/south pedestrian corridor, such as across the parking lot to access the new entry at K1. Establish accessible routes, using interior circulation where necessary to help navigate steep grades. Asphalt in primary pedestrian areas, such as east/west between Buildings H and I gives the impression that vehicles have the right-of-way. Reinforce pedestrian priority by converting this aisle to concrete level with adjacent walkways, even if vehicles must also occasionally access the route.



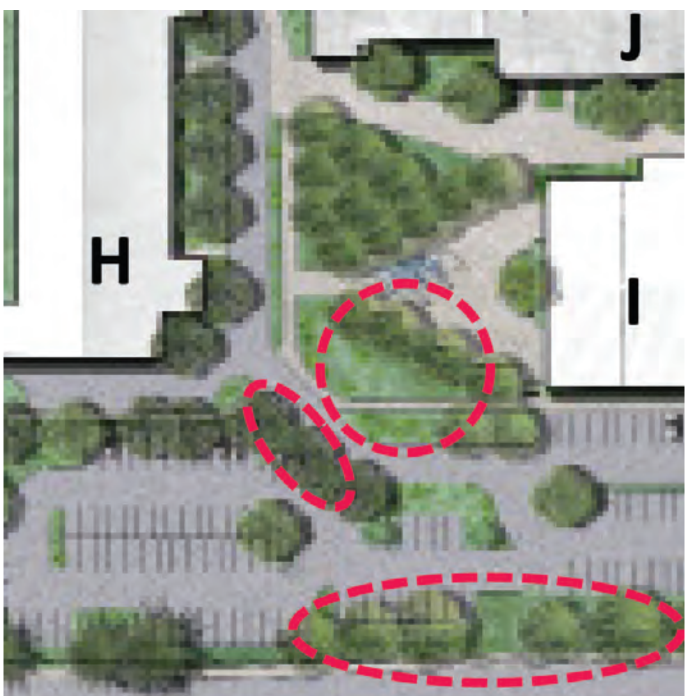
Existing walkway on campus west edge



Proposed concept for walkway on campus west edge

Existing condition

Proposed concept



Proposed locations for rain gardens

Rain Gardens

Install rain gardens to both capture run-off and beautify grounds:

- Try to manage storm water on site. Parking islands are the perfect place to install functional, attractive rain gardens especially since the core campus sits significantly lower than the perimeter. Prioritize the islands around Building I where bare ground or weedy islands surround public parking areas.
- Large open lawn areas that are poorly draining and small areas that are difficult to mow can successfully be converted to a storm water feature, reducing irrigation and grounds staffing hours. The lawn adjacent to Building I does not drain well (perhaps due to sub-grade pavement) and would serve well as bio-retention.
- See the following page for conceptual images of rain gardens in the vicinity of Building I.

The benefits of installing rain gardens are many; including pollution control, flooding protection, habitat creation and water conservation.

Providing educational signage adjacent to the rain gardens, to explain the purpose and advantages of the new landscape feature, provides another opportunity for learning.

Rain Gardens

One area to consider for rain garden conversion is in front of Building I since historically it drains very poorly

Rain gardens built into the parking islands near the staff parking lot will beautify this highly-public area while adding needed storm water detention capacity

5.3 VEHICULAR CIRCULATION & PARKING RECOMMENDATIONS

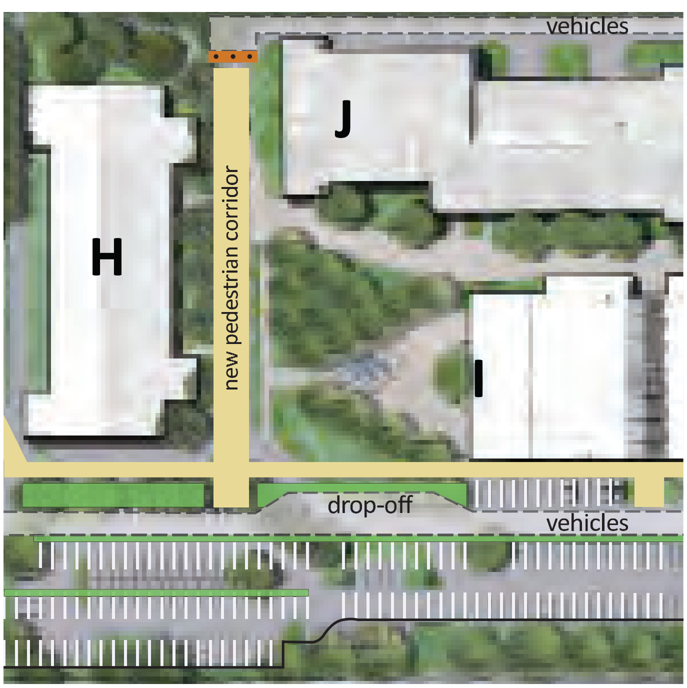
SEE also PARKING & TRIP GENERATION REPORT in APPENDIX e.

Vehicular Circulation

- Explore implementing incentives for carpool/transit options for both students and faculty/staff to reduce overall parking demand. This could take the form of preferred parking stalls, transit subsidies, charging a fee for single-occupant parking, and other parking management techniques.

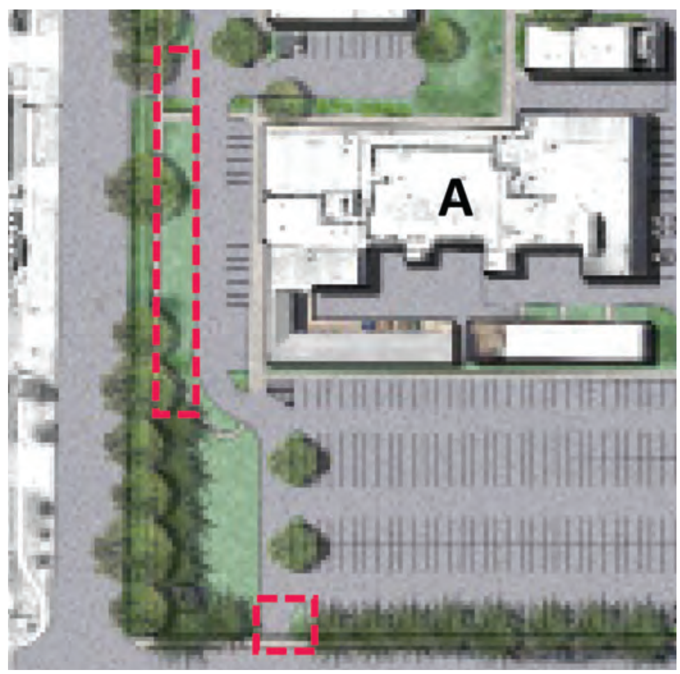
- Consider potential vehicular access consolidation that would revise the more central driveway on Monroe with protected egress movements to allow for ease of campus dismissal periods both on street and off-street. See APPENDIX e, attachment D for further information.

- Adjacent to Building H, relocate the existing stop bar interior to the drive aisle further east to allow better sight distance availability and stop control/yield movements between drivers entering this interior intersection.



Proposed concept for improving vehicular circulation in front of Building I following PSE power pole replacement.

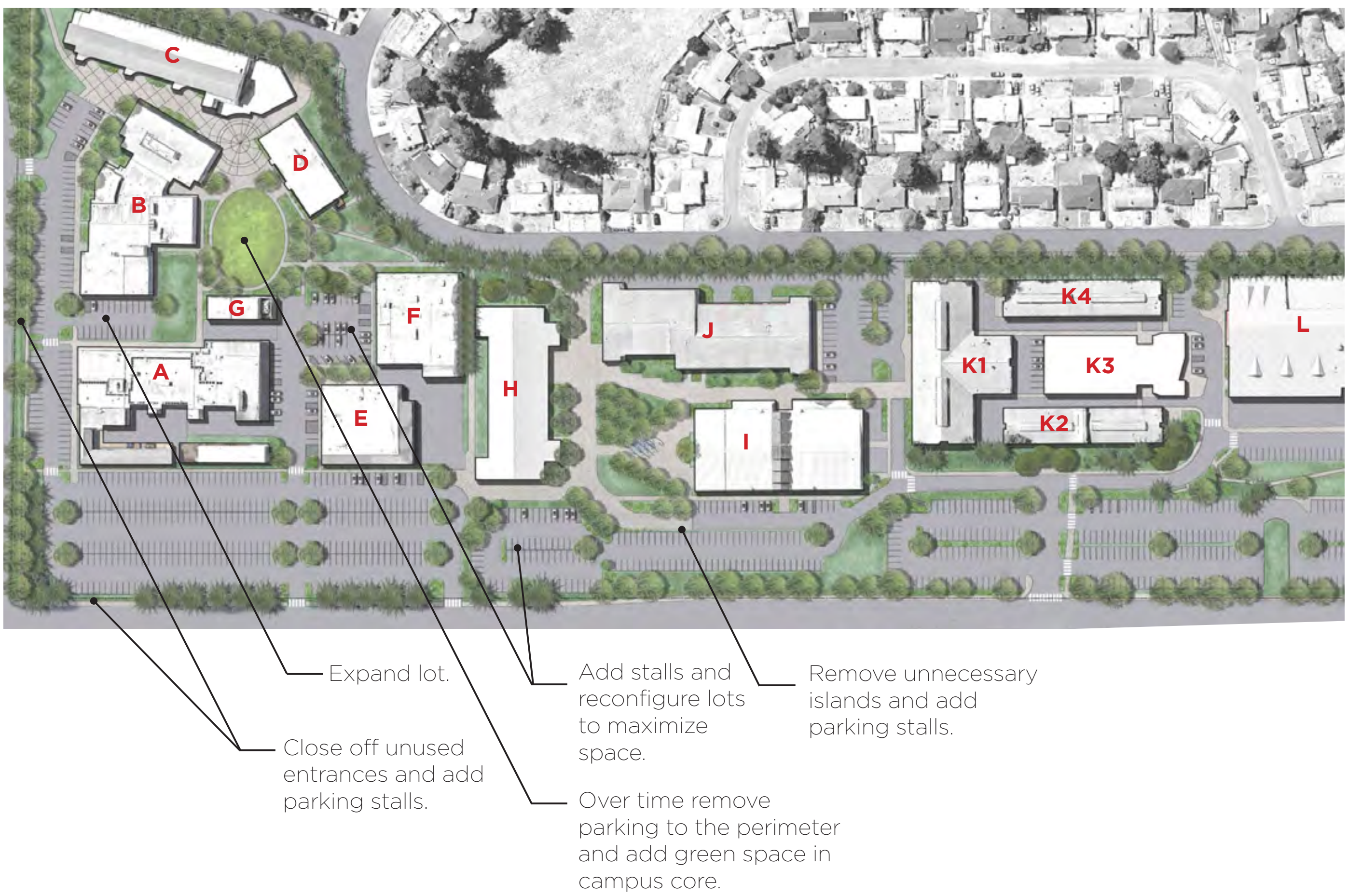
- Following the reconfiguration of PSE power poles on campus, consider simplifying the vehicular drive in front of Building I. Straightening out the drive aisle will increase parking count, allow for a drop-off zone in front of Building I and create additional area for a dedicated pedestrian walkway extending from the east side of Building H south to Building E. See image to left.



Approximately a dozen parking stalls can be added to the area along 4th street, as indicated in the diagram below. Other strategies for adding parking are indicated on page 69.

Parking

- As buildings are replaced/rehabilitated, identify opportunities for efficiency improvement within existing and new parking areas to increase on-site capacity adjacent to classroom buildings, encouraging fewer students to use Monroe Avenue for on-street parking. See image below.
- Locate pockets on campus in which to add stalls, such as along 4th Street, including conversion of permanently blocked driveways into parking, following approval by the city of Renton. See image to left.
- Continue to group primary parking areas outside of the campus core to strengthen pedestrian connectivity and improve overall campus circulation.
- As a part of the Allied Health replacement project on the new south property, provide approximately 160 on-site parking stalls. ADA upgrades to the signalized intersection may be required by the City, with an estimated cost of approximately $75,000.



Proposed concepts for increasing the parking stall count on campus

Restricting vehicles to the perimeter of campus and establishing dedicated walkways creates safer and more pedestrian-friendly exterior spaces.

5.4 SIGNAGE & WAYFINDING RECOMMENDATIONS

Consider adding exterior uplighting at new signage:

- An LED light fixture will brighten the face of the signs at night, as well as contribute to the ambient light levels of the surrounding area.

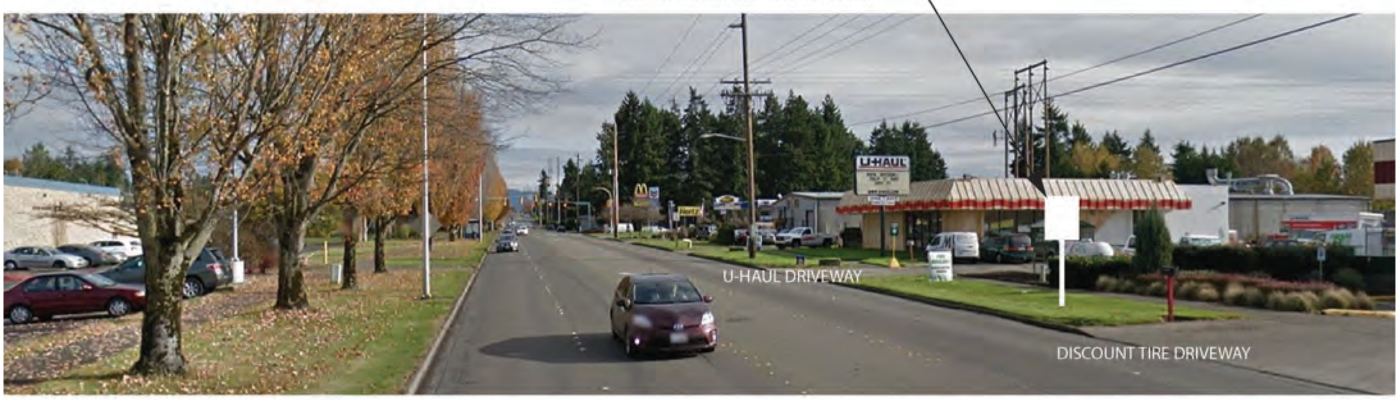
Consider requesting a change-of-address:

- RTC's formal street address of "3000 NE 4th Street" creates confusion for new visitors since there is not any access to campus from 4th Street.

Consider purchasing City of Renton directional signage for 4th street:

- Providing signage indicating where to turn to access both the main campus and the Annex will reduce driver confusion. Signs along 4th Street should indicate a turn north onto Monroe in order to access the college. Similarly, adding an arrow and RTC to the existing sign at the T-intersection of Monroe and NE 2nd Street will make it easier for drivers to locate the Annex. Locations for the new signs have been proposed and tentatively approved by the city. Costs for these would need to be covered by the college. Contact Rohini Nair at the City of Renton for further information.

PROPOSED CITY SIGN LOCATIONS



Preferred location - Eastbound on 4th Street

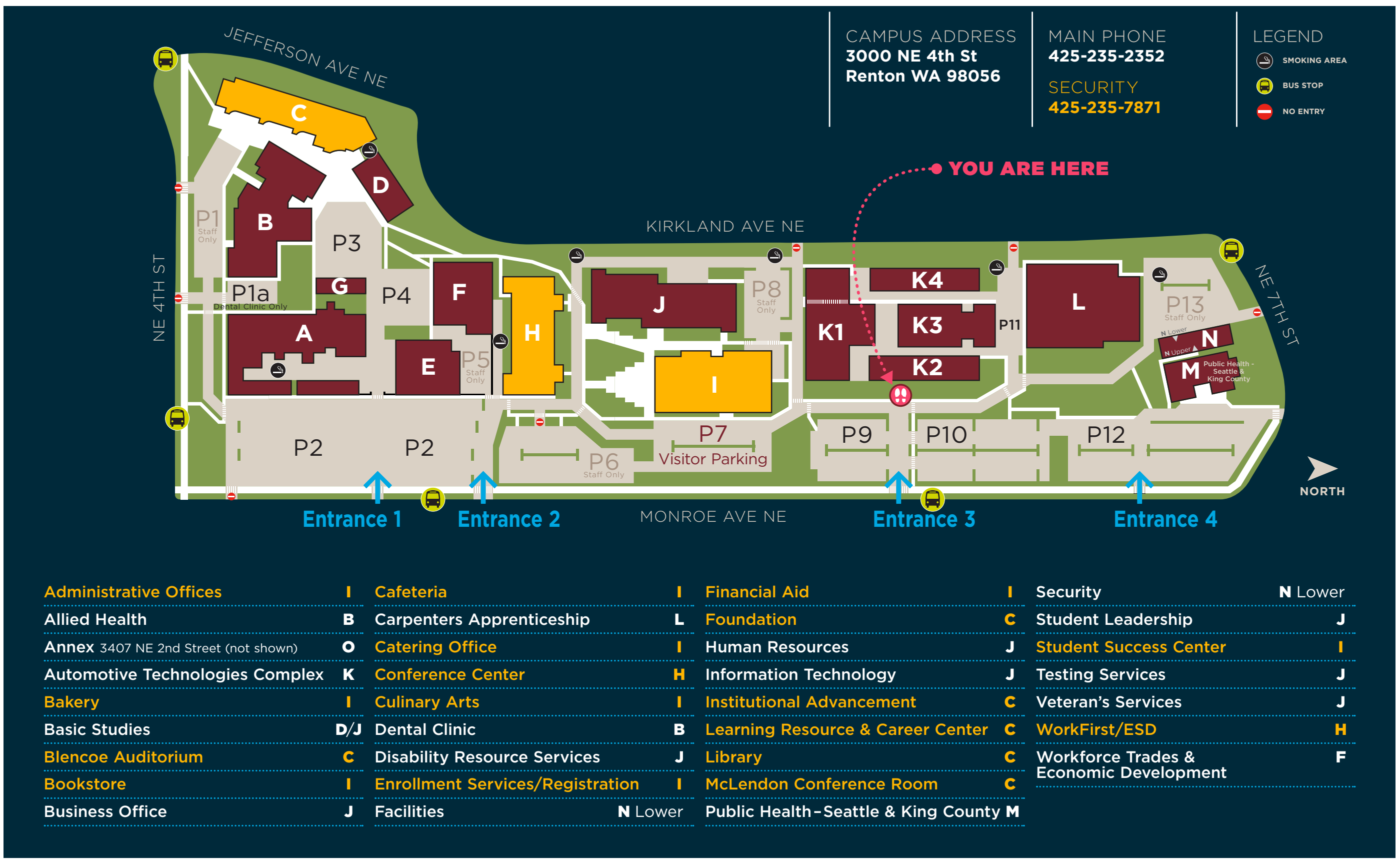
Preferred location - Westbound on 4th Street

Consider a method for displaying event flyers:

- System should keep flyers out of wet weather, be easy to change out and accommodate 4-6 letter-sized sheets.

Maintain campus directories (I-Spots):

- Update campus maps as needed. A sign fabricator is not needed to update the I Spots signs.



Five newly installed I-Spot campus signs direct student and visitors to their intended destinations.

Implementation Schedule

PROJECT DESCRIPTION	SHORT TERM 2016	2017	2018	2019	2020	2021	MID TERM 2022	2023	2024	2025	2026	2027	LONG TERM 2028	2029	2030	2031	2032	2033	2034	2035
MAJOR CAPITAL PROJECTS																				
New ALLIED HEALTH Replacement Building		Submit PRR December 2017 *		design		construction														
New TRADES Replacement Building Co-locate Programs from A & E								Submit PRR December 2023 *		design		construction								
New BASIC STUDIES Building														Submit PRR December 2029 *		design		construction		

MINORS, REPAIRS & LOCALLY FUNDED PROJECTS	DESIGN/CONSTRUCTION TIMELINES OF MINORS, REPAIRS AND LOCALLY-FUNDED PROJECTS TO BE DETERMINED AS FUNDING BECOMES AVAILABLE
Renovation of Miscellaneous Restrooms	MAJOR PROGRAMMATIC IMPROVEMENT PROJECTS (PARTIAL BUILDING RENOVATIONS)
BASIC STUDIES - Building J Consolidate Program Spaces Partial Renovation	
AEROSPACE- Building A Relocate Program from Building J Partial Renovation	
GEN ED SCIENCE LAB - Building F New Lab	
COMPUTER SCIENCE PROGRAMS - Building J Partial Renovation	
STUDENT SERVICES - Building I Improve Student Success/Enrollment Consolidate Other Student Services	
EXECUTIVE ADMINISTRATION - Building C Relocate President/VPs From Building I	
BAND INSTRUMENT REPAIR (BIRT) - Annex Relocate Program from Building J	
CULINARY ARTS - Building I Expand Bakery to Add Stations	
IT & CUSTODIAL - Building N Co-locate Departments on Upper Level	
STUDENT CENTER - New Facility Financed Through Public/Private Partnership, COP	NEW FACILITY
CAMPUS LANDSCAPE Replace Irrigation System	INFRASTRUCTURE IMPROVEMENTS & REPAIRS
ELECTRICAL Upgrade Buildings to LED Fixtures Study Site Lighting	
CIVIL Repair Heaving Concrete Utility Vaults Repave Miscellaneous Parking Lots	
TRAFFIC Re-stripe to Add Parking Capacity	

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6.0
DESIGN GUIDELINES

6.0 Design Guidelines

Design guidelines establish a framework for making decisions about function and aesthetics, and to align future design opportunities with over-arching goals and visions of the college. Having a unified approach for incremental campus improvement is especially important considering the cultural shift that has occurred over the last couple of decades.

Millennials and Gen Zs have grown up with an unprecedented connection to the outside world via social media. One result of this connectedness is a more acute awareness of design; the look, feel and functionality of everything from the products they buy to the places they visit. Evidence suggests that institutions of higher learning are perhaps increasingly evaluated with an eye on environmental design. When polled, more than 50 % of students visiting campuses consider the appearance of campus in their choice of colleges to attend. (*"Student Poll." : Research Dispels Millennial Theories. N.p., n.d. Web. 17 Aug. 2016.*)

Principles outlined on page 78 provide coherent suggestions for phased improvements to the look and function of campus, simultaneously reinforcing the RTC brand while allowing for flexibility and creativity in the design of individual projects.

CAMPUS PLANNING CONCEPTS

A successful campus plan, much like a great downtown, relies not only on how well each individual building functions, but on how well separate elements co-exist within the wider context of their environment. Harmonious campus environments result when buildings and landscape around them aesthetically and programmatically complement and reinforce each other. In his timeless essay, “The Image of the City”, esteemed urban planner Kevin Lynch described simple planning elements that lead to exceptional city design (Lynch, Kevin. The Image of the City. Cambridge, MA: MIT, 1960. Print). These components easily translate into creating a thoughtfully planned college campus: Paths, edges, districts, nodes, and landmarks.

See LONG-TERM PLAN below for proposed guideline elements.

Paths (Walkways)

Addresses Master Plan Goals; Student Success:

- Strengthen intra-campus circulation and wayfinding
- Provide a safe and accessible place for learning

Paths, the collection of channels along which people move, are like threads that stitch together elements on campus. A well-defined hierarchy of paths simplifies wayfinding and eliminates conflicts between vehicles and pedestrians. The guiding principle for future design of circulation routes should be segregation of pedestrian and vehicular. Whenever possible, confine cars to the perimeter of the campus and choose paving materials to reinforce path ownership, be it pedestrian or automobile. For example, select concrete (poured or unit pavers), for dedicated pedestrian passageways - especially when vehicles must occasionally share the route. When automobiles and pedestrians must regularly share a path, elevate the surface from main drive aisles to slow drivers and make them aware that they are entering an area where pedestrians have the right-of-way. Similarly, choose asphalt for predominantly vehicular areas to send a signal to pedestrians that extra caution is warranted. Plants selected to outline pathways should complement adjacent buildings and be appropriately scaled for clear sightlines by avoiding heights between 3 and 8 feet above ground.

See also LANDSCAPE RECOMMENDATIONS - Walkways.

Edges (Perimeter)

Addresses Master Plan Goal; Institutional Sustainability:

- Improve the college presence within the surrounding neighborhoods of our service area
- Create guidelines to strengthen college identity

Edges, the boundaries between properties, districts, and walkways are an organizing feature that contribute to overall campus identity. Edges can be used to frame or separate areas to create zones or to imply inaccessibility. The perimeter of campus, along 4th & 7th Streets, and Monroe & Kirkland Avenues should clearly define the extents of campus and strengthen the identity of the college within the entire community. The edge of the campus has been recently improved with the installation of new entry signage. Unifying landscape choices is instrumental in accomplishing institution identity around the perimeter. Specifying appropriately scaled, diverse and easily maintained vegetation is key.

See LANDSCAPE RECOMMENDATIONS - Plants and Trees.

Districts (Departments)

Addresses Master Plan Goals; Education & Student Success

- Invite collaboration and the sharing of educational and social spaces
- Increase visibility and transparency of programs
- Create greater identity and cohesion of BASIC STUDIES to facilitate transitions into programs

On an urban scale, cities craft municipal zoning codes to group related land use functions. The benefits of grouping similar uses includes ease of accessibility and visibility. On a college campus, creating a similar system of zones by locating related programs in close proximity to each other helps encourage collaboration and sharing of spaces among students, staff and faculty. Grouping together functions, such as student services, academic programs, the trades and facilities and maintenance simplifies communication and also provides opportunities to share resources.

Several of the projects in the RECOMMENDATIONS section, such as relocating Maintenance to Building N, and grouping Basic Studies, Gen Ed and Student Services into Building I, draw on this concept of districts. Student events are generally better attended when they are held near food service, ASG, or advising; places where students tend to visit regularly.

Nodes (Open Spaces)

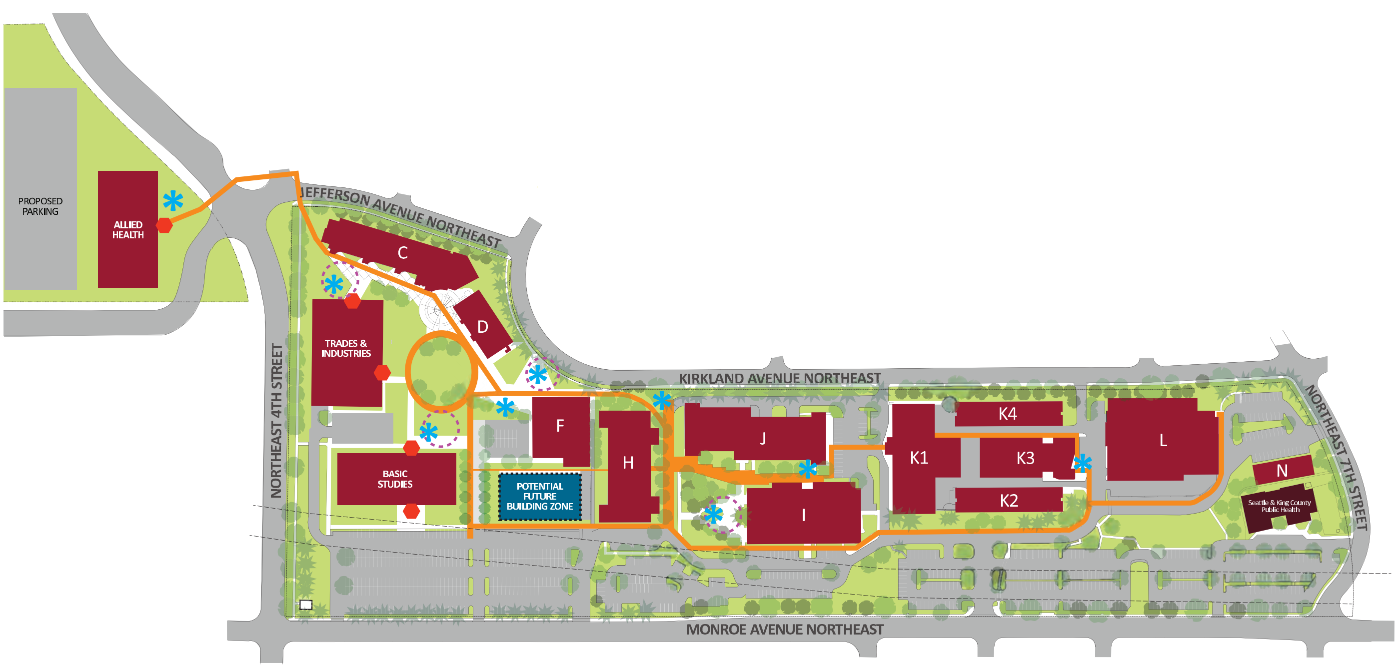
Addresses Master Plan Goals; Education & Student Success:

- Invite collaboration and the sharing of educational and social spaces
- Create a welcoming environment for all who arrive on campus
- Create spaces that encourage health and wellness,
- Create student-centered spaces that strengthen the relationship between students and the college

Nodes on campus are like a town square in urban design; intentional places where paths converge. They are a place to pause, gather and socialize. On campus, nodes (or open spaces) facilitate collaboration and spontaneous informal learning opportunities among students, staff and faculty. Points for this interaction should occur in the landscape as well as inside buildings, providing places for students to socialize and work together in small groups regardless of weather conditions. In the Pacific Northwest, open spaces must be carefully oriented to take full advantage of sunlight and protection from the wind.

Locate smaller nodes where a pathway changes direction or merges with another route. The future proposed green space in the location of Parking Lot P3 will provide a generously-sized place for holding student events ranging from large formal fairs to spontaneous frisbee tossing between classes.

To maximize comfort and flexibility in more intimate collaborative spaces, specify a variety of moveable seating options that can be easily reconfigured to accommodate groups of various sizes. Specify other site accessories such as trash receptacles and pole mounted lighting to match campus standards. Avoid using natural wood products in exposed exterior settings that quickly degrade in the wet Washington climate.



Long-Term Plan with design guideline elements

Landmarks (Focal Points)

Addresses Master Plan Goals; Student Success & Institutional Sustainability:

- Create a welcoming environment for all who arrive on campus
- Improve the overall aesthetic quality of campus facilities

Landmarks give meaning to place. They have the power to not only orient and provide wayfinding, but to also strengthen institutional identity for both the frequent visitors and casual observers. To be most memorable, Lynch suggests that landmarks be placed in sequences or clusters. The RTC campus includes several notable landmarks in the form of large-scale metal artwork. Signage and building entries are other examples of landmarks on campus that serve as external reference points and create a view where one may not occur naturally. Introducing bold art pieces into the landscape invites visitors to explore campus and inspires a greater appreciation for the arts. Seek additional opportunities on campus for placing learning on display and celebrating student accomplishments.

6.1 ARCHITECTURE

Site Selection/Orientation

Since the RTC campus is fully developed with structures and surface parking lots over non-buildable easements, new building sites will only become available through acquisition of additional off-site property or through demolition and replacement of existing buildings.

Replacement buildings designated for the south portion of campus should be positioned to support development of a large open quadrangle in the current location of Parking Lot P3.

Buildings with designated program space should be placed adjacent to similar program spaces, whenever possible, to establish the concept of identifiable districts.

Ideally, buildings housing highly occupied spaces such as classrooms and offices should be oriented in an east-to-west direction to effectively utilize passive daylighting strategies.

Buildings

Buildings should visually fit into campus context while uniquely expressing its purpose. The fabric of campus will be enriched by introducing a variety of building types that harmoniously work together.

Buildings must offer functional flexibility for future modification based on emerging program needs. Minimize the use of internal load bearing walls and small space column bays to allow for easy reconfiguration of interior spaces.

Buildings should meet or exceed minimum code requirements for accessibility by improving student access to the surrounding buildings and open spaces. Topography on campus includes a 40 foot slope across the site that creates challenging transitions between existing buildings. Consider how physically challenged students, staff and faculty might traverse through buildings using elevators to navigate exterior routes that are difficult to retrofit for ADA compliance.

Indoor Outdoor Connection

Building forms should engage and define open spaces. Locate major building entrances off of larger public spaces to activate the space around the building. Encourage a pedestrian-friendly campus by including overhead weather protection such as canopies or roof overhangs along major facades that run parallel to pedestrian pathways. Investigate opportunities to provide an exterior protected area near the main door for building users to gathering informally upon exiting or entering the building. Incorporate human-scaled elements, window openings or building modulation to avoid large expanses of unarticulated building envelope.

Sustainability Standards

All new construction and major renovations on campus are designed to meet or exceed state LEED requirements. This aligns with Master Plan Goals, as well as the college's Mission, Vision and Values.

System retrofits on campus should significantly reduce current energy and water use and be designed to optimize return on investment. Examples of this include upgrading light fixtures on campus to LED, reducing not only annual energy costs but also lowering maintenance hours previously devoted to frequent lamp replacement.

Implementing Landscape strategies as outlined in the RECOMMENDATIONS sections is another relatively simple way to improve campus environmental sustainability. The landscape concepts presented focus on plant diversity for reduced maintenance requirements and water conservation. An overseeding of large traditional turf area on campus with Eco-Lawn introduces a more responsible ground cover that requires a fraction of the water and less frequent mowing. In addition, adopting a phased implementation plan for replacing the failing irrigation system will reduce the amount of water used on campus by eliminating leaks associated with the aging lines.

Universal Design Standards

The natural topography of campus creates unique challenges to making the seamless connections between facilities. Efforts to improve accessibility on campus include creating designated paths of travel. New I-Spot signs will include high contrast graphics to improve wayfinding for the sight impaired. A regularly scheduled Washington State ADA survey evaluates accessibility on campus and suggests ways to improve accessibility for all.

Reflection Spaces

RTC is committed to providing dedicated reflection spaces for its diverse student and staff population. New buildings on campus will program these intentional quiet areas with the goal of creating a variety of indoor and outdoor spaces on campus where individuals can reflect or meditate.

Scale & Massing

For efficient use of RTC's constrained site, new buildings should be multi-storied. Clustering large program areas and social spaces has the additional benefit of encouraging greater collaboration between departments and among students, staff and faculty.

Materials & Details

Materials selected for new buildings, renovations or site features should complement existing structures on campus. Durable, low maintenance exterior roofing and cladding products will ensure higher building performance and a longer lifespan.

Select large areas of glazing that extend from within a foot or two of the ceiling and floor level to increase to maximize views and extend the depth to which daylight is brought into interior spaces. Utilize passive daylighting strategies such as sunshades and overhangs to control glare and solar heat gain.

The exterior material palette is comprised of neutral earth tones and natural metallic colors. Primary cladding materials should be selected with a focus on durable, low maintenance products such as brick, stucco and corrugated or composite metal panel. Window and storefront systems should be natural anodized aluminum or a bronze tones in a dark or medium finish. For durability, specify Kynar type finishes on exterior metal and avoid field-painted products that require regular repainting.

Interior products should also be selected for beauty, durability and ease of maintenance. Woods selected for doors, accent panels and ceiling elements should consist of natural stains over maple or cherry. Woods finished in natural, light to medium stains better hide the appearance of nicks and scratches while highlighting the natural characteristics of the wood.

EXTERIOR MATERIALS & COLOR PALETTE

Paint Field

Paint- Accent

- Rookwood Red SW
- Sherwin-Williams

Metal Roof/Metal Siding (Flat Composite or Corrugated)

- Zactique
- Zinc Gray
- Zincalume
- Metallic Champagne
- Metallic Silver

Masonry

- Neutral Earth Tones
- Variegated Brick Mix (Refer to Building C - TRC)
- Mutual Materials Royal Plum, Redondo Gray, Castle Gray shown

Storefront

- Anodized Aluminum
- Dark Bronze
- Medium Bronze

Roofing

Metallic Champagne

Siding

- Morin S-16 Corrugated Metal Panel Bright Silver

INTERIOR COLOR PALETTE

Colors utilized on the lower level of Building I - in the food service areas.

A Cactus Cafe KM3431-3

B Aged Olive KM3415

C Greene & Greene HLS4290

D Beach Umbrella KM5000

E Great Gaucho KM3543-3

F Tobey Rattan HLS4266-3

G Sherwin-Williams- Rookwood Red 2802

H Navy Damask KM4995

I Zanzibar KM3932-2

J Metallic Silver

K Natural Maple Wood

L Natural Cherry Wood

Colors reference Kelly Moore Paint, unless noted otherwise

Color

Color plays a pivotal role in a one's immediate impression and long-term perception of a space. Conscientious color selection creates harmony between spaces and informs users on the intent of activities. Research on color in architecture shows that color choices subliminally reinforce personal behaviors, whether the intent is to create relaxation through a cool color palette of blues and greens, or energize a space with fiery reds and orange.

The following is a list of RTC standard colors for educational spaces. Areas with special functions on campus, such as in the student spaces should incorporate a wider range of bold accent colors, contingent on college approval.

Interior:
White
Color: Acoustic White
Product: Flat
Match#: 46

Red Accent
Color: 305-16-0380
Product: Flat
Mix#: 12-0212-419

Tan Accent
Color: Ashley Grey
Product: Flat
Mix#: 305-16-0379

Blue Accent
Color: KM 3128-5
Product: Flat

Gray Trim
Color: 2121-10
Mix#: 305-16-0378

Exterior:

Field Colors (K-Complex):
Curio Gray
Sherwin-Williams SW0024

Anonymous
Sherwin-Williams SW7046

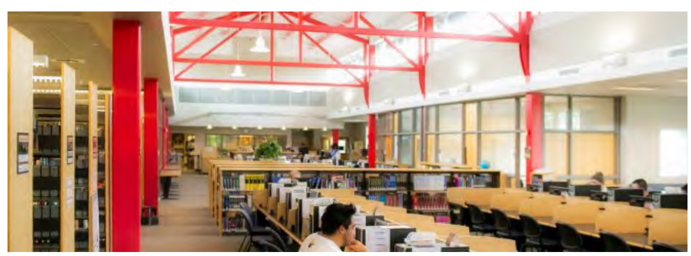
Exterior Doors (K-Complex):
Urbane Bronze
Sherwin-Williams SW7048

Exterior Doors (Previous):
Product: 1930 Semi-Gloss
Water Oil Hybrid
Color: Townsend Harbor
Brown
Match#: 305-15-0304

Exterior Accent (K-Complex):
Goldfinch
Sherwin-Williams SW6905

Exterior Trim (Previous):
Product: 1930 Semi-Gloss
Water Oil Hybrid
Color: Blue
Match#: 305-15-0305

The exterior palette consists of natural, durable materials such as masonry, clear coated metals, and earth tone paint colors.



Interior student areas can incorporate bold pops of color to add interest and energize the space.

6.2 LANDSCAPE

SELECTION

See the APPROVED PLANT LISTS on pages 87-92.

Trees & Woody Shrubs

- Plant trees for longevity and on an annual basis to ensure a variety of ages and resiliency in the overall canopy.
- Choose small, less mature trees, to allow for good root development and better acclimation.

Plants

- Choose plants carefully for their location. Avoid plants that will require significant maintenance to control height, spread, and droppings.
- Create a diverse plant palette, not only for aesthetics, but to also provide stronger disease resistance. Include a mix of herbaceous grasses, perennials, woody sub-shrubs and ground cover.
- Avoid relying too heavily on woody plants such as trees and shrubs that require more pruning maintenance. Inappropriate plant selection can result in damage to buildings and paving.
- Select plants for drought tolerance and group species by cultural requirements.
- Maintain sightlines close to building entrances and walkways by avoiding plants which are bulky between 3 and 8 feet above ground.

Turf

- Opt for Eco-Lawn in place of traditional turf mix to reduce water use and maintenance requirements. See LANDSCAPE RECOMMENDATIONS on page 62 for more information.

PLACEMENT & PREPARATION

Trees & Woody Shrubs

- Consider the location of trees carefully in respect to buildings, light fixtures, and adjacent walking surfaces. Trees planted too close to walkways can cause pavement damage. Utilize root barrier or rigid foam to avoid future root conflicts and paving uplift.
- Prepare the root zone and soil volume to the greatest extent feasible when planting new trees.
- Set tree canopy coverage goals. In addition to monitoring individual trees, campus trees should be managed as an urban forest.
- Incorporate time as a factor of design to allow for maturation of woody species without constant pruning.

Plants

- Avoid creating small, intensive planting areas that are difficult to maintain.
- Bare, exposed ground increases maintenance and erodes the soil. Create a plant understory beneath trees. Select low growing, shade-loving, drought-resistant vegetation. Choosing high quantities of herbaceous plants provides competition for weeds and gives a more immediate full look to the landscape.

- Focus maintenance resources to the areas that provide the greatest benefit. Leave ample space between entrances, walkways, lighting, and buildings to avoid blocking sight lines.
- Plant densely to create an instantly fuller look and reduce weeding maintenance. The few weeds that are able to grow among the tightly spaced plants will not be visible.

CONSERVATION

Irrigation

Addresses Master Plan Goal; Institutional Sustainability

- Incorporate sustainable strategies in all projects to conserve natural resources and reduce life-cycle building costs.
- Irrigate less; adjust irrigation settings seasonally and taper to no irrigation for plantings that are drought-tolerant.

Perimeter & Parking Lot

Enhance perimeter landscaping to beautify campus edges. Keep taller, vision-blocking plantings away from vehicular circulation paths.

6.3 PARKING

Perimeter Parking

For practical and aesthetic reasons, limit parking to edges of campus to reserve the campus interior for landscaped gathering spaces and paved plazas.

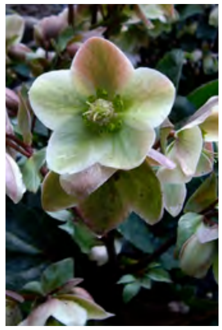
Parking Islands as Rain Gardens

Whenever feasible, convert parking islands into rain gardens. Rain gardens beautify parking lots by introducing a variety of drought resistant vegetation while providing the added benefit of valuable storm water retention area.

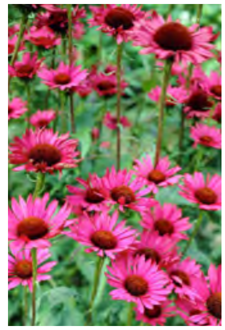
APPROVED PLANT LIST — PERENNIALS

Achillea millefolium
Yarrow

Helleborus 'Grape Galaxy'
Grape Galaxy Lenten Rose



Helleborus 'Ivory Prince'
Ivory Prince Lenten Rose



Echinacea purpurea
'Vintage Wine' Cone Flower

Penstemon digitalis 'Husker Red'
Husker Red Penstemon

Salvia 'May Night'
May Night Sage

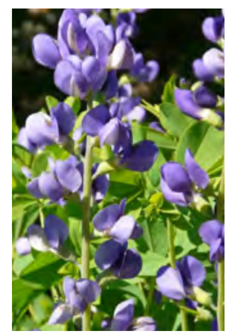
Liriope spicata
Spike Lily Turf

Veronica spicata
Spike Speedwell

Asclepias tuberosa
Butterfly Weed

Phlomis fruticosa
Jerusalem Sage

Baptisia alba
Wild Indigo

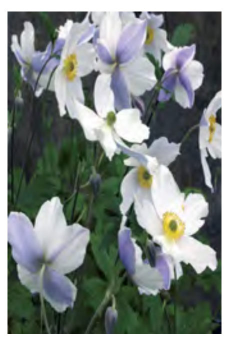


Baptisia australis
Wild Indigo

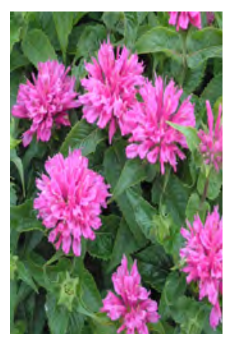
Sedum rupestre 'Angelina'
Stonecrop

Aster lateriflorus 'Prince'
Calico Aster

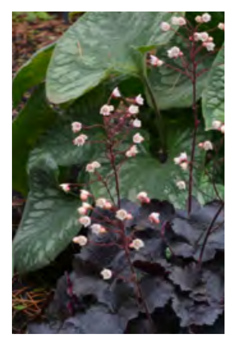
Salvia sylvestris
Little Night Sage



Anemone 'Wild Swan'
Wild Swan Windflower



Mondarda 'Petite Delight'
Dwarf Bee Balm



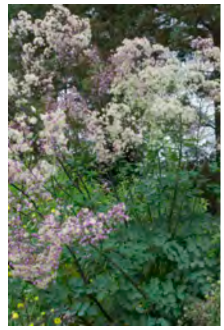
Heuchera 'Coco'
Coral Bells

APPROVED PLANT LIST — PERENNIALS


Agastache
'Black Adder'
Giant Hyssop


Sedum x 'Purple
Emperor'
**Purple Emperor
Stonecrop**


Sedum acre
Goldmoss Stonecrop


Thalictrum 'Elin'
Elin Meadow Rue


Sedum rupestre
Stonecrop


Liriope muscari
Lily Turf


Sedum spurium
'Dragon's Blood'
**Dragon's Blood
Stonecrop**


Achillea x 'Moonshine'
Moonshine Yarrow


Nepeta x
'Walker's Low'
Walker's Low Catnip

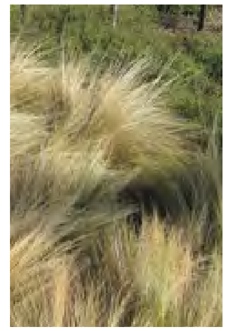
APPROVED PLANT LIST — GRASSES

Deschampsia cespitosa
Tufted Hair Grass

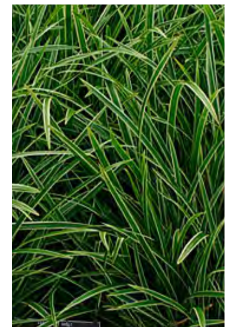
Festuca glauca ‘Elijah Blue’
Blue Fescue

Imperata cylindrica
Blood Grass

Helictotrichon sempervirens
Blue Oat Grass



Stipa tenuissima
Mexican Feather Grass



Carex morrowii ‘Ice Dance’
Ice Dance Japanese Sedge

Pennisetum alopecuroides ‘Hameln’
Dwarf Fountain Grass

Carex elata ‘Bowles Golden’
Bowles Golden Sedge

Miscanthus sinensis ‘Adagio’
Dwarf Maiden Grass

Pennisetum alopecuroides ‘Karley Rose’
Fountain Grass

Sesleria autumnalis
Autumn Moor Grass

Carex testacea
New Zealand Orange Sedge

Pennisetum alopecuroides ‘Little Bunny’
Dwarf Fountain Grass

APPROVED PLANT LIST — SHRUBS


Erica
Heather


Cornus sericea 'Kelseyi'
Kelsey Dwarf Red Twig Dogwood


Viburnum davidii
David Viburnum

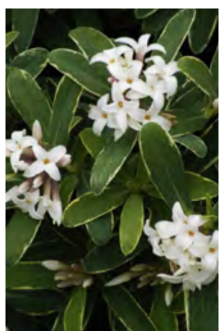

Caryopteris incana
Common Bluebeard

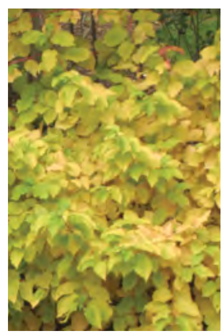

Rhododendron
Rhododendron


Ceanothus 'Victoria'
California Lilac


Symphoricarpos albus
Snowberry


Arctostaphylos columbiana
Hairy Manzanita


Daphne x 'Summer Ice'
Summer Ice Daphne


Cornus sanguinea 'Cato'
Arctic Sun Red Twig Dogwood


Cornus sanguinea 'Farrow'
Artic Fire Red Twig Dogwood


Garrya elliptica
Silk Tassel

APPROVED PLANT LIST — SMALL TREES

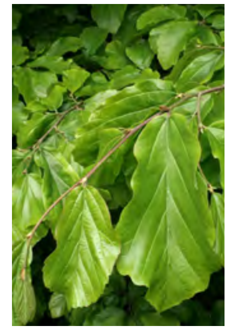

Chionanthus retusus
Chinese Fringe Tree


Cornus mas
Cornelian Cherry


Enkianthus
Enkianthus


Acer palmatum
Japanese Maple


Cornus x ‘Venus’
Venus Dogwood


Parrotia persica
Persian Ironwood


Prunus serrulata
‘Shirotae’
Shirotae Cherry


Prunus serrulata
‘Kwanzan’
Kwanzan Cherry

APPROVED PLANT LIST — MEDIUM & LARGE TREES


Nyssa sylvatica
Black tupelo


Ginkgo biloba
Ginkgo


Ulmus x parvifolia 'Emer II'
Chinese Elm


Ulmus americana 'Jefferson'
American Elm


Liquidamber styraciflua
Sweet Gum


Cercidiphyllum japonica 'Heronswood Globe'
Heronswood Globe Katsura


Cercidiphyllum japonica 'Red Fox'
Red Fox Katsura


Fraxus americana
White Ash


Fraxus pennsylvania
Green Ash

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7.0
APPENDIX

7.0 Appendix

a. Acknowledgements

Thank you to the following individuals who provided input and insight into the development of this 2016 RTC Campus Master Plan:

RENTON TECHNICAL COLLEGE REPRESENTATIVES

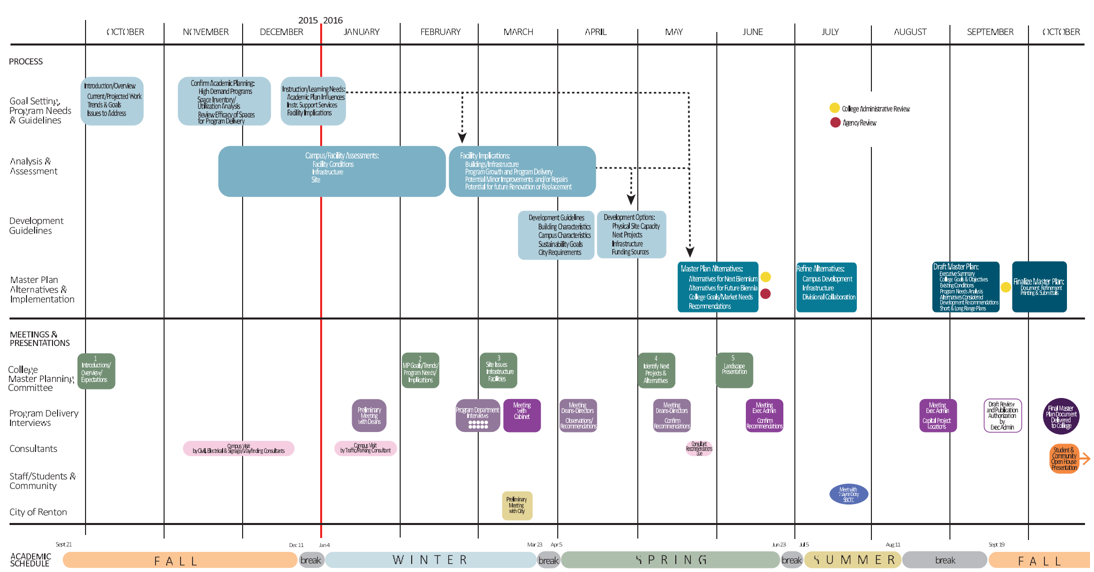
Kevin McCarthy	President
Melinda Merrell	Vice President - Administration & Finance
Barry Baker	Director - Plant Operations
Angel Reyna	Vice President - Instruction
Jessica Gilmore English	Vice President - Student Services
Paul Corigliano	Chief Information Officer
Christopher Carter	Dean - Allied Health
Dante Leon	Dean - Automotive / Technical Programs
Doug Medbury	Dean - Culinary Arts / Director - Catering Services
Jodi Novotny	Dean - Basic Studies
Jenny Pollock	Assistant Dean - Basic Studies
Michelle Campbell	Executive Director - Institutional Advancement
Elizabeth Falconer	Director - Innovative Teaching and Learning
Eric Palo	Director-Library
Carrie Shaw	Director - Foundation
Jessica Supinski	Director - Student Programs & Engagement
Matt Vielbig	Director - Campus Security
Mike Biell	Full-time Faculty - Engineering Design Technology
Michelle Canzano	Executive Assistant - Administration & Finance
Zoe Dang	ASG Representative
Mark Daniels	Custodial Manager
Cindy Leggett	Admin Assistant - Business Technology, Gen Ed
Stefanie McIrvin	BAS Program Manager
Larry Price	Full-time Faculty - Leadership in the Trades
Susie Rather	Grant & Contract Coordinator
Greg Snider	Maintenance Lead
June Stacey-Clemons	Special Assistant to Instruction
Cheryl Stover	Full-time Faculty - Natural Sciences
Simone Terrell	Full-time Faculty - Phlebotomy

WASHINGTON STATE DEPARTMENT OF ENTERPRISE SERVICES

Indra Jain, Project Manager

CONSULTANTS

Matt Lane	McGranahan Architects
Gail Merth	McGranahan Architects
Charles Li	Tres West
Kenneth Wiersema	Coughlin Porter Lundeen
Scott Souchock	Maxwell Edwards
Michael Read	Transportation Engineering NW
Jason Henry	Berger Partnership
Jen Montressor	Berger Partnership



The RTC Master Planning Process Schedule identified a series of Planning Committee and Executive Committee meetings, individual program interviews and educational space tours, in addition to discussions with the City of Renton and the State Board of Community and Technical Colleges (SBCTC)

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b. program interviews/tours – notes & images

Meeting Minutes

Administration Group Program Meeting
19 February 2016, 1:30 PM
Prepared by: Sara Perz and Matt Lane

Attendees:

■ Melinda Merrell (MM)	Vice President – Administration and Finance	■ Mark Johnson (MJ)	Director – Financial Services
■ Barry Baker (BB)	Director - Plant Operations	■ Matt Lane (ML)	mcg-ARC
■ Jose Perdomo (JP)	Bookstore Manager	■ Sara Perz (SP)	mcg-ARC

ITEMS DISCUSSED

I. DISCUSSION - INTRODUCTION

A. ML discussed overview of master plan logistics, purpose of meeting, benefits of master plan to help guide growth and prioritization.

II. DISCUSSION – CURRENT LOCATION

A. Building I: Student Services, Administration
B. Building J: Business
C. Building N: Facilities

III. DISCUSSION – WHAT WORKS WELL IN EXISTING SPACE

A. Administration and the Bookstore like their current locations adjacent to Enrollment and Financial Aid and at the center of campus, with good access to other student services including the cafeteria.
B. Bookstore display area at front of the store is adequate. Overall space allotted for the Bookstore is ideal for its needs.
C. Financial Aid was recently remodeled into a better layout. (See also, notes from Student Services interview for comment regarding Financial Aid and Student Government.)
D. Administration believes that Student Government has adequate space.
E. The lower level of Building N works well for Facilities.

IV. DISCUSSION – DEFICITS OF EXISTING SPACE

A. The Administration area is not an ideal layout since unauthorized people can gain access to the President's office area.
B. Student Services is in multiple locations because of the area needed.
C. The Boardroom is not adequate for the size of meetings. (See also, notes from Cabinet interview for comments regarding Boardroom and Administrative suite.)
D. The Bookstore is in need of a remodel.
E. The loading dock area is limited, access to the platform by larger trucks is nearly impossible because of the grading in front of the dock. (The sidewalk opposite the loading dock was recently eased as part of the renovation to Building K, which may help solve this issue.) A larger overhang at the loading dock would allow for a better

work/storage area. This is the main receiving area for the college. This is a good location for the loading dock but access needs to be improved. There is also a loading dock below, for the kitchen.

F. Janitorial needs a meeting space for about 12 people that is central to campus. This space could be similar to a Staff Lounge with lockers and could potentially be located in Building E.

G. The Business Department is at full capacity and they plan to grow. The department could take over the storage area next door in order to expand. Another option is to move into the Boiler/Property Maintenance Assist. Room.

H. Building N's second floor may be underutilized. Early Childhood is the only program in that space.

V. DISCUSSION – TYPES OF SPACES, KEY RELATIONSHIPS AND ADJACENCIES

A. Administration has discussed the idea of having all of the deans co-located for increased collaboration. However, this arrangement may make them less accessible to program instructors and students. The current suite space would hold approximately 10 faculty members.

B. The Business office likes its location in a less public area (Building J) and likes access to the Print Shop and Mail Room in Building I. (The Annex is too far from campus to effectively house the Business office.)

VI. DISCUSSION – SPECIAL CONSIDERATIONS (UTILITIES, SECURITY, ACCESS)

A. Building M is leased out to King County Public Health. They are 2 years into their 10 year lease, with an option to renew for another 10 years.

B. There is not a good campus-wide storage facility. Storage is currently scattered across campus.

VII. THE MEETING ADJOURNED AT 3:30 PM.

Attachments: Space Use Diagrams of Buildings I, J, N

Meeting Minutes

Allied Health Program Meeting
17 February 2016, 9:00 AM
Prepared by: Sara Perz and Matt Lane

Attendees:

■ Christopher Carter (CC)	Dean – Allied Health	■ Sara Perz (SP)	mcg-ARC
■ Matt Lane (GM)	mcg-ARC	■ Julie Pock (JP)	Administrative Assistant-Allied Health

ITEMS DISCUSSED

I. DISCUSSION - INTRODUCTION

A. The meeting began with a review of the current spaces. Space deficiencies were documented and the pool room was identified as a potential new lab/classroom space.
B. FCS scores and funding strategies were discussed.

II. DISCUSSION – CURRENT LOCATION

A. Allied Health is located in Building B
B. RN Classroom and Lab space and CNA Classroom in Building H
(It would be beneficial if this space could be located in Building B
C. Optometry Class and Lab in Building J

III. DISCUSSION – WHAT WORKS WELL IN EXISTING SPACE

A. Dental Operatory space and Dental Lab space functions well for use, although updating of finishes was requested.
B. Massage Therapy classroom and Lab is sufficient for program needs
C. Nursing large and small lecture halls work for needs
D. Pharmacy, Surg. Tech, Nursing programs work well for the most part.
E. The programs have found adequate storage by utilizing rooms that were not originally identified as storage rooms, such as restrooms, waste disposal rooms, and kitchens. This is not a preferred use of space.

IV. DISCUSSION – DEFICITS OF EXISTING SPACE

A. An additional computer lab for testing and lab function is needed; enough to seat 34+ students
B. Class space for 26 students needed for next academic year
C. Staff lounge, private meeting space and secure document storage area needed
D. Common study space for students would be helpful. Currently students wait in the corridor alcove between restrooms. This area is directly outside of the Massage Therapy Lab and the noise disturbs the class.
E. Currently the CST and Vet Assistant program share a space. These two programs are in conflict with each other due to cleanliness issues.
F. Storage and Exam rooms next to Computer Lab 121 could have a better function as they are not utilized at the moment.
G. The Pool and Locker Rooms are not being used. This area could be converted into lab space.
H. The dividing wall between the two dental assistant classrooms is a security issue. The smaller classroom is too small and therefore not utilized as much as the larger classroom.

I. Private offices are located inside classrooms making them inaccessible to the teacher.
J. Phlebotomy Classroom would be better located in Classroom 202 and Classroom 206 could house another function. CST was suggested to move upstairs to 206. The movable partition between 205 and 206 could become a solid wall.
K. Laundry and Storage 201 could be better utilized if the spaces were combined with Storage 203. Anesthesia Tech Classroom/Lab could also expand.
L. The kitchen inside the Phlebotomy Lab is used as storage.

V. DISCUSSION – PROGRAM TRENDS/PROGRAM DELIVERY

A. Medical Assistant Program would like to double in size. One class could be offered in the evenings so only one additional classroom would be needed.
B. The Dental program plans to increase but it would become a hybrid class, so no additional space is required.

VI. DISCUSSION – TYPES OF SPACES, KEY RELATIONSHIPS AND ADJACENCIES

A. CST is not well located because it shares a space with Vet Tech. CST could potentially move upstairs to Room 202.
B. The Everest College campus may have space that Allied Health could lease. It is a more modern space of about 40,000 SF and would make Allied Health a satellite program in downtown Renton. This would give the college some presence in the downtown area. (Allied Health is currently located in 46,000 SF of Building B. Could the entire program could fit into a smaller, more efficient, footprint?)
C. One of the main needs for Allied Health is additional computer lab space. Basic Studies also noted this as an urgent need. The two departments could potentially share this new resource.

VII. DISCUSSION – SPECIAL CONSIDERATIONS (UTILITIES, SECURITY, ACCESS)

A. Use of the vacant Everest College building
B. Renovation to the Pool area
C. Wireless dead zones in building prevent technology growth in the programs
D. Heat and airflow issues were reported in the building due to overall configuration and age of equipment

VIII. THE MEETING ADJOURNED AT 11:30 AM.

Attachments: Space Use Diagram of Building B

Meeting Minutes

Automotive and Technology Program Meeting
24 February 2016, 11:30 AM
Prepared by: Sara Perz

Attendees:

■ Dante Leon (DL)	Dean – Automotive and Technology	■ Sara Perz (SP)	mcg-ARC
■ Matt Lane (ML)	mcg-ARC		

ITEMS DISCUSSED

I. PROGRAM DESCRIPTION – TECHNICAL PROGRAMS

A. Information Technology: Computer science (4 labs and 1 classroom). Computer Networks (3 labs), BAS Application Development (sharing with Computer Science), BAS Network Architecture (future expansion)

B. Engineering Technology: Engineering Design (2 labs and 1 classroom) and Surveying/Geospatial (1 lab and 2 classrooms)

C. 2 ABE classrooms, 1 Ophthalmic Tech classroom and lab, 2 Aerospace shops (to move out next year), 1 Lab Tech lab (program is closed), 1 Gen Ed classroom, 2 Boiler Operator classrooms. Band Instrument Repair (shops and classrooms)

II. PROGRAM FTES:

A. Current and Projected: Current: 280, Projected over 5 years 360
   1. IT is the program that has generated the most growth. The program needs more labs and classrooms.

III. DISCUSSION – CURRENT LOCATION

A. Building J: Labs and Instructional Space

IV. DISCUSSION – WHAT WORKS WELL IN EXISTING SPACE

A. Ample space for classrooms and labs.
B. Well lit
C. Good HVAC

V. DISCUSSION – DEFICITS OF EXISTING SPACE

A. Classrooms are too large, but not big enough to split into two.
B. Unutilized space between adjacent classrooms (kitchen type alcoves with storage)
C. Electrical wiring location only along walls does not support efficient classroom layout
D. Wasted space with recessed entry alcoves
E. 303, 304 and 312 should be grouped together
F. Testing Room 219 should be located near enrollment
G. Need a larger server room in the building, with a raised floor, increased HVAC and hot/cold aisle.

VI. DISCUSSION – PROGRAM TRENDS/PROGRAM DELIVERY

A. Increased use of computer-based instruction. All classrooms should be wired to support a computer lab configuration.

B. Installing fiber to each classroom will support HD multimedia delivery.
C. Provide wireless access in the lower level of the Building J, which is below grade.
D. New programs: Robotics and BAS

VII. DISCUSSION – TYPES OF SPACES, KEY RELATIONSHIPS AND ADJACENCIES

A. Lecture rooms, computer labs, and industrial labs. Adjacencies should be according to subject. For example, IT, Engineering, ABE and Gen Ed should be grouped together physically.
B. DL requested a long term plan to relocate Administrative Offices in Building J to another building in order to free up more classroom space.
C. DL suggests consolidating all instructors' offices in one location at the ground level of Building J to make spaces more flexible/functional and increase instructor collaboration.

VIII. DISCUSSION – SPECIAL CONSIDERATIONS (UTILITIES, SECURITY, ACCESS)

A. Additional switches and routers to support more computers. Additional wireless access points.

IX. PROPOSED SPACE NEEDS FOR PROGRAM:

A. Robotics Lab 25 occupants
B. Robotics computer Lab 25 occupants
C. BAS Network Architecture computer Lab 25 occupants
D. Server Room Expansion 25 occupants
E. Physics Lab 25 occupants

X. THE MEETING ADJOURNED AT 1:30 PM.

Attachments: Space Use Diagram of Building J

Meeting Minutes

Basic Studies Program Meeting
12 February 2016, 11:30 AM
Prepared by: Gail Merth and Sara Perz

Attendees:

■ Jodi Novotny (JN)	Dean of Basic Studies	■ Gail Merth (GM)	mcg-ARC
■ Jenna Pollock (JP)	Associate Dean of Basic Studies	■ Sara Perz (SP)	mcg-ARC

ITEMS DISCUSSED

I. DISCUSSION – CURRENT LOCATION

A. Building D plus 6-12 other classrooms on campus and off-site, satellite locations

II. DISCUSSION - WHAT WORKS WELL IN EXISTING SPACE

A. The staff office is a highly used space

III. DISCUSSION – DEFICITS OF EXISTING SPACE

A. JP stated that they have a high need for computer classrooms. They are constantly looking for more lab spaces. They would ideally like to allocate 3-5 additional computer labs for their program.
B. JD said they need more classrooms on campus and in Building D. Since classes spread around campus there is a lack of staff support during evening class hours for students and faculty. This raises a safety concern.
C. The entrance to Building D acts as intake for new students. They have a group of 15-20 people weekly coming to Building D to sign up for classes. GM noted the entry of the building does not serve this function well; a reception area/small lobby would better facilitate the gathering/intake of groups new students.
D. More office space is needed. New FT faculty has been added but there are no available offices for them. (A private office is contractually required for each FT faculty member.) Current offices are awkwardly located inside or between classrooms, so there is no access to these offices when a class is in session.
E. They layout of Building D is awkward in that students have to walk outside and around the building to access two of the larger classrooms. This is especially problematic for new students in the Basic Studies program.
F. The parking lot near Building D is at capacity by 8:00am, and the location of Building D makes it difficult for new students to find.

IV. DISCUSSION – PROGRAM TRENDS/PROGRAM DELIVERY

A. Basic Studies will be offering more hybrid classes. This should not change overall space needs.
B. The program does not anticipate growing more in terms of FTE numbers, but they may need to relocate the Renton program onto campus. This satellite program currently houses 4 classrooms, 4 offices and 100 FTE in day and evening classes.

V. DISCUSSION – TYPES OF SPACES, KEY RELATIONSHIPS AND ADJACENCIES

A. There is a strong partnership between Basic Studies and Work Source that the college would like to maintain. These are ideal locations for off-campus classrooms.

B. A large computer lab with 60 computers is needed
C. For safety, evening classes should be consolidated and located within one main building.
D. Lack of individual office spaces causes competition between FT faculty and I-BEST faculty.

VI. DISCUSSION – SPECIAL CONSIDERATIONS

A. Ideally, Basic Studies would be located near the center of campus because the program has a separate intake system of new students.
B. Building J would permanently house (2) FT Faculty and classrooms.
C. Basic studies is budgeted for 900 FTE, however enrollment is approximately 1,300 FTE. Of those FTE, 600 are generated off-campus. An on campus presence of about 700 FTE accounts for about 1/6 of RTC's on-campus population.
D. Providing off-campus classes increases enrollment in Basic Studies. However, this arrangement makes it harder to achieve the college's goal of students continuing with college courses at RTC because little college presence or experience is created. Keeping students on campus and into integrating them into the college setting will likely facilitate enrollment in college courses after Basic Studies is complete.

VII. THE MEETING ADJOURNED AT 1:00 PM.

Attachments: Space Use Diagram of Building D

Meeting Minutes

Business Education and Technology Program Meeting
24 February 2016, 8:30 AM
Prepared by: Sara Perz

Attendees:

■ June Stacey-Clemons (JSC)	Interim Dean – Business Education and Technology	■ Sara Perz (SP)	mcg-ARC
■ Matt Lane (ML)	mcg-ARC	■ Cindy Leggett (CL)	Administrative Assistant

ITEMS DISCUSSED

I. DISCUSSION - INTRODUCTION

A. JSC discussed the courses offered in the program. Business, Technology and Education such as English, Science Labs and Math.

II. DISCUSSION – CURRENT LOCATION

A. Building H: General Ed, Worksource
B. Building J: Band Instrument Repair
C. Building N: Early Childhood
D. Building C: General Ed

III. DISCUSSION – WHAT WORKS WELL IN EXISTING SPACE

A. Band Instrument Repair has good enrollment and space works well for their needs. See below for tour observations.
B. Conference Room 209B works well but the entire space is not fully utilized.

IV. DISCUSSION – DEFICITS OF EXISTING SPACE

A. Band Instrument Repair – It was observed that the room needs increased ventilation, which was confirmed during discussions with Dante Leon. There is a tripping hazard in the BIRT Chemical Room and faculty requested additional storage.
B. H-302 is not being used. This space could be converted into a computer lab or testing room for 30+ students.

C. Catering space, first floor of Building H: Is this the best location for a rental space or should it be instructional? Could a space at the Annex serve this function? Is the prep kitchen currently utilized?
D. There needs to be a comfortable place for students to gather, and a reflection space.
E. Classroom 204 Building N is not being used at all but it seems too far away for Basic Studies use. Early Childhood classrooms are not utilized in the mornings or evenings.
F. The Biology/Cadaver Room in Building F is not the best use of space because there is not a lecture space adjacent to the lab space. Students have to travel to another room and sometimes use it as an excuse to leave. Currently there are (2) labs with separate lecture spaces. Ideally, there would be (3) labs with adjacent or combined lecture spaces. A back-up generator is needed for the Cadaver Room, as well as more suitable space for storage.
G. A space is needed on campus for proctored, online courses. The space could be a general computer lab made available for this use.
H. 307B Lab is awkward to use because access is through classrooms and private offices.
I. The primary need for Gen Ed is science labs.
J. Workforce needs a private meeting space within their suite to help place students.
K. Faculty Workroom 107 is used for part-time faculty, but it appears underutilized. This space could be used for another purpose, and the workroom could be much smaller.
L. The Clinical Classroom Nursing 117 is used for only one half of the week.

V. DISCUSSION – PROGRAM TRENDS/PROGRAM DELIVERY

A. The college is leaning toward more traditional courses like Gen Ed for transfer students to four year colleges in applied sciences.
B. Social Media Marketing is a new program they are thinking of adding.
C. JSC stated that the campus is often deserted after 3pm because of online classes and working students.
D. JSC thought Cosmetology and Esthetics programs would bring in many FTEs.

VI. DISCUSSION – TYPES OF SPACES, KEY RELATIONSHIPS AND ADJACENCIES

A. The idea of office suites versus private offices inside classrooms was discussed. This arrangement would make the spaces more flexible and functional. Grouping teacher together would promote collaboration and the sharing of resources.
B. Laurie Benazic made recommendations about utilization in a report. Mcg-ARC to request a copy.
C. Basic Studies often requests classrooms in Building H.
D. Room 312 Building J may become a Physics Lab because they need another lab as part of the bachelors program. Currently it is used as a lecture space.

VII. THE MEETING ADJOURNED AT 11:15 AM.

Attachments: Space Use Diagrams of Buildings H, J, N, C

Meeting Minutes

Cabinet Interview
01 March 2016, 11:00 AM
Prepared by: Gail Merth

Attendees:

■ Kevin McCarthy	RTC President	■ Lesley Hogan	Executive Director of Human Resources
■ Melinda Merrell	Vice President – Administration & Finance	■ Paul Corgliano	Chief Information Officer
■ Jessica Gilmore English	Vice President – Student Services	■ Matt Lane (ML)	mcg-ARC
■ Di Beers	Executive Assistant - President	■ Gail Merth (GM)	mcg-ARC

ITEMS DISCUSSED

I. DISCUSSION - INTRODUCTION

A. The meeting began with a short introduction by ML about the Master Plan process to date. It was noted that this interview concludes a series of interviews and tours conducted with RTC program deans and directors over the last few weeks.

II. DISCUSSION – CURRENT LOCATION

A. Building I: President's Suite/Executive Administration
B. Building J: HR & IT

III. DISCUSSION –EXISTING SPACES

A. Boardroom: Used for larger meetings and interviews. Proximity to Assistant's office is good, as well as its adjacency to parking and general accessibility. (DB)

Deficiencies:

Boardroom table does not allow for flexibility since it restricts the number of people who fit in the room. If a large group is anticipated, the table needs to be moved. Assistant must crawl on the floor to hook up AV equipment.
Technology, equipment and general style of the room are outdated.
The projector screen works but the white board is mounted too high on the wall.
A lectern is desired.
Projector is inadequate; however, it was decided to delay projector replacement until Boardroom relocation was discussed.
KM likes the flexibility provided by operable walls in Boardrooms that allow accommodation for groups of various sizes.

B. President's Suite: (DB)

Deficiencies:

Too close to other offices; there is no buffer for confidentiality.

Assistant must clear things off desk and computer screen when walking away from desk, even briefly. Generally it is an inefficient arrangement.

Having only one point of reception sometimes results in unintended people getting into suite.

General style has the feel of a k-12 school, not higher Ed.

Presidents office is too small. The space needs conference area inside the office, in addition to desk/seating.

JGE mentioned she likes the current arrangement of VPs to President, primarily because she is close to much of her staff which is located within Building I.

C. IT (PC)

IT space is generally adequate and the location is good with two exceptions; it would be better if IT storage and the main space were on the same floor, however, storage needs to be near the loading area. It would be difficult and costly to reconfigure.

Deficiency:

A primary IT deficiency are unsecured IDF locations in the corner of classrooms. PC to provide mcg-ARC with the room numbers of classrooms with unsecured IDF locations.

D. Mail Room (PC)

The Mail Room works but the distribution system is inefficient. There is no mail delivery on campus, so all departments need to visit Building I each day to receive their mail. No recommendations were made for changing this model. The Mail Room is in an acceptable location at the center of campus and near services, such as food service, that staff typically accesses during the day.

PC to provide mcg-ARC with a list of Basic Classroom Technology guidelines. It was noted that each classroom should contain, at a minimum; a document camera, computer, projector, and screen. A Technology Standards section will be added to the Master Plan document under Design Guidelines. PC also mentioned that he likes the newer computer lab model on campus that has 22 laptops contained within the desktops, allowing a general classroom to easily convert to a computer lab.

PC noted the sense of classroom ownership on campus that creates low space utilization if a department is not actually occupying their spaces regularly. He supports the idea of more general use classrooms and computer labs.

E. Human Resources

LH noted that the location of HR is acceptable and the department likes their access to a second, emergency exit. HR needs to be in a location that faculty and staff can physically access.

Deficiencies:

Not a welcoming space for faculty, staff or new applicants. The space feels like a k-12 facility.

Difficulty creating collaborative HR environment since the offices are in a single row. A preferred arrangement would be offices around the perimeter of a larger, open space.

Although HR generally has enough space, the conference room can be tight with any group over 6. This makes interviewing in the department difficult since the conference room cannot accommodate an interview panel. The room also lacks basic technology.

Although it would be a major shift over current conditions, an open concept for workspaces could function well for most of the HR staff. Two positions that require private offices are the Benefits and Labor Relations personnel.

F. General:

PC noted that Building H and J have become a catch-all of diverse, unrelated spaces that were placed there only because of space availability.

HG noted that the H Building conference room is an awkward, unusable space. It's too long and narrow to function as a conference room. In general, it seems like conference rooms across campus have been carved out in a less than desirable way.

Although a Staff Lounge is a requirement with faculty contracts, the current staff lounge is used very little and could be reduced in size

IV. DISCUSSION –RELOCATION OPTIONS FOR CONSIDERATION

Executive Administration Offices

KM would like to consider options for moving the Executive Administration area. The preferred options would be at the south end of C Building, on either the lower or upper floor. There is good access to parking in this location, and there are opportunities for creating a boardroom in this area. The building is more contemporary in feel, promoting the future of the institution. It was determined that Buildings H and N are not good candidates for reconfiguration due in part to parking constraints (H) and remote location (N). At a minimum the new space would to accommodate the President, 3 VPs and 3 Administrators. This move would allow Student Services to expand in Building I by co-locating Student Services currently in other buildings. It was noted that at RTC, deans have the responsibility of Program Chair, a role that is sometimes done by a different faculty member at larger institutions. Therefore, keeping the deans located among the programs makes sense. The heads of programs have two different titles; half are VPs, half are Directors.

If the existing offices at the lower level of Building C are moved, the Foundation and Grant offices need to be kept in close proximity.

ML discussed different options for Administrative office arrangement; keeping VPs in one area, or dispersing the VPs closer to the programs that they oversee. RTC has typically grouped the VPs. It was determined this model is a good arrangement for the college.

ML noted that the Bookstore works well in its current location, although it could be reduced in size.

Some other options for study include moving HR and Payroll to the upper floor of building N. Early Learning classrooms no longer need a connection to Building M, since M is being leased by Renton Public Health.

V. NEXT STEPS

Contact Angel Reyna to set up an interview.
PC to provide list of classrooms with unsecured IDFs.

PC to provide mcg-ARC with technology standards for RTC basic classrooms and computer labs.

VI. THE MEETING WAS FOLLOWED BY A TOUR AND ADJOURNED AT 1:15 PM.

Attachments: Space Use Diagrams for Buildings I, J

Meeting Minutes

Culinary Arts Program Meeting
12 February 2016, 8:30 AM
Prepared by: Gail Merth and Sara Perz

Attendees:

■ Doug Medbury (DM)	Dean - Culinary Arts/ Director-Catering	■ Sara Perz (SP)	mcg-ARC
■ Gail Merth (GM)	mcg-ARC		

ITEMS DISCUSSED

I. DISCUSSION - INTRODUCTION

A. GM reviewed comments made by DM during a preliminary needs assessment meeting with Matt Lane (MCG Architects), and DM gave a brief overview of the overall Culinary Arts Program. This consists of three different focuses: Bakery, Culinary and Catering/Rental.

B. Bakery is a 1 year open enrollment program with a two week shift between baking stations.
Culinary is a 2 year associates program split between junior and senior students during the instructional periods.
Catering hosts weekly events in their rental spaces such as weddings, seminars, and rehearsal dinners.
DM stated that they hope to open an additional course for the college called Food Service Management.

II. DISCUSSION – CURRENT LOCATION

A. ACF is located in the bottom of Building I with rental space in Building H and the Annex.

B. The two Cafeteria wings in Building I are separated with dividing walls, creating a seminar location in the morning for the senior students. This area works well for their needs and there is access to projectors. ASG uses the other space in the cafeteria for a meeting space, except during the lunch hour.

C. The Demonstration Kitchen is used as an instructional area for seminars, weekend courses, and junior student lecture areas. The Demonstration is also used as a rental for chef demonstration dinner events.

D. Building H is a conference area for Culinary as well as a rental space. There is a small staging kitchen in the space.

III. DISCUSSION – WHAT WORKS WELL IN EXISTING SPACE

A. DM stated that the partnership between instructional culinary arts and catering is beneficial from a monetary standpoint. They are able to share funds to complete space upgrades and purchase new kitchen equipment.
   1. The cafeteria and restrooms were renovated two years ago
   2. DM hopes to renovate the cook line in the kitchen during the upcoming year to make all equipment mobile by removing the existing curb.

IV. DISCUSSION – DEFICITS OF EXISTING SPACE

A. Loss of parking around Building K is a challenge. The department decided they would not host any events over 30 people in Building I for this reason. All larger events are hosted at the Annex.

B. The bakery is too small. Currently they have the lowest student to teacher ratio of any course because class size is completely space driven. There are 12 students in the program at any time. The goal would be to add additional 6-10 stations in the bakery to increase FTEs.

C. Rental does not have many facility rental classrooms on campus for outside use of space.
D. The college is looking for a space for a Botany Lab in Building H.
E. The Demonstration Kitchen needs a ventilation hood and the finishes and furnishings are outdated. There is also no hood in Building H staging kitchen. It is used as a catering kitchen.
F. Evening Continuing Education is weak and DM is unsure why. The college offers skill enhancement classes and other options.
G. Seminars are occasionally held in the dining room but this does not work well.

V. DISCUSSION – PROGRAM TRENDS/PROGRAM DELIVERY

A. Food Service Management is a new course being added in the future. The demonstration lab as a class space for this course during the day would help increase space utilization.
B. RTC may see an increased enrollment in culinary programs due to the recent closing of the local Le Cordon Bleu.

VI. THE MEETING ADJOURNED AT 11:00 AM.

Attachments: Space Use Diagrams for Buildings: I, H, Annex

Meeting Minutes

Institutional Advancement Division Interview
6 April 2016, 1:30 PM
Prepared by: Gail Merth

Attendees:

■ Michelle Campbell (MC)	Executive Director– Institutional Advancement	■ Gail Merth (GM)	mcg-ARC

ITEMS DISCUSSED

I. DISCUSSION – CURRENT LOCATION

A. Building C: Executive Director of Institutional Advancement IA,
Institutional Development; Communications/Marketing, Grants, Accreditation, Title 3

B. Building J: Institutional Research, IR (3 Staff)

II. DISCUSSION – WHAT WORKS WELL IN EXISTING SPACE

A. Co-location of most of the IA staff in Building C and the ability to maximize the current space.

B. Building J is a good place for IR, except for the deficiencies listed below.

III. DISCUSSION – DEFICITS OF EXISTING SPACE

A. Part of the division, IR, is located in a separate building (J 301). The efficiency of the division could be improved with all of IA in a common space.

B. IR staff has no privacy since they are working on tables in an open area. IR staff has the need for acoustical separation. Cubicles are requested.

C. There is no room for growth of the IA division.
Institutional Research has a strong need for a color printer in J 301.

IV. DISCUSSION – PROGRAM TRENDS/PROGRAM DELIVERY

A. IR hopes to add one FTE in the next year.

V. DISCUSSION – TYPES OF SPACES, KEY RELATIONSHIPS AND ADJACENCIES

A. Institutional Advancement needs easy access for students and the public. Building C is a good location from an access/parking standpoint.

VI. DISCUSSION – SPECIAL CONSIDERATIONS (UTILITIES, SECURITY, ACCESS)

A. Concerns expressed about security in J 301, where there is no second path of egress and it is not possible to lock doors from the inside.

B. Concern also expressed over security of other frontline staff, such as the Foundation Associate. (Inside door locking mechanism has recently been installed in Foundation Office.)

VII. THE MEETING ADJOURNED AT 2:30 PM.

Meeting Minutes

Student Services Program Meeting
29 February 2016, 1:00 PM
Prepared by: Gail Merth

Attendees:

■ Jessica Gilmore English	Vice President – Student Services	■ Patrick Brown	Director of Enrollment Services/Registrar
■ Debbie Solomon	Director – Financial Aid	■ Jessica Supinkski	Director – Student Programs/Engagement
■ Scott Latiolais	Dean-Student Success	■ Sara Perz (SP)	mcg-ARC
■ Elaine Calloway	Executive Assistant-Student Services	■ Gail Merth (GM)	mcg-ARC

ITEMS DISCUSSED

I. DISCUSSION - INTRODUCTION

II. DISCUSSION – CURRENT LOCATIONS

A. Building I: Student Success, Enrollment, Financial Aid,
B. Building J: Student Leadership, ASG, Veteran's Services
C. Building C: Learning Resource Center

III. DISCUSSION – WHAT WORKS WELL IN EXISTING SPACE

All of upper floor of I is Student Services except for Bookstore.
Co-location of Student Success and Enrollment
VP/Director offices near direct reports works well
SL: Offices for Faculty Counselors
JGE: Open offices in general, with the exception of those in supervisory roles and counselors who need private offices.
PB: Cashiering next to registration works well.

IV. DISCUSSION – GENERAL DEFICITS ON CAMPUS

Mid-size conference rooms on campus
General student collaborative/gathering space.
Shared computer labs that could be booked for occasional use and tutoring. Existing computer labs on campus tend to be associated with specific programs, which make them difficult to book.
A place for nursing mothers
Single stall lockable toilets
A multi-purpose studio space for Health/Wellness activities like Zumba and Yoga.
Annex building is good for conferences since it has space for break-out sessions.
Consolidated Student Services.
Dedicated tutoring spaces, especially a Math & Writing Center.

A. **Student Leadership** Building J (JS):

Deficiencies

Program is growing exponentially and overall space is inadequate. There are currently 4-5 groups on campus trying to meet weekly.

The main space is located next to the Aerospace and Band Instrument Repair programs which creates noisy interruptions.

Student storage space is accessed from Director's office resulting in interruptions.

Space Needs:

A meeting space with appropriate ventilation that can accommodate the 40 member senate. C-111 is too small for Senate. (Portion of Cafeteria is currently being used, which restricts meeting times.)

Indoor event space to events such as guest speakers over student lunch periods. (Ideally, a space that has a stage/platform.0

2-3 office spaces

Additional storage space that can be secured and has access from a hallway.

Spaces for student clubs to meet.

General student gathering/collaboration space.

B. **Student Success/Enrollment Services** Building I (SL & PB)

Whole area could use a facelift.

The flow of the space is backwards and is confusing to new students. Adding a Welcome Desk would help to guide students in right direction.

Student Success needs a private office for a Health/Wellness counselor yet to be hired

SL suggested moving bookstore to add more student services in Bldg I

Bldg I lacks welcoming feeling of student building because of Administration's presence.

PB: Entire area is too small. Students stand in lines that can go out the door. There are few seating options.

One staff member needs a private office for discussion of grades, etc. Currently, this staff member's office is inaccessible to students, which makes it difficult to discuss confidential issues since he is forced to use an open table area. One private office needed for PeopleSoft analyst.

Cashier doesn't need to be in registration area. Could move over to bookstore area and could face outward into atrium.

Privacy is a big issue. Should consider privacy screens. (TCC example was cited as a good model for privacy.)

File Storage is a large room that is underutilized. Many files appear to be outdated and could possibly be relocated. This room lacks windows, but they could potentially be added since the area is on the 2^{nd} level. File Room also includes a staff kitchenette needs to be retained since it is used by many.

C. **Learning Resource Center** (JS/JGE)

LRC in Building C is too small since there are 6 functions that take place in one location. Tutoring would ideally be located in a separate, quieter location.

D. Financial Aid (DS)

Area has recently been reconfigured but has several problems; the space is already undersized, the arrangement of cubicle walls makes a second emergency egress path impossible.

Director's Office is not adjacent to direct reports, which makes supervision difficult.

Veteran's Rep is in completely separate building (J).

V. THE MEETING ADJOURNED AT 3:15 PM.

Attachments: Space Use Diagrams for Buildings I, J, C

Meeting Minutes

Workforce Program Meeting
17 February 2016, 1:00 PM
Prepared by: Sara Perz, Matt Lane, Gail Merth

Attendees:

■ Heather Winfrey (HW)	Executive Dean – Workforce, Trades, Economic Development	■ Sara Perz (SP)	mcg-ARC
■ Matt Lane (ML)	mcg-ARC	■ Henry (H)	RTC
■ Rick (R)	RTC	■ Jeremy (J)	RTC
■ Vince (V)	RTC		

ITEMS DISCUSSED

I. DISCUSSION - INTRODUCTION

A. The meeting began with a tour of spaces including Building F to view the Machine and CNC rooms, Building E to view the Major Appliance and Refrigeration Technology, Building A to observe the Welding and Fabrication shops, Building J to observe the Aerospace Metrology space, and finally Building L to view the Carpentry center.
B. The Annex was visited to discuss options for future use. The courthouse is roughly 10,000 SF of space.

II. DISCUSSION – CURRENT LOCATION

A. Building F: Machining, CNC, Construction Management.
B. Building E: Major Appliance and Refrigeration Technology
C. Building A: Welding, Fabrication, Automotive (Future location of Aerospace program)
D. Building J: Aerospace and Metrology
E. Building L: Carpentry

III. DISCUSSION – WHAT WORKS WELL IN EXISTING SPACE

A.

IV. DISCUSSION – DEFICITS OF EXISTING SPACE

A. The CNC room is too small; the program would ideally like to add more CNC machines. There are not enough for the number of students in the program. It is also a poor configuration.
B. The Machine room is currently adequate in size but there are none of the necessary sightlines between it and the CNC room. The office above the tool room feels unsafe because there is only one exit out of the room. Next year a new program will be added to the Machining area which will increase the number of students in the space. This could create congestion.

C. The Precision Machining classroom is divided into two rooms with a diving wall that is more like a curtain. Lack of acoustical separation makes it difficult to hold two classes at one time. The second space also lacks a teaching wall.
D. The computer lab for CNC has two groups that use the space at once. Ideally they would have an additional instructional space for a second lab.
E. Gen Ed Anatomy and Construction Management could move to another building and give the Machine program the space and classrooms that are needed.
F. Machining needs better storage of materials. There are currently two separate areas. Hazmat storage does not have a safe place to store these materials, which means they sometimes sit on site for a while.
G. Refrigeration Technology is a growing program that could use more demo space. There are two programs (domestic and commercial) running at once. The request was made to expand the program into the Plasterer's space.
H. Welding is at 140% enrollment and they could increase FTEs with more space and more storage. They would not mind losing a classroom for other uses.
I. Fabrication needs more outdoor space for mock up. A large boat is one need.
J. The Construction Trade Prep and Property Maintenance programs want to move to Building L to make more space for Welding.
K. The Ford Asset current location will become Aerospace once they move back into Building K.
L. The current location of Aerospace Metrology prohibits class sizes over 10 students. The space and power capacity is too small and noise disrupts other classrooms in the building. The space is more conducive as a general classroom.
M. A stair (instead of a ladder) is needed in the New Carpentry Lab for safety reasons.
N. The new Covered Storage Area may not currently be used efficiently.

V. DISCUSSION – PROGRAM TRENDS/PROGRAM DELIVERY

A. The trades programs are growing rapidly. Most are over-enrolled and could increase FTEs with additional space.

VI. DISCUSSION – TYPES OF SPACES, KEY RELATIONSHIPS AND ADJACENCIES

A. The Annex is underutilized. It is mainly used as a catering space and rental but there are many other rooms in the building that could become classrooms, space for Property Maintenance or Construction Trades.

VII. DISCUSSION – SPECIAL CONSIDERATIONS (UTILITIES, SECURITY, ACCESS)

A. Electrical Load seems to be an issue throughout many of the programs. Machining and CNC discussed failing electrical loads. The sawing area has electrical issues as well. Major Appliance and Refrigeration Tech said they are maxed out on space and electrical capacity.
B. Ventilation in the Machine room is an issue and needs an upgrade. They need fume extraction and are maxed out on compressed air.
C. There are virtually no sightlines in the Machine and CNC rooms. This is a safety issue because the faculty are not able to watch all the students carefully. They are currently at 129% enrollment.
D. An emergency power generator is needed campus wide. Emergency power is especially needed for the cadaver room in Gen Ed Anatomy.

VIII. THE MEETING ADJOURNED AT 4:45 PM.

Attachments: Space Use Diagrams for Buildings A, E, F, J, L

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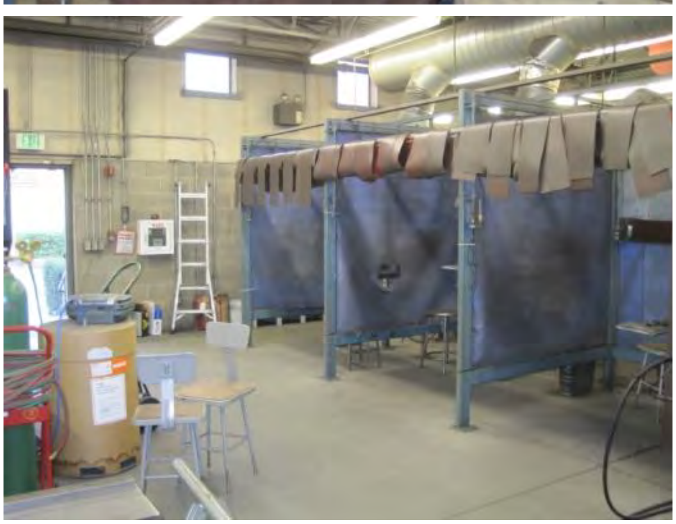
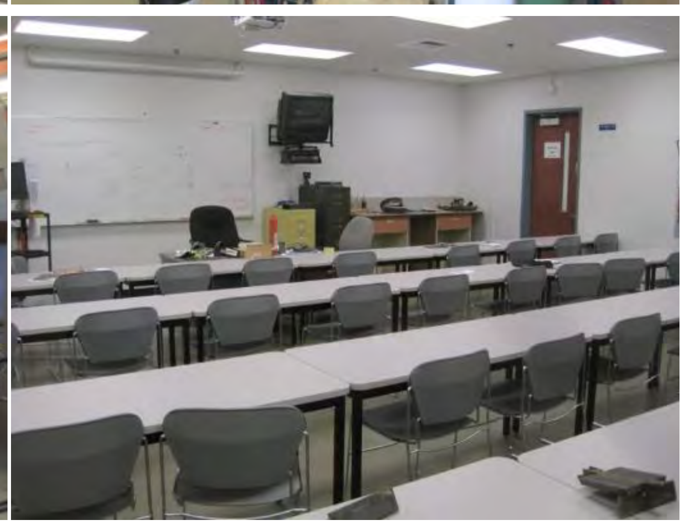
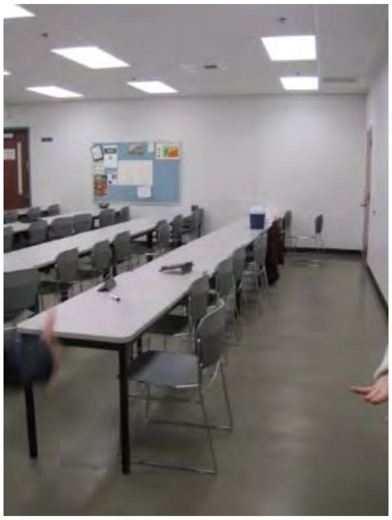
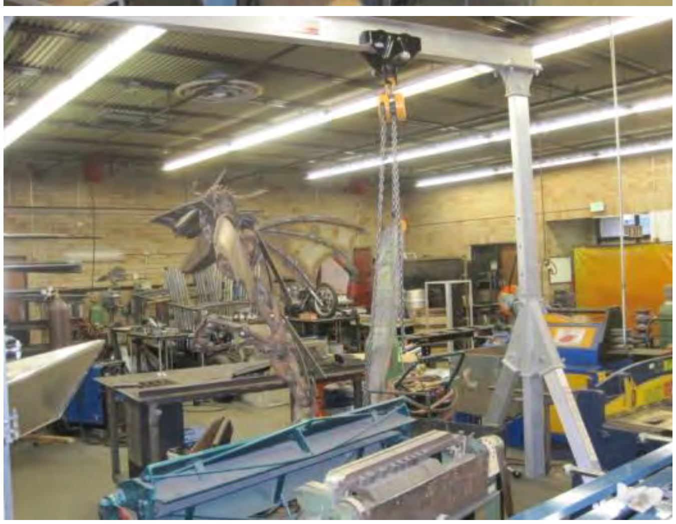
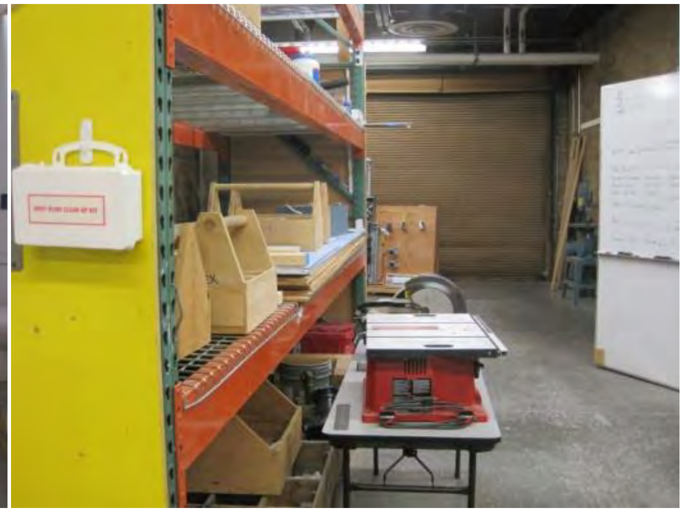


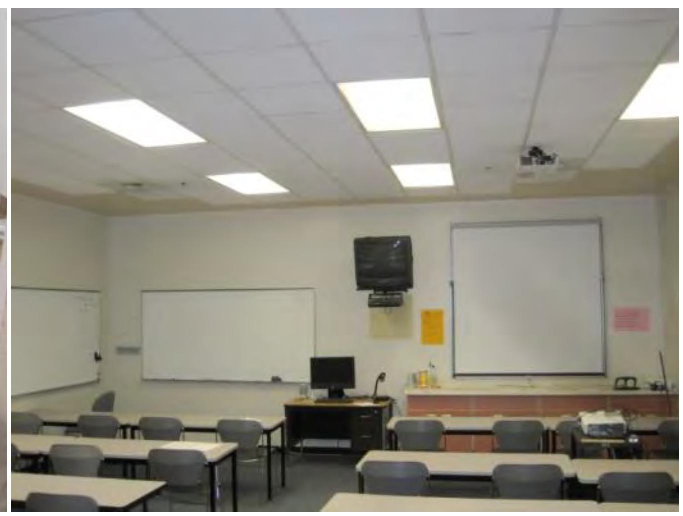


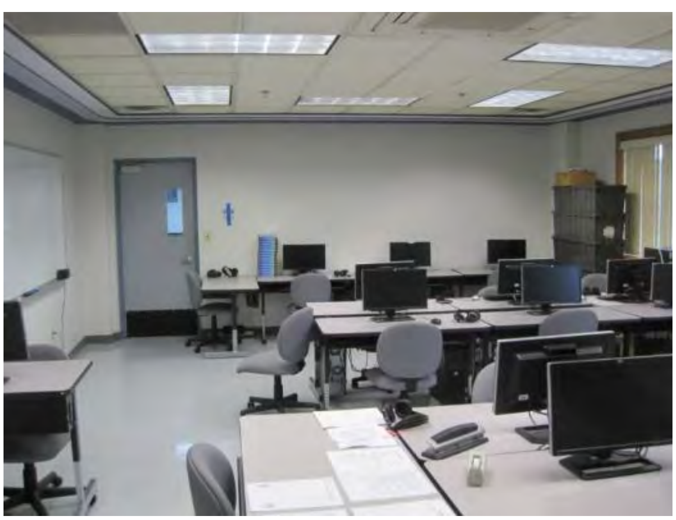



LINCOLN
ELECTRIC



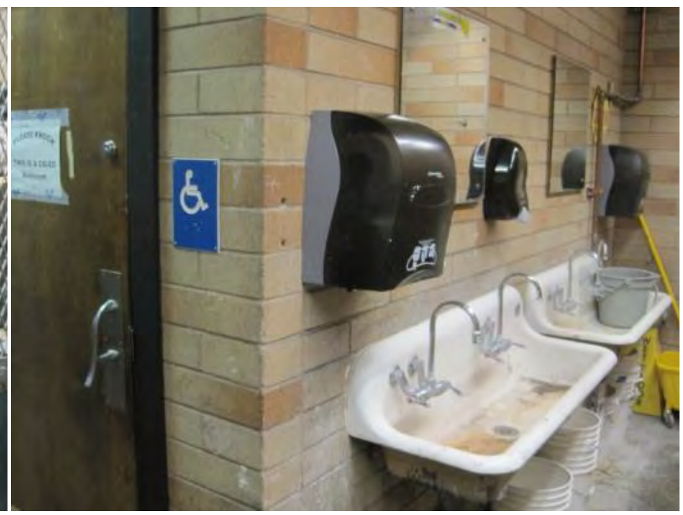
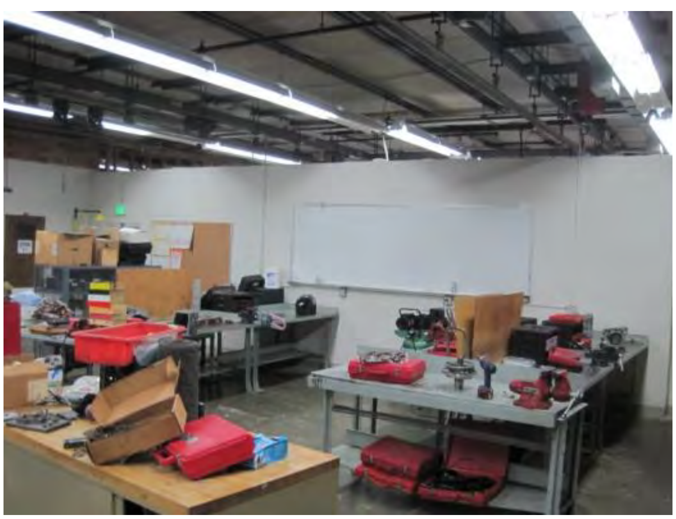




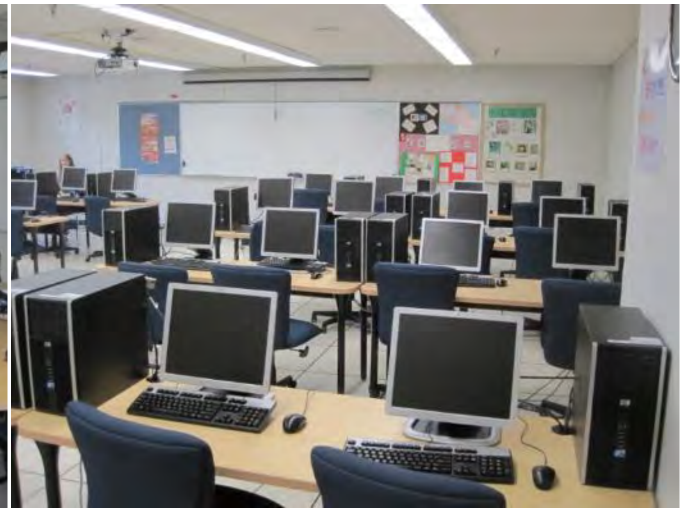


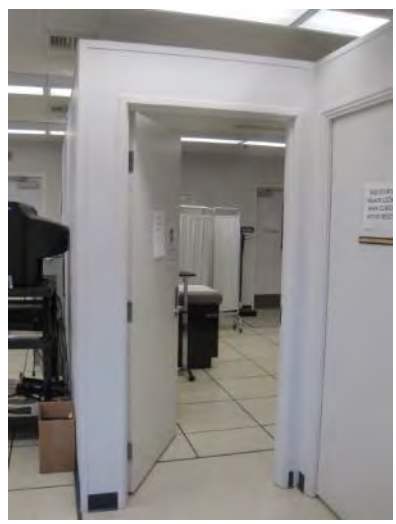

NOTICE
ELECTRICAL ROOM

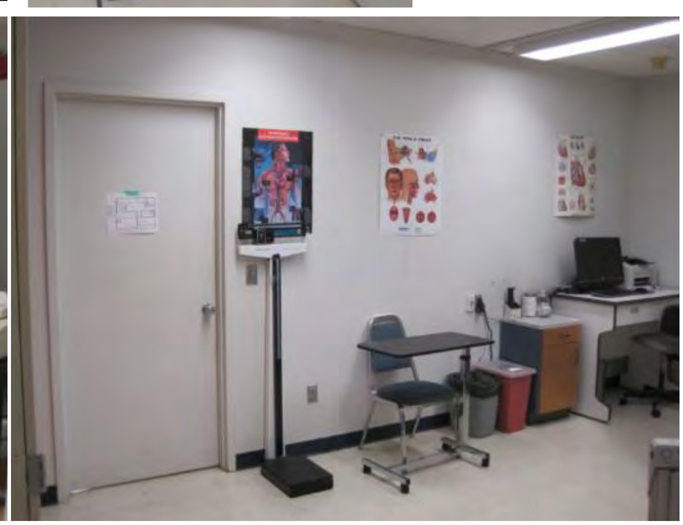


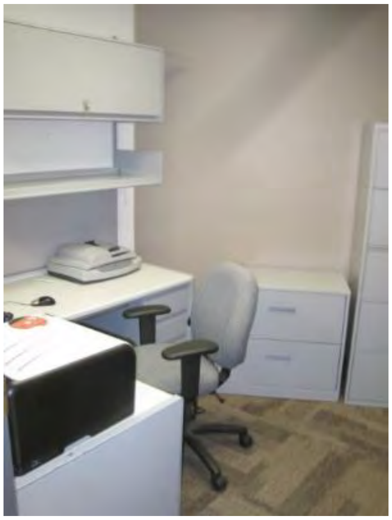
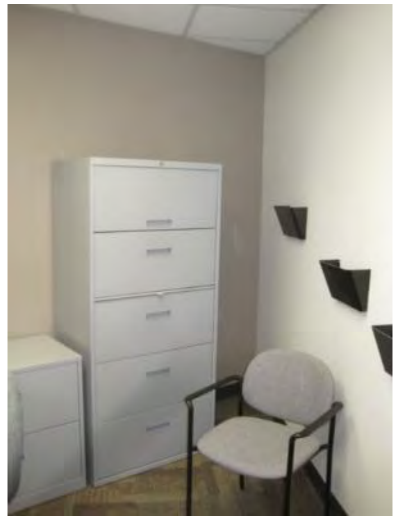




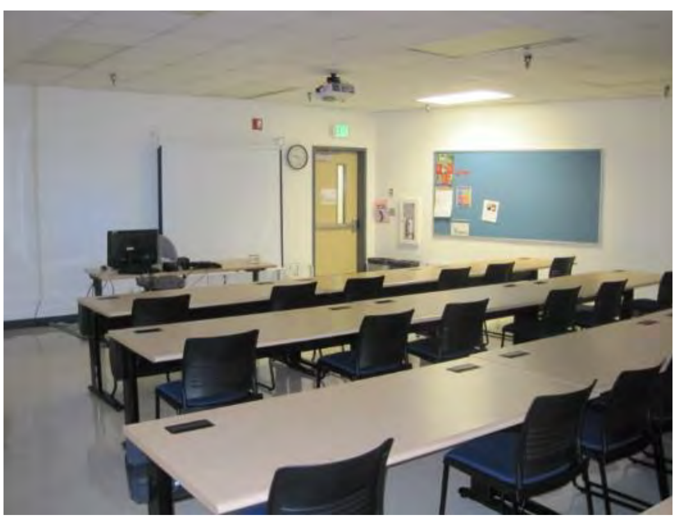
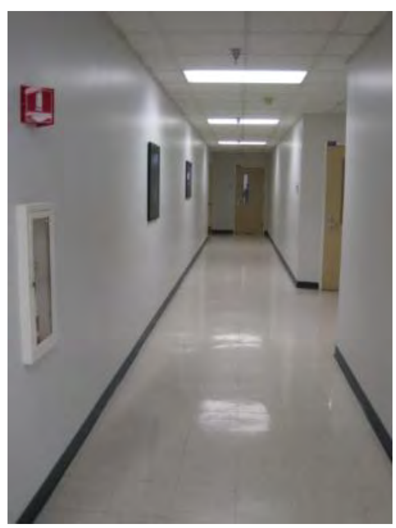
Existing Photos - Building B

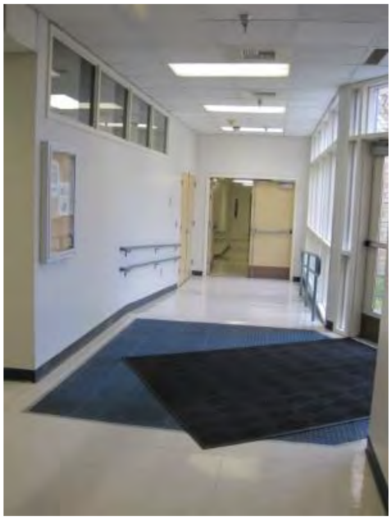



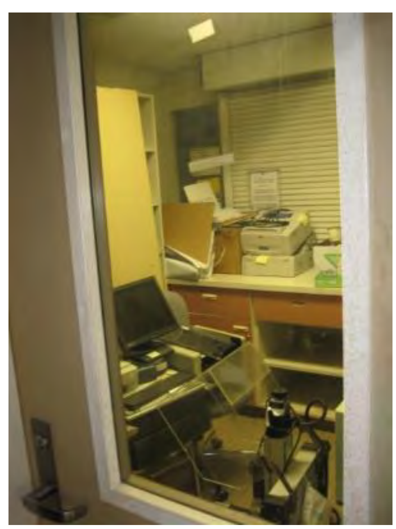


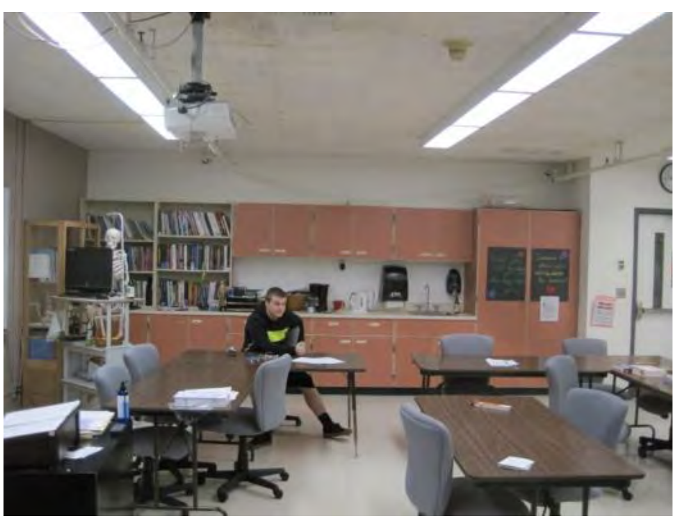



Rubbermaid





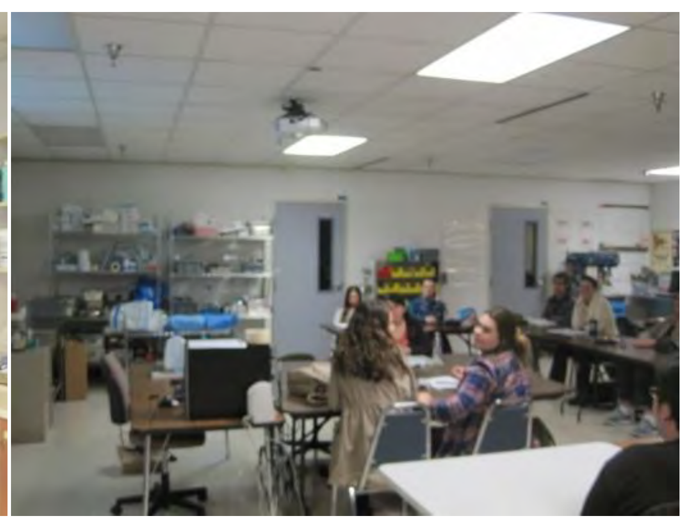


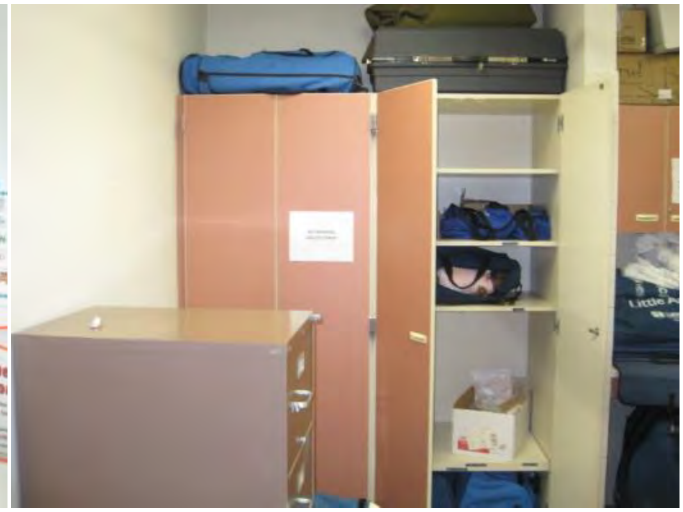


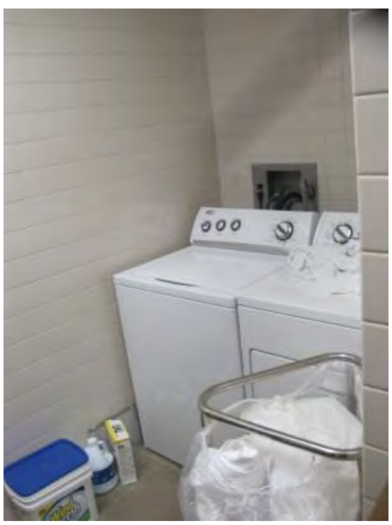










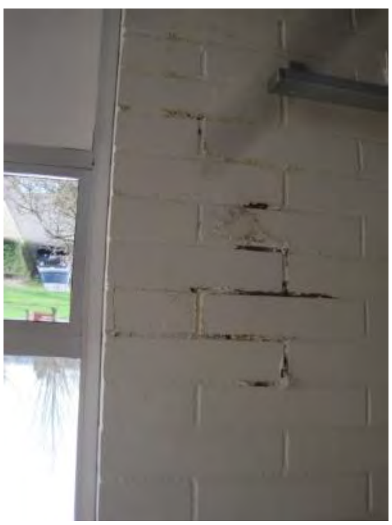


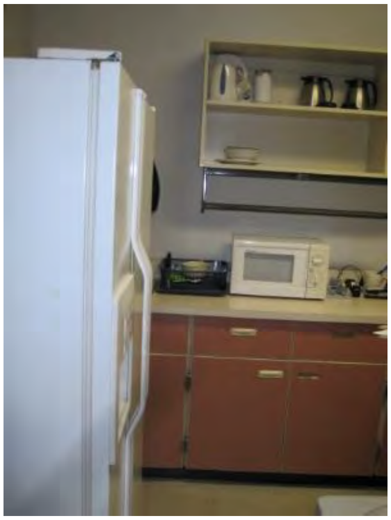




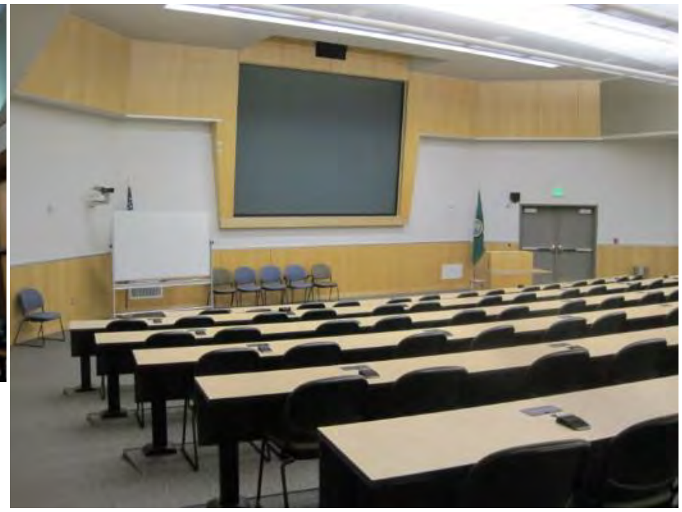


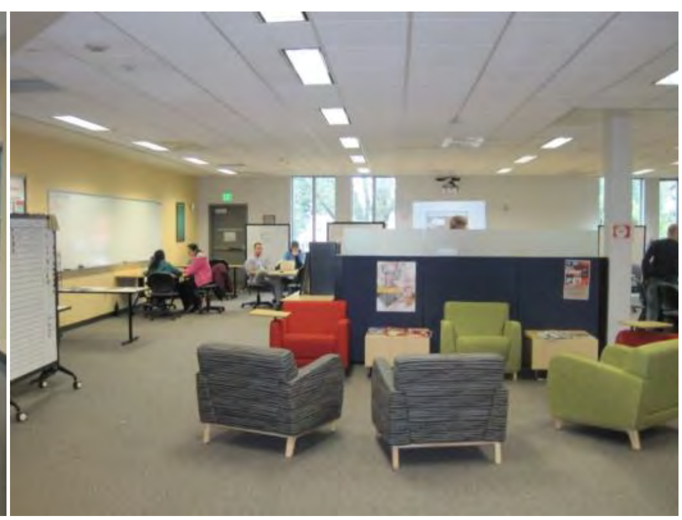
SOAP
WATER
SOAP
WATER





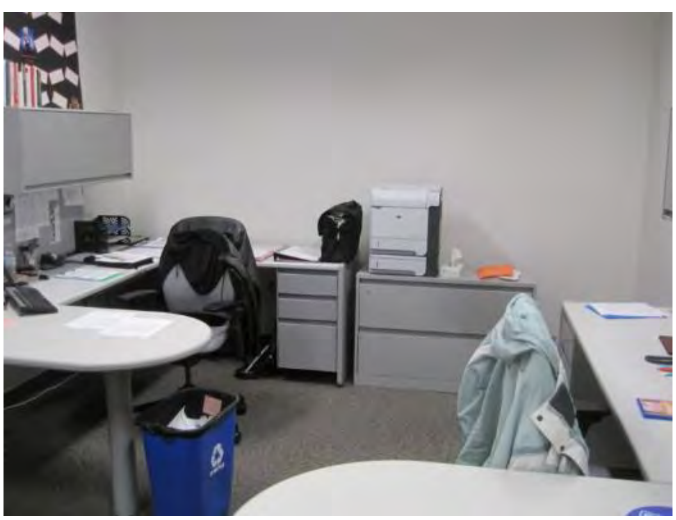
Existing Photos - Building C


RTC
Career Connections


OPEN
CHIPS
STUDENT COMPUTER REPAIR



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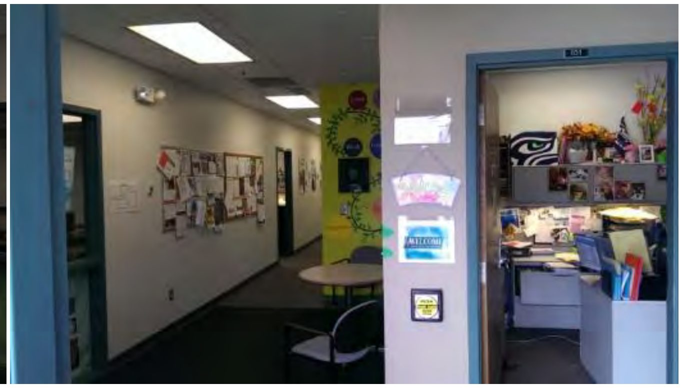
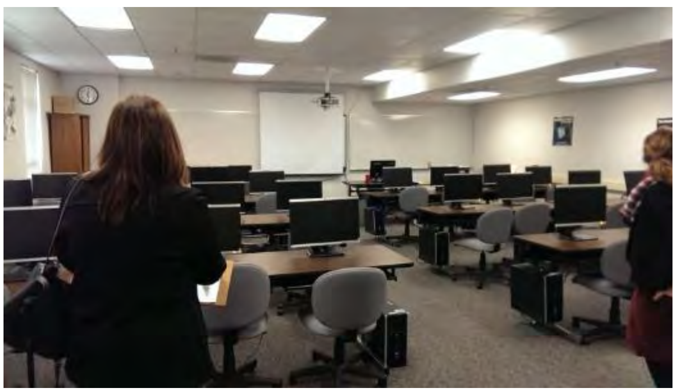
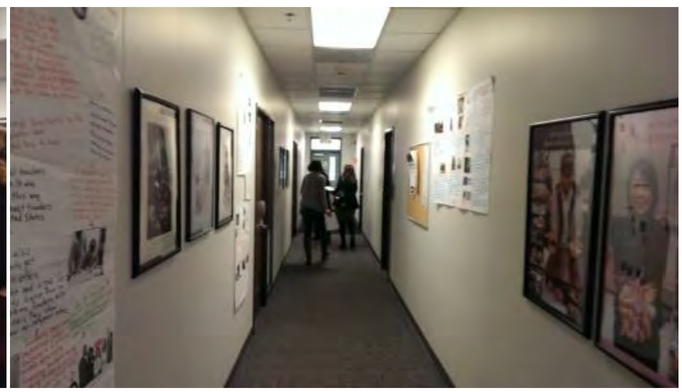
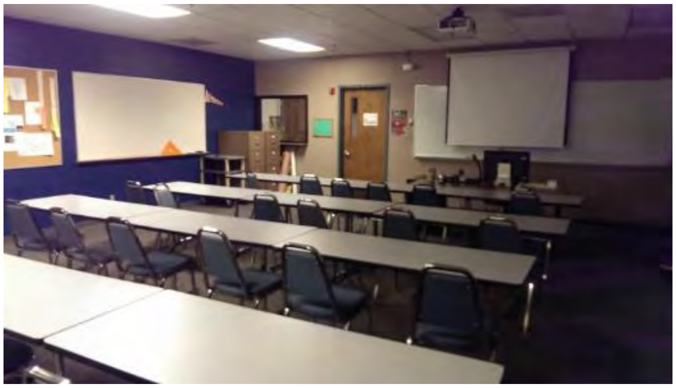
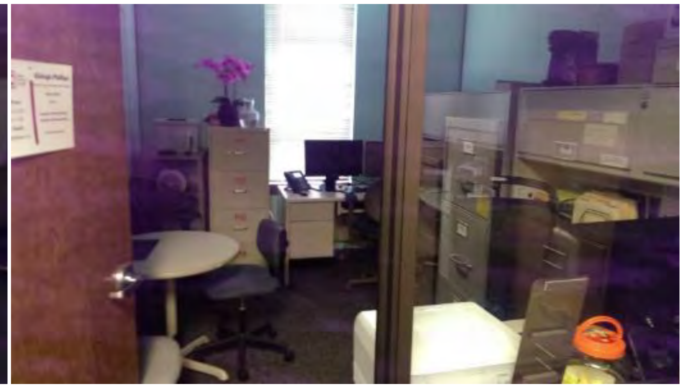
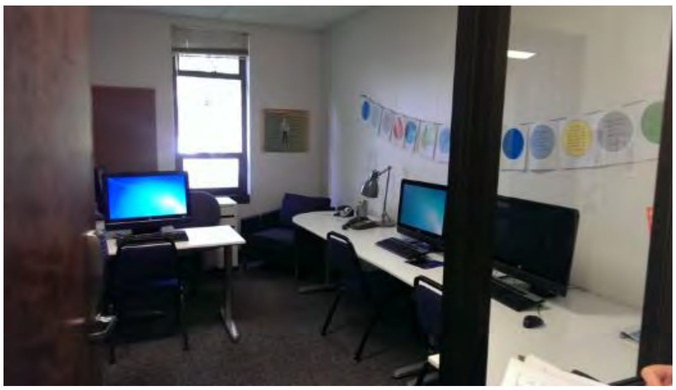
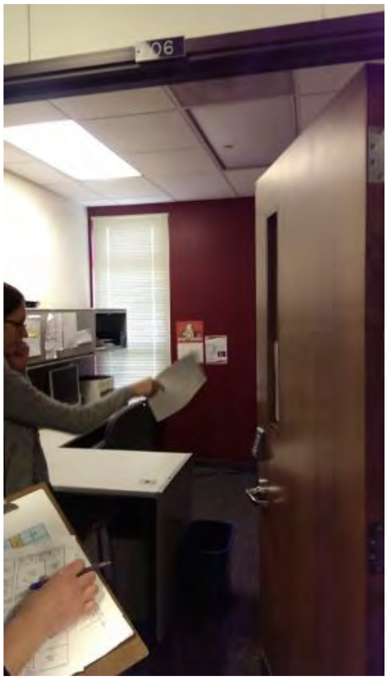
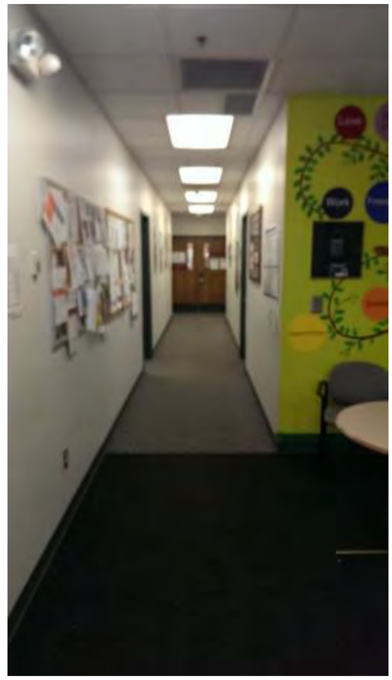
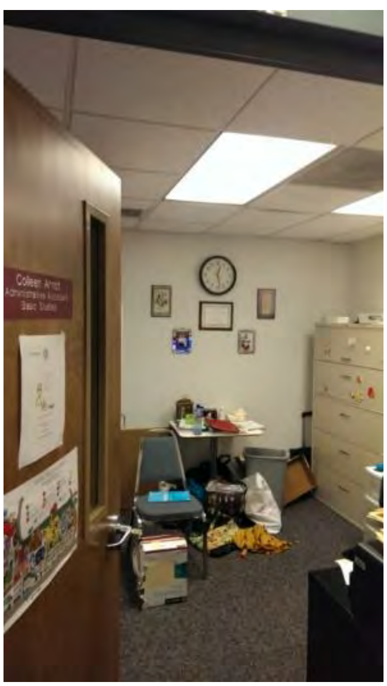
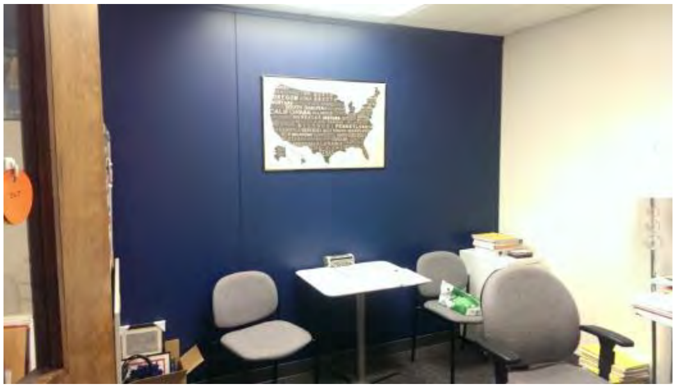











FIRE LANE


D

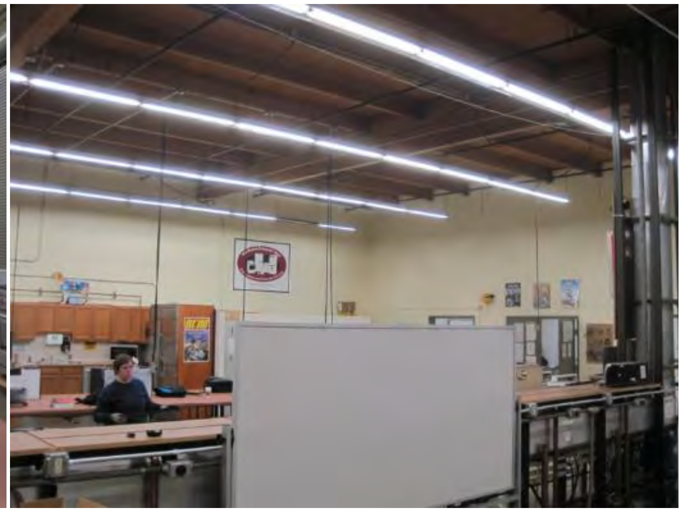

D

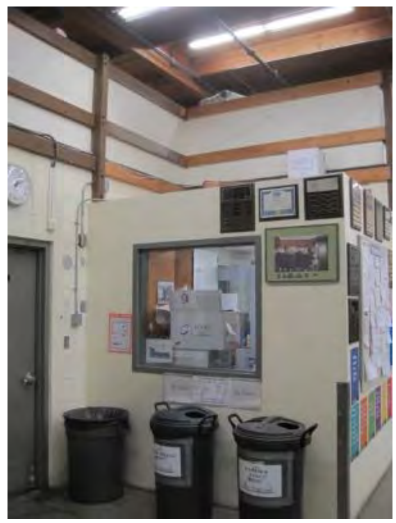

D

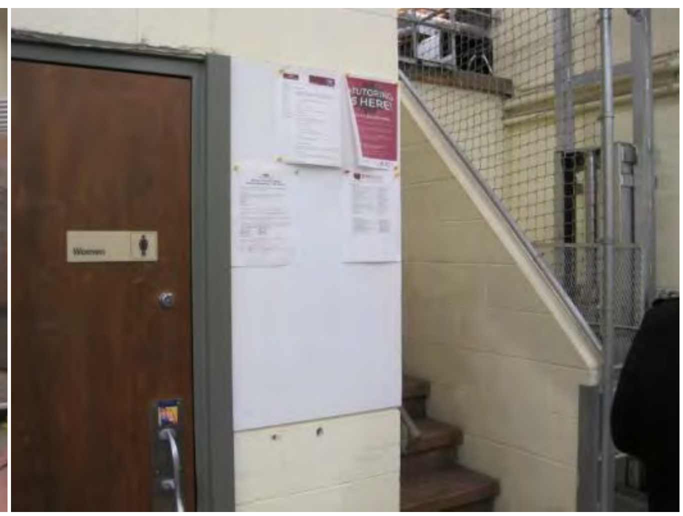

WELCOME

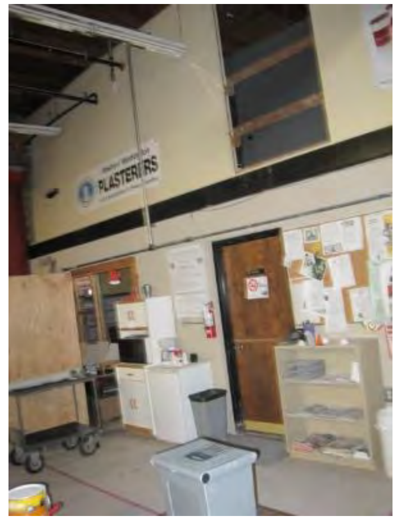

READ

Existing Photos - Building E



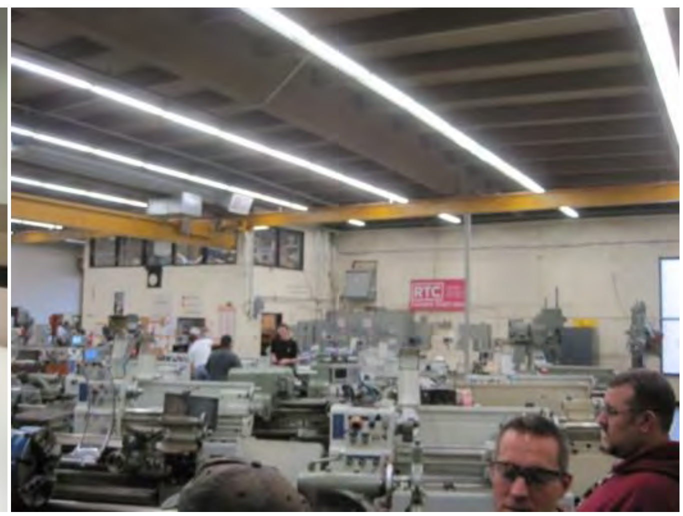


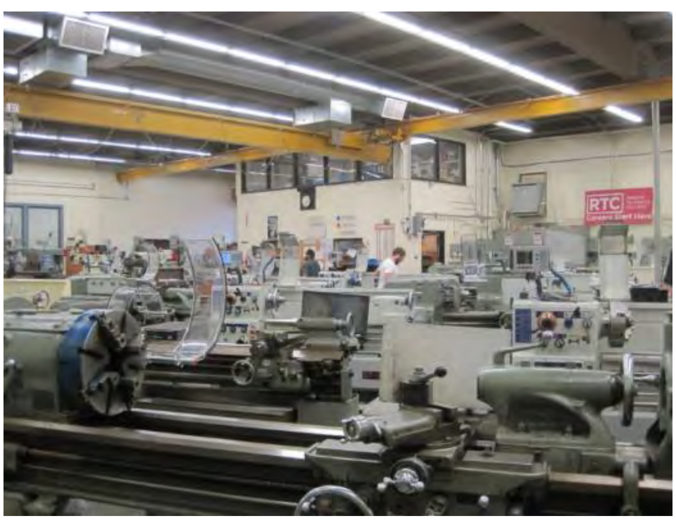

PLASTERERS

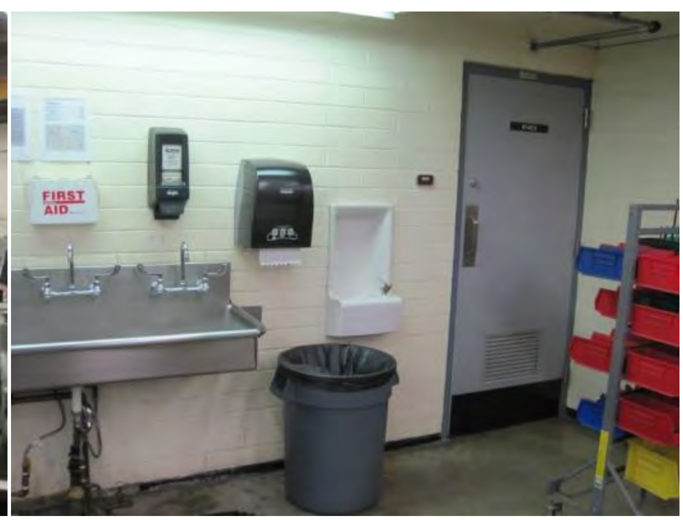

GRAINGER

Existing Photos - Building F



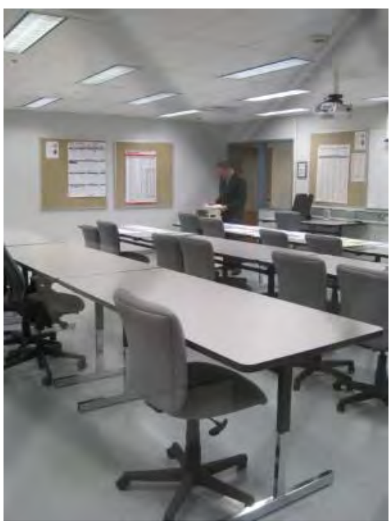





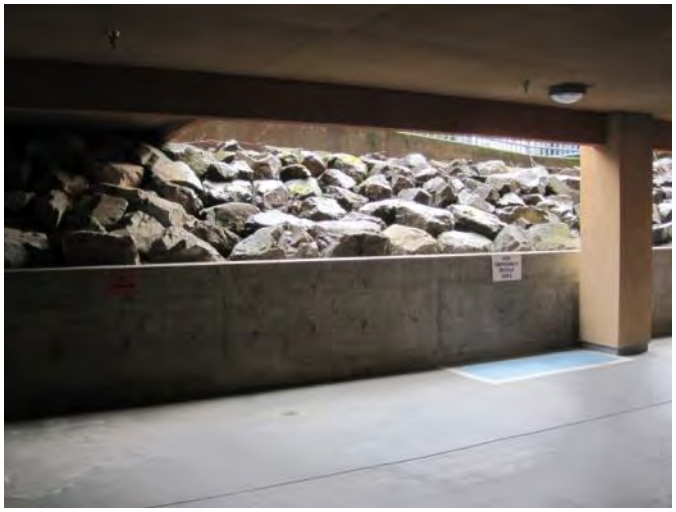
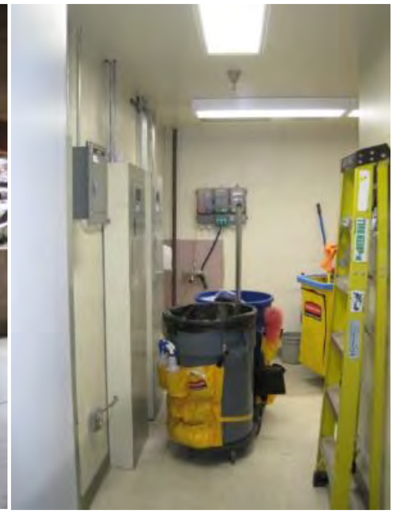
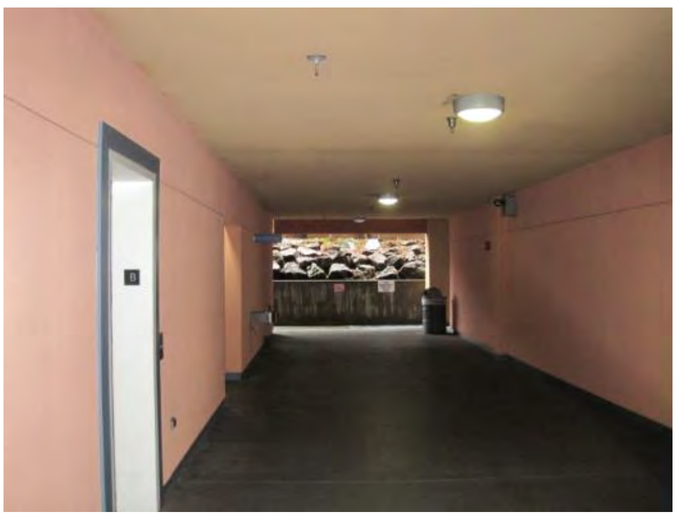


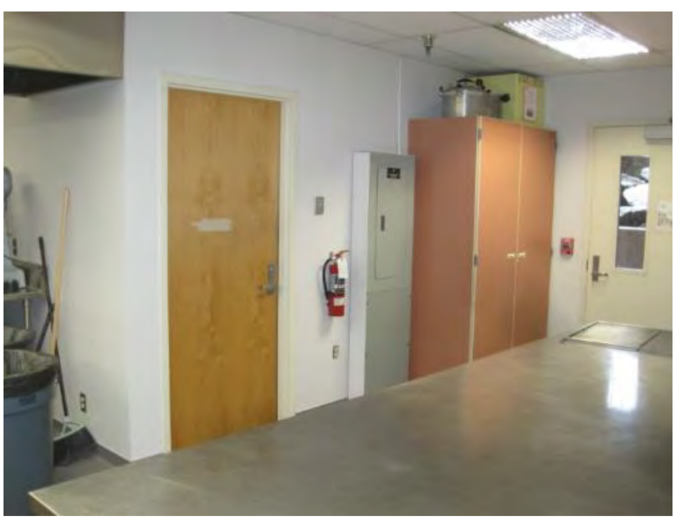
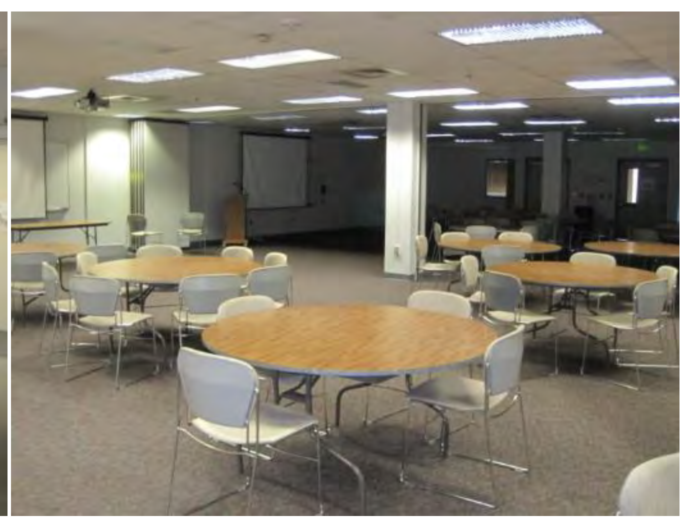

Master

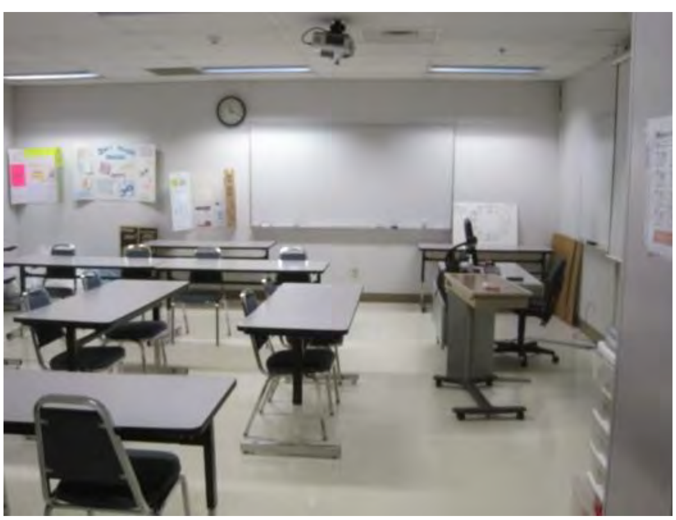

Master

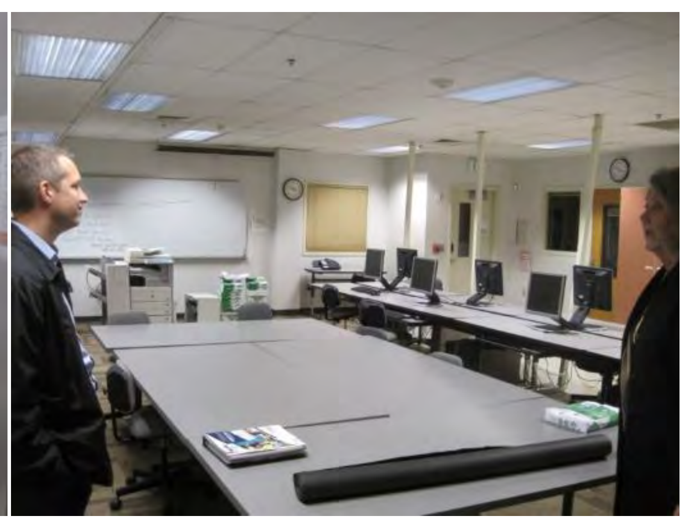


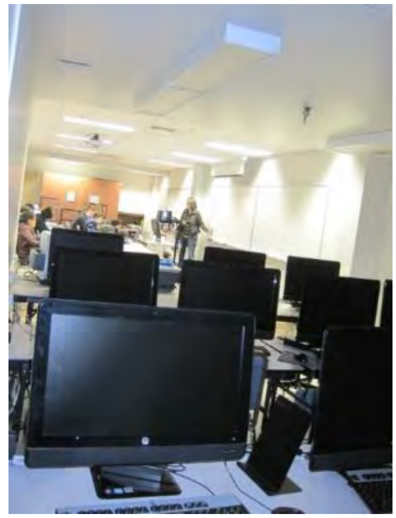
Existing Photos - Building H

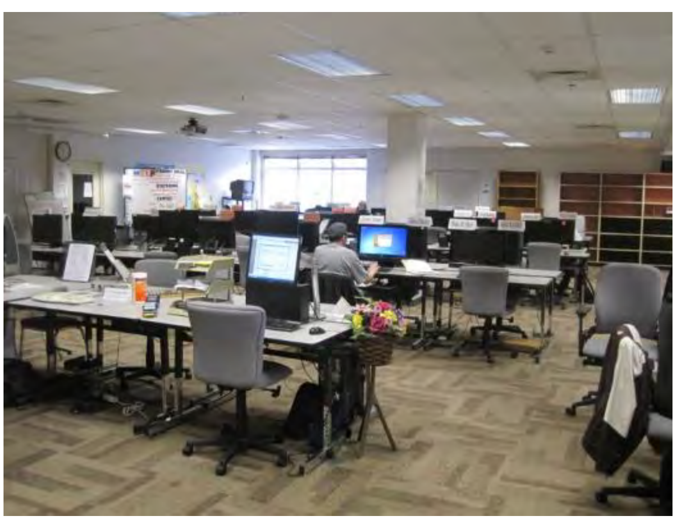
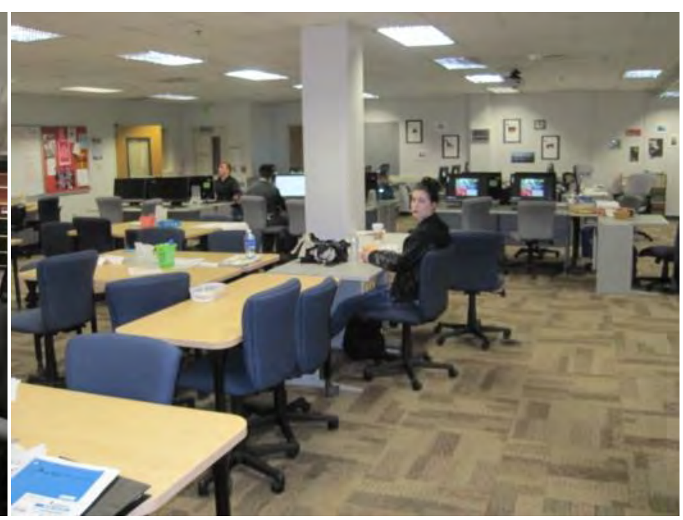




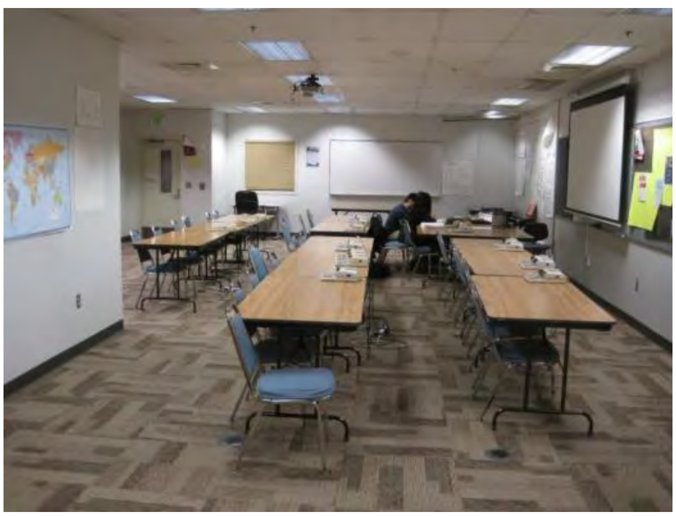
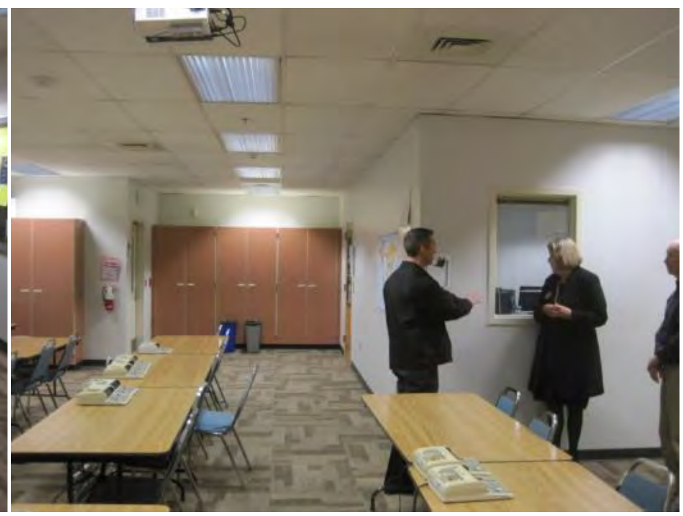
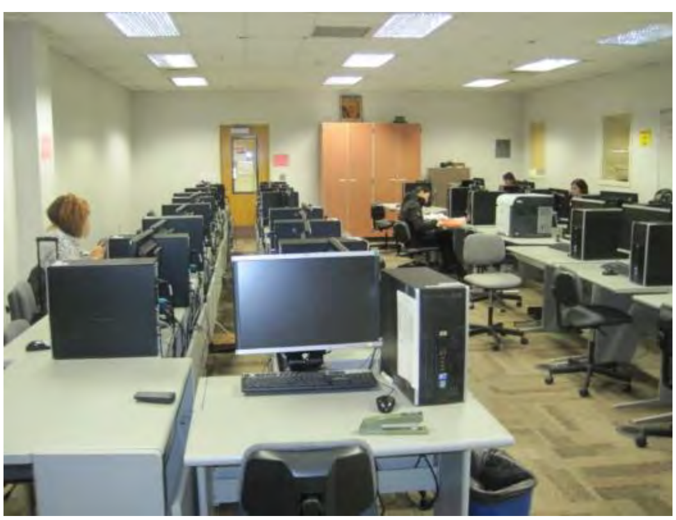








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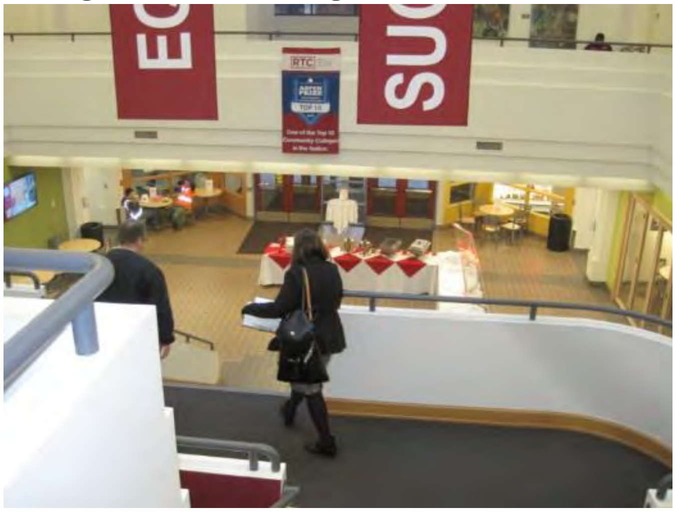

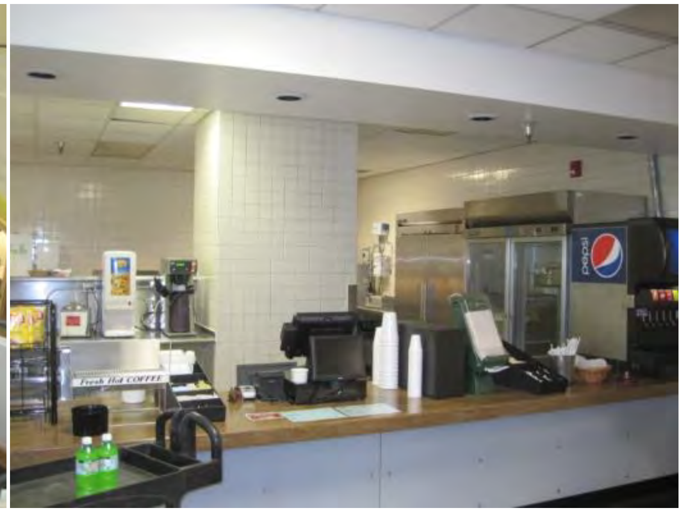

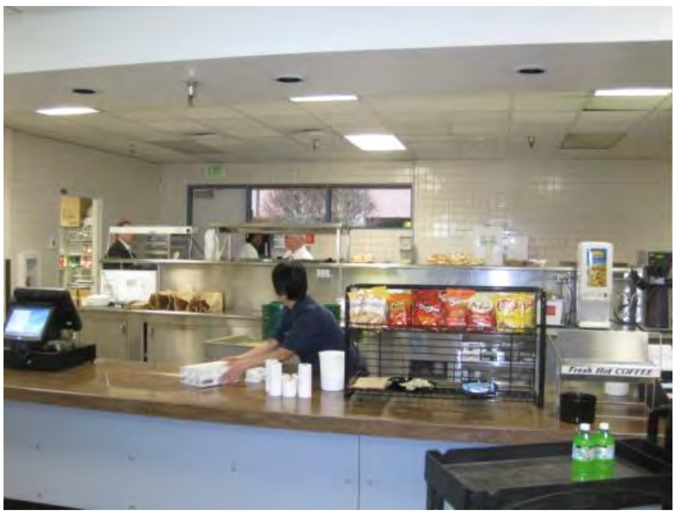


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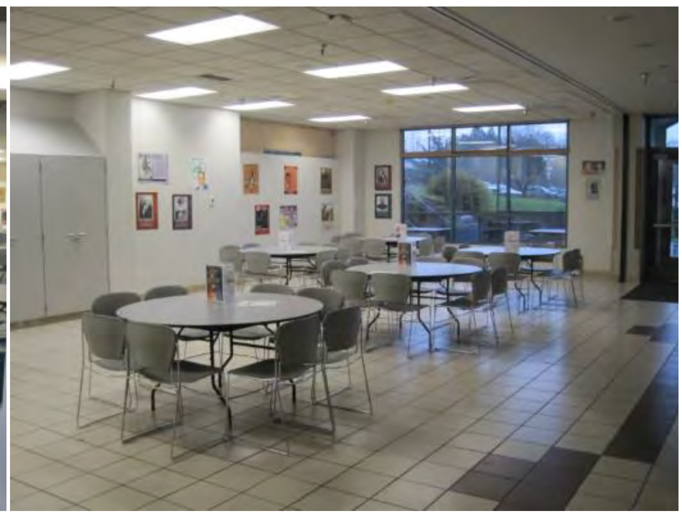

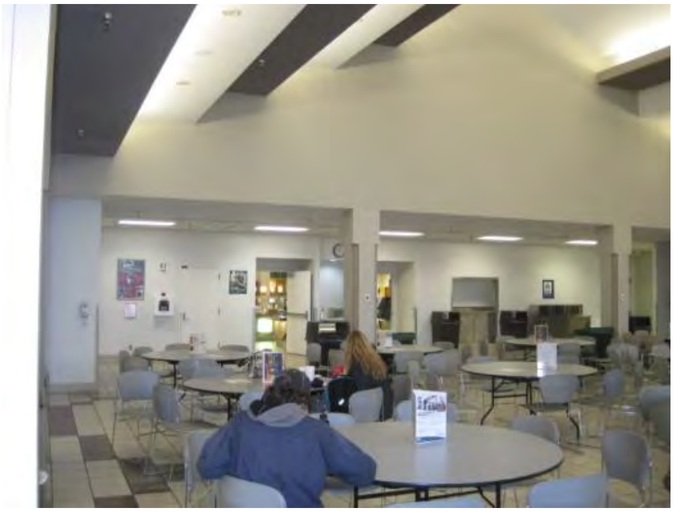
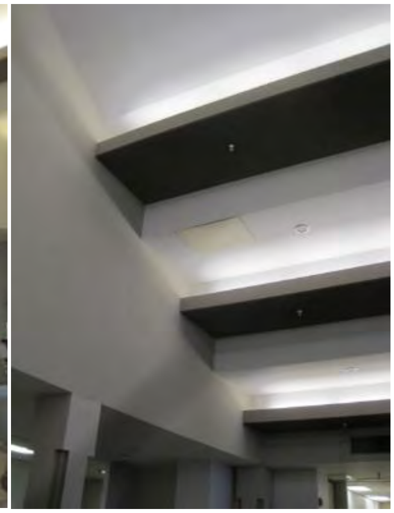



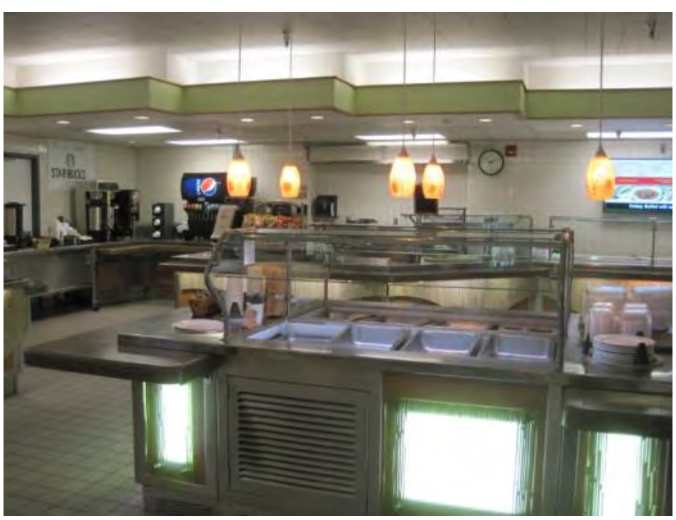


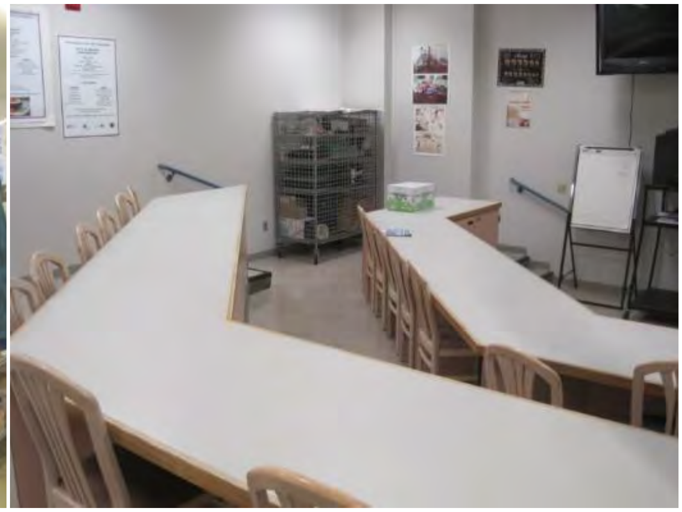
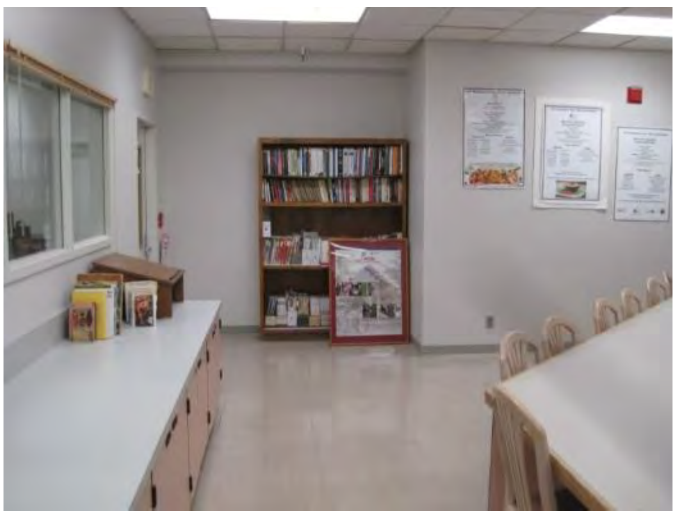
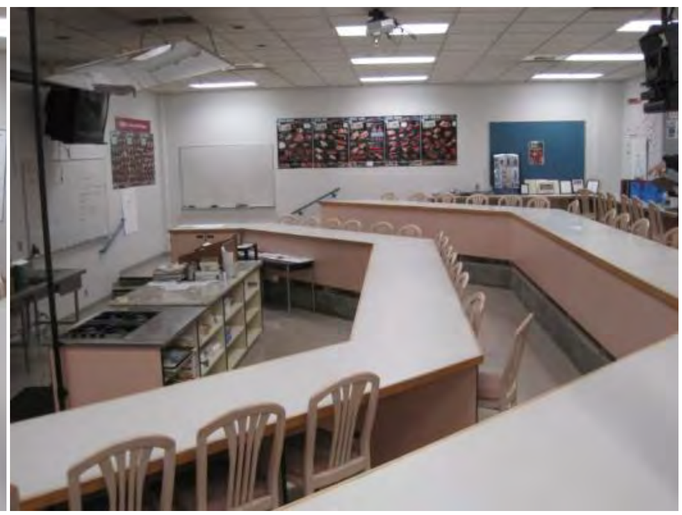

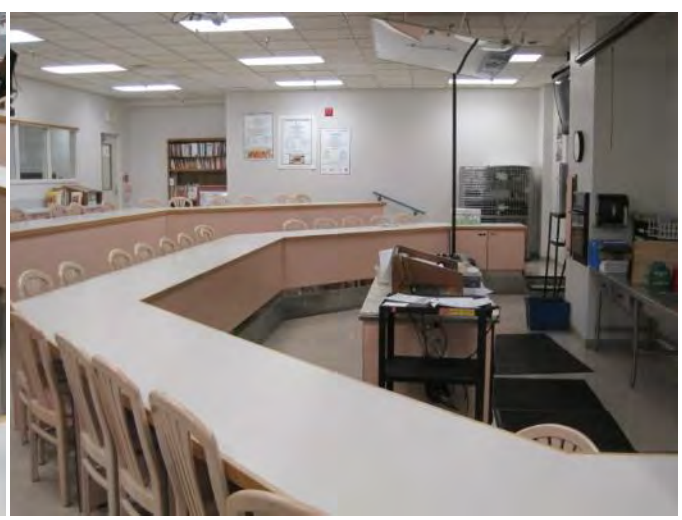

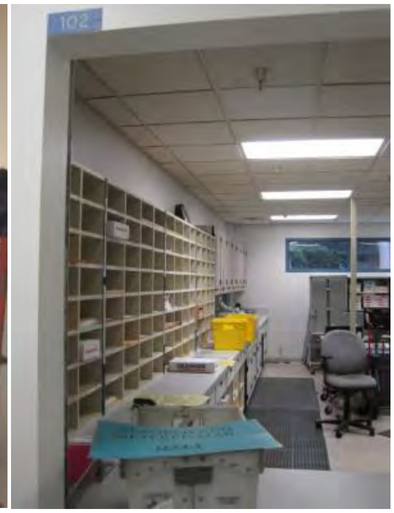
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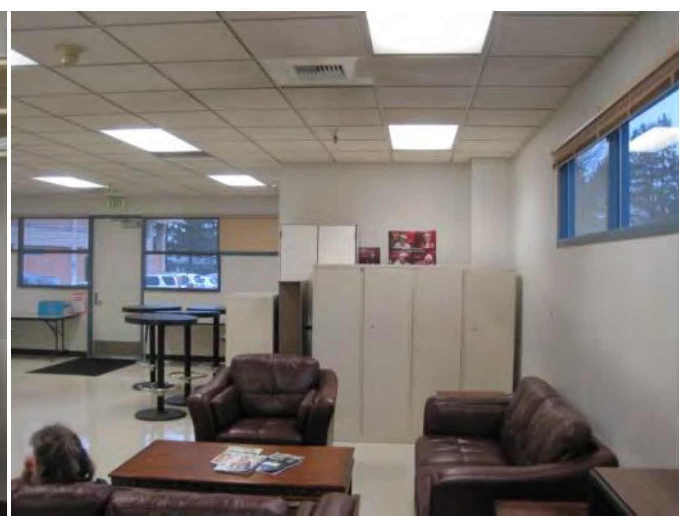

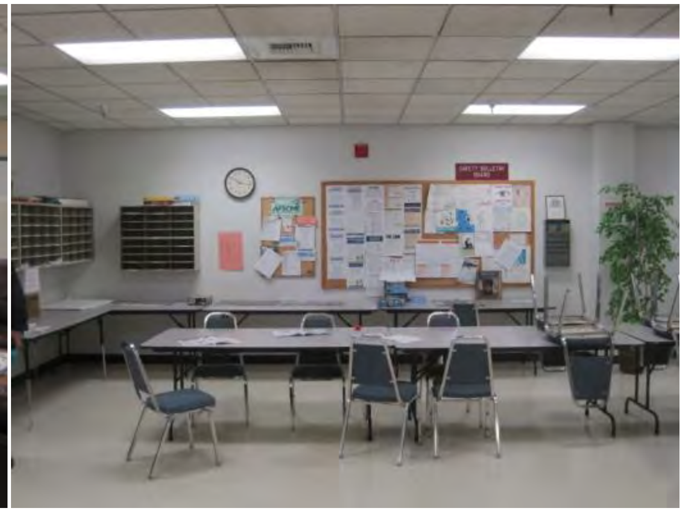

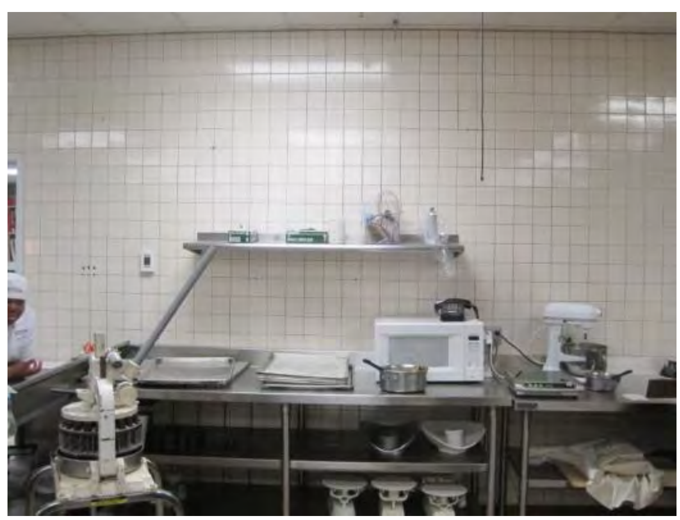


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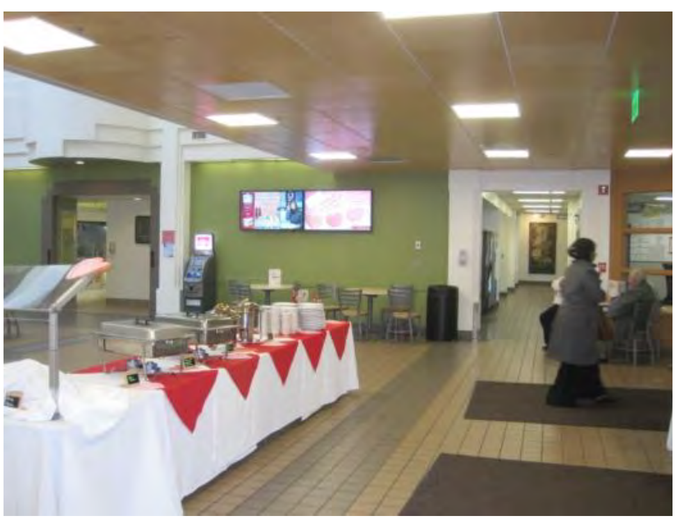


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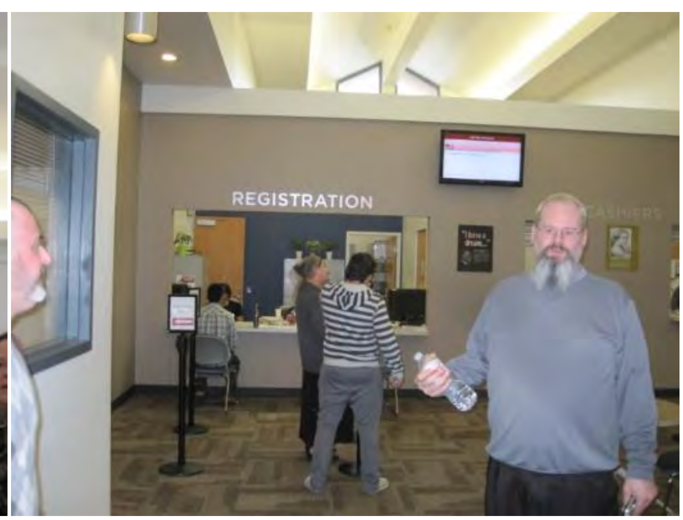
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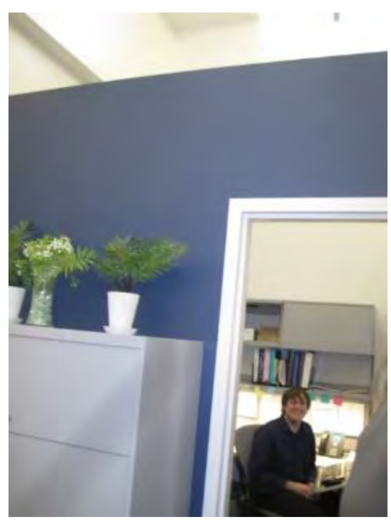

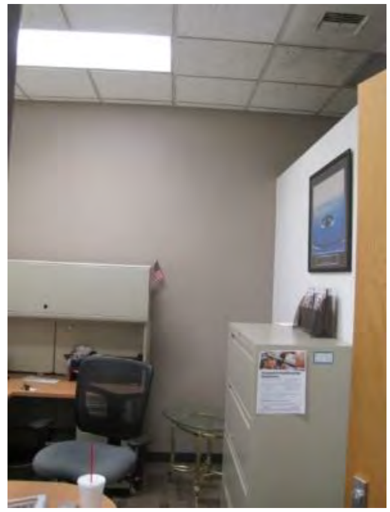

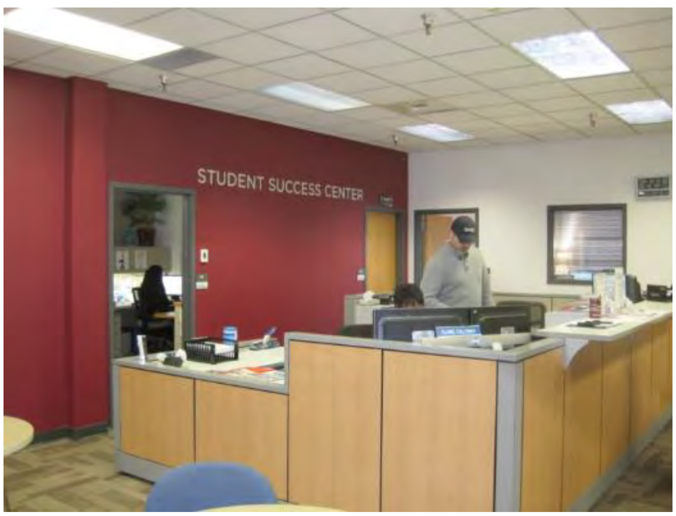
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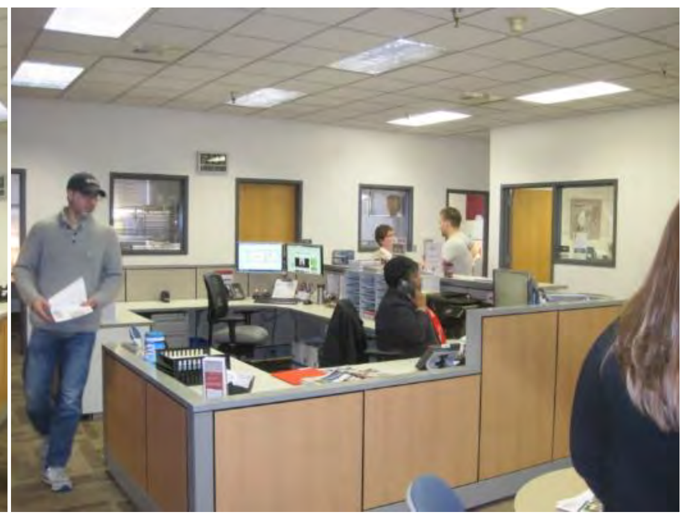

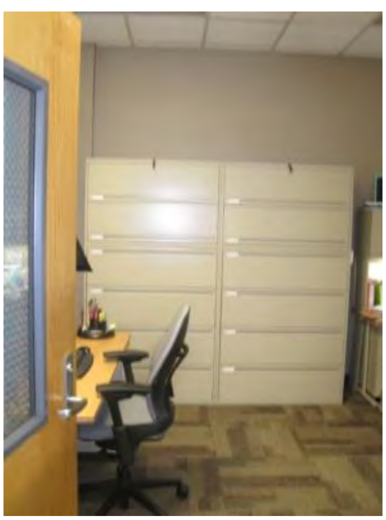

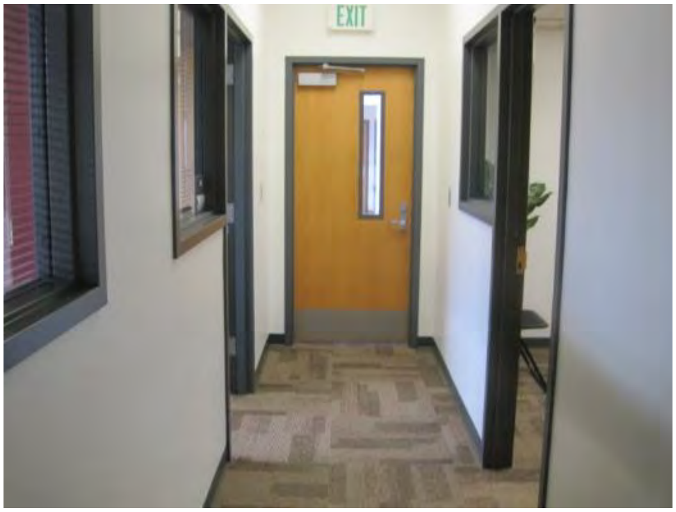
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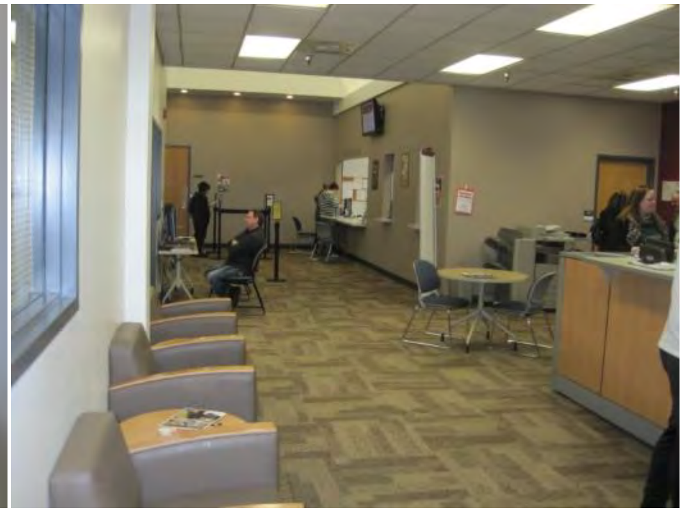


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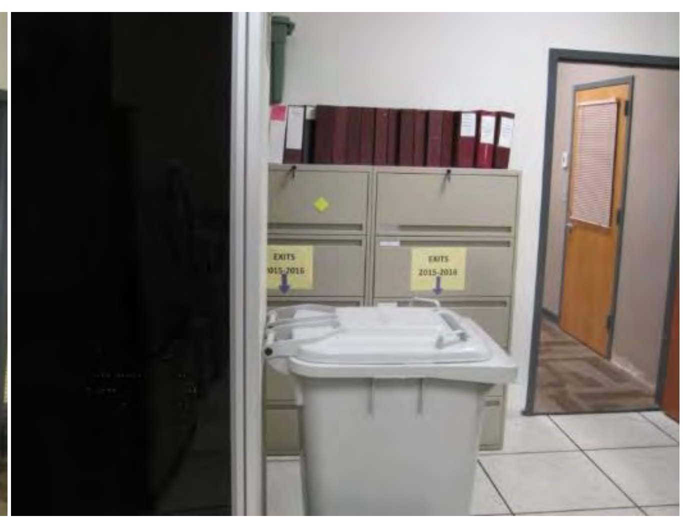

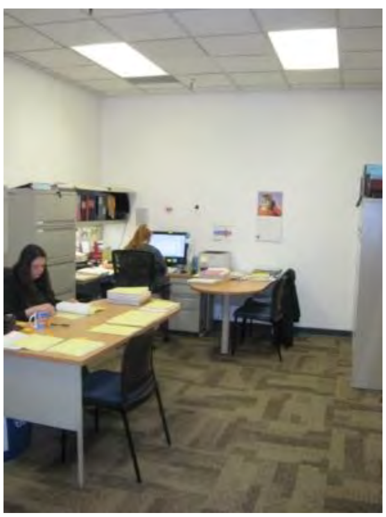

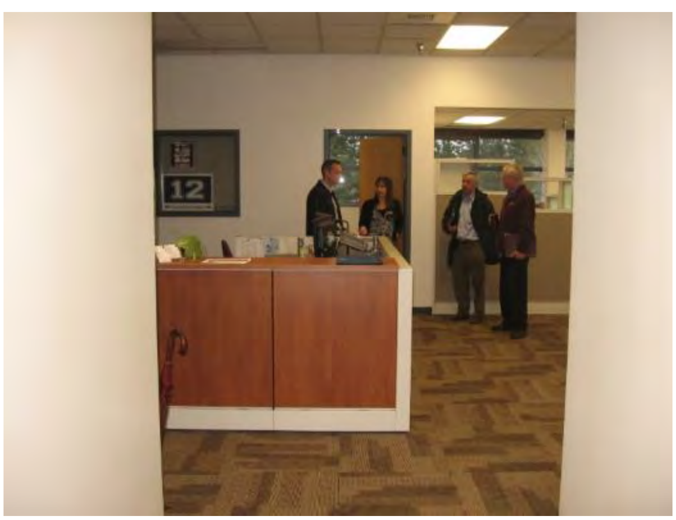
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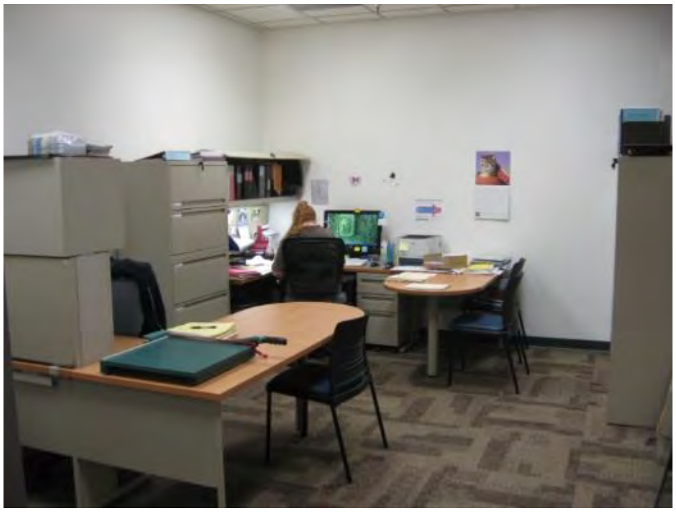

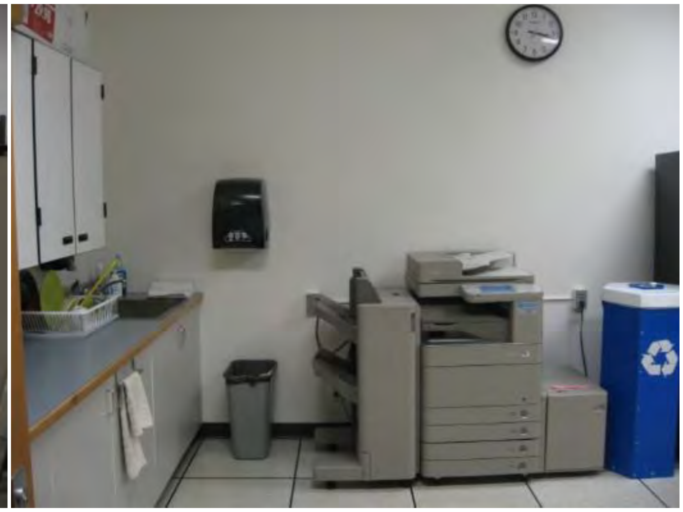


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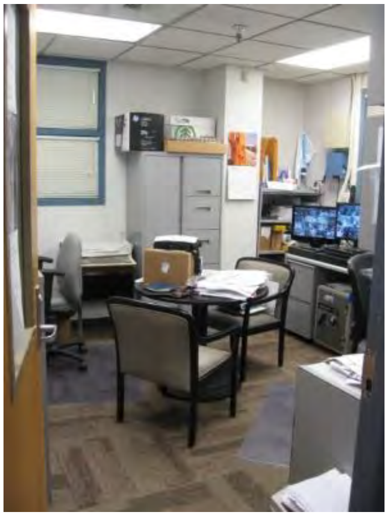
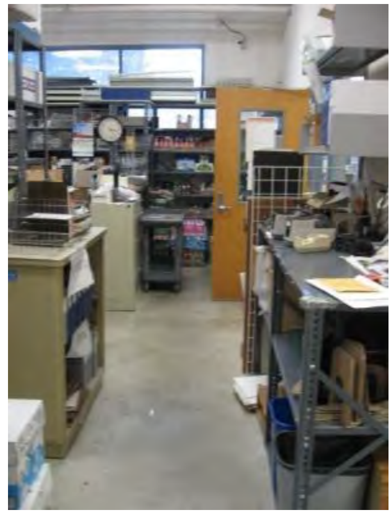
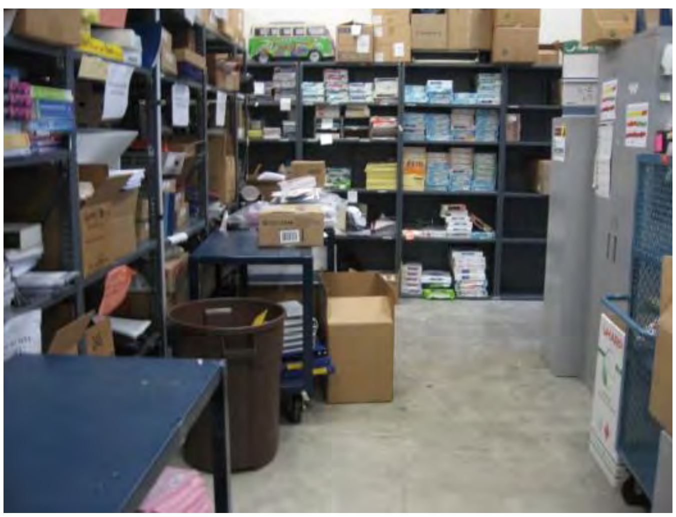
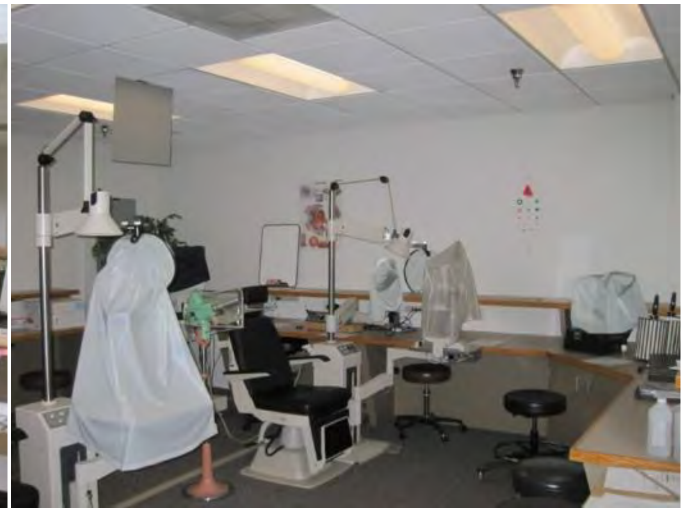
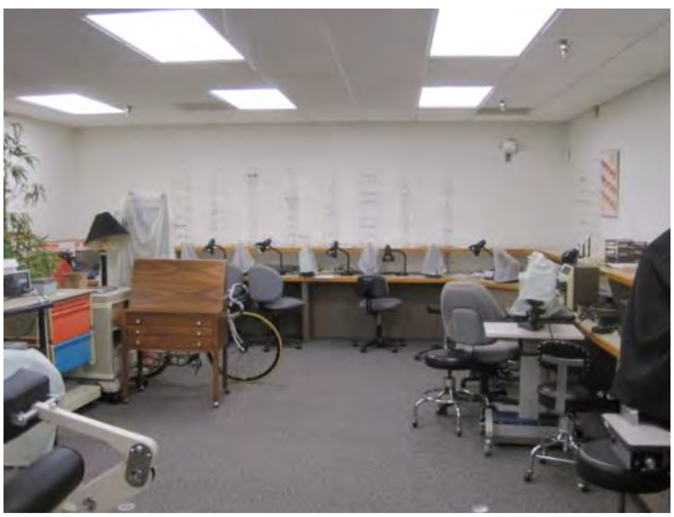
BOOKSTORE

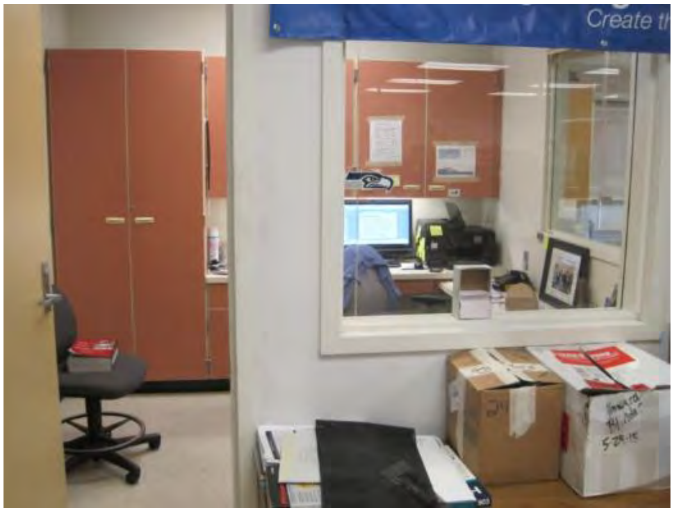






Existing Photos - Building J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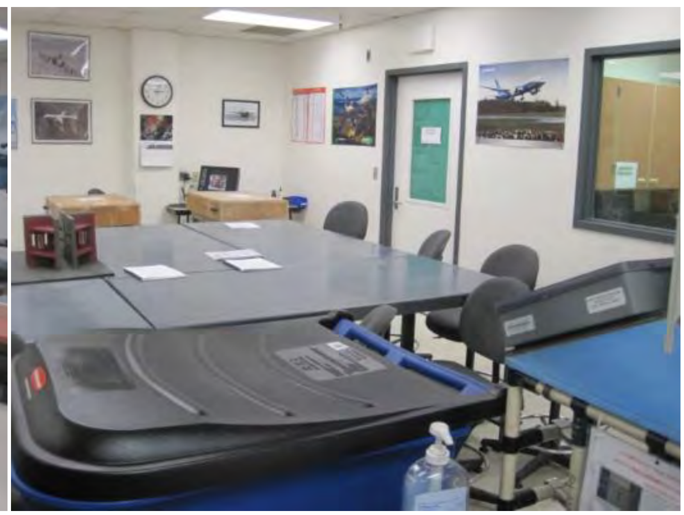
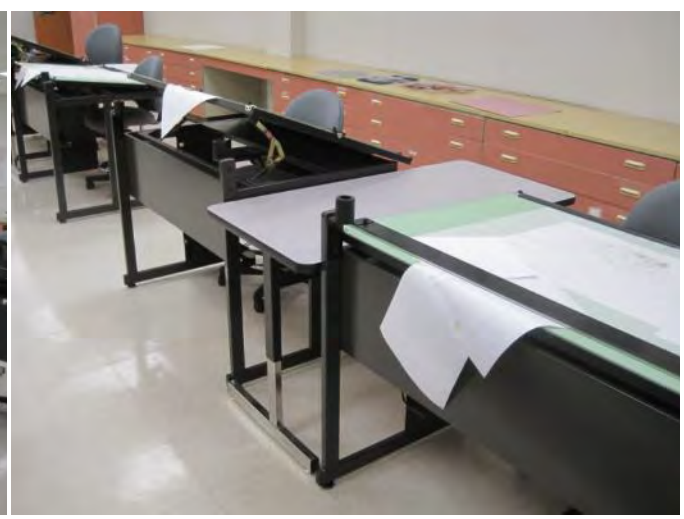
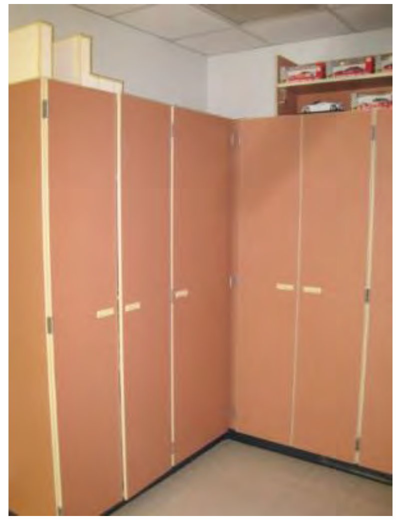
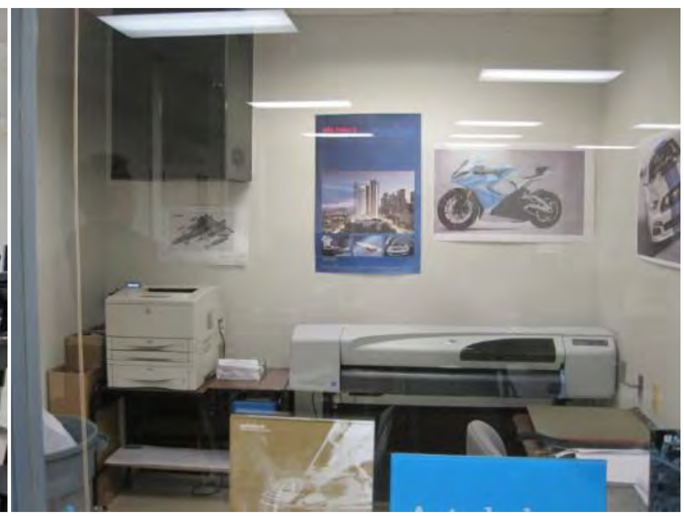
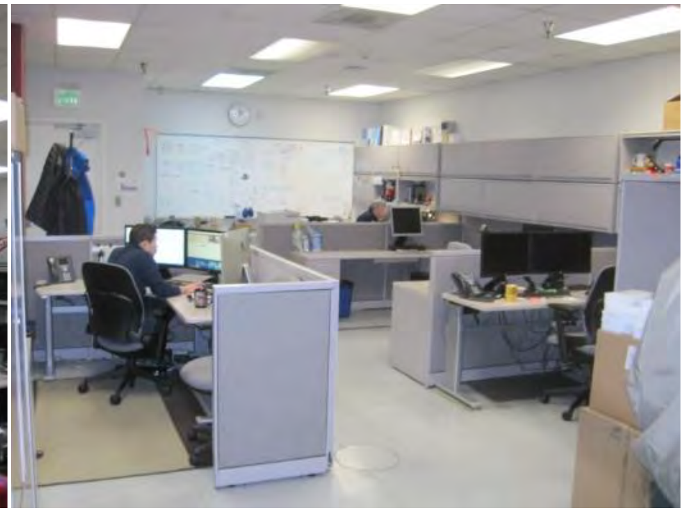
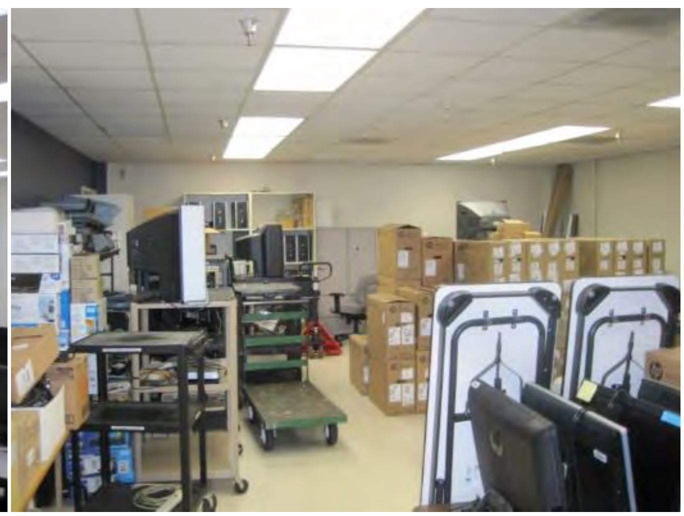
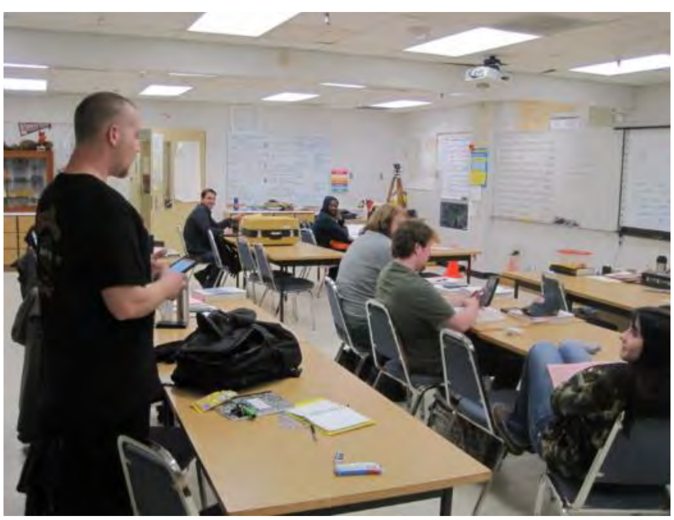


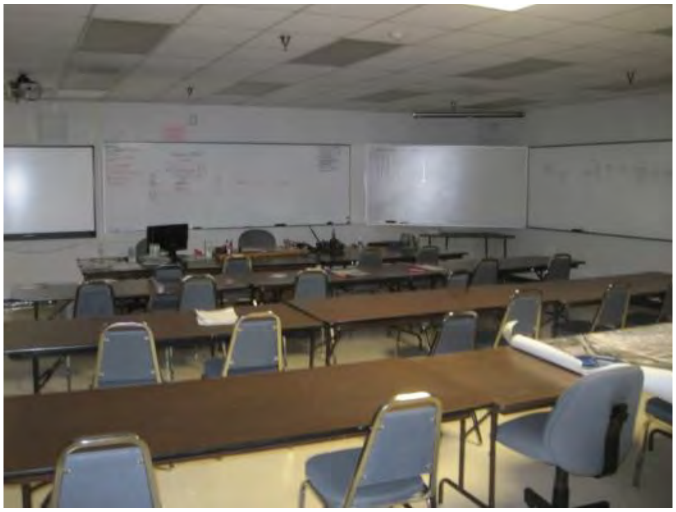


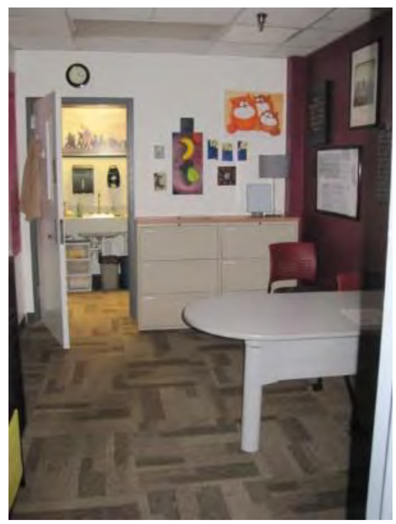



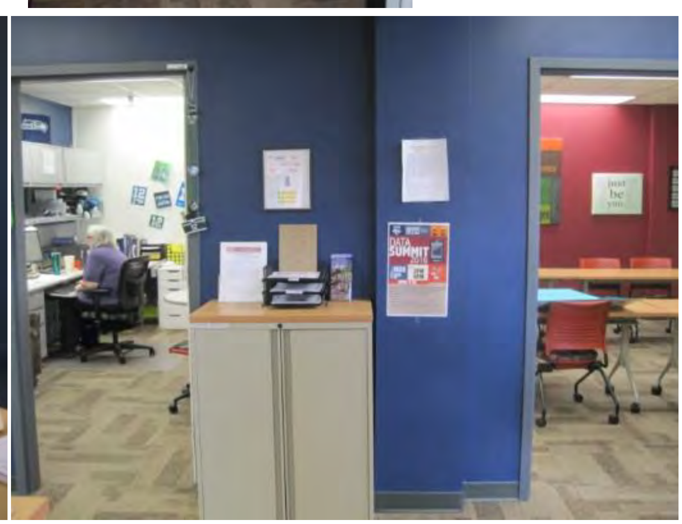


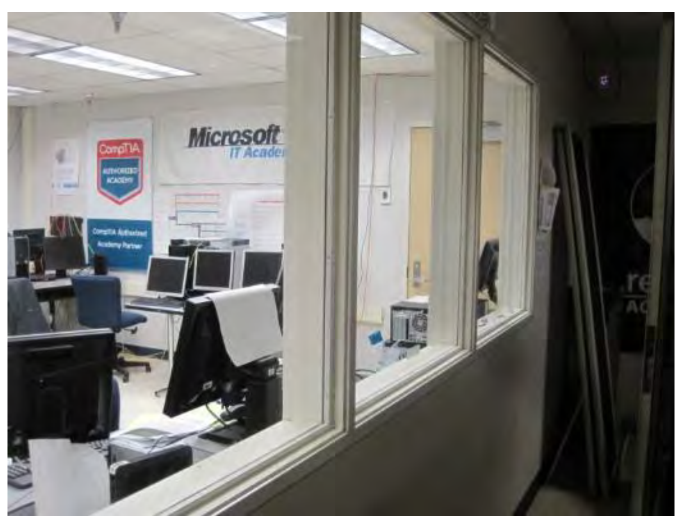






DATA SUMMIT


just
be
you.
Inspired
Grateful
Empowered
Open


TESTING SERVICES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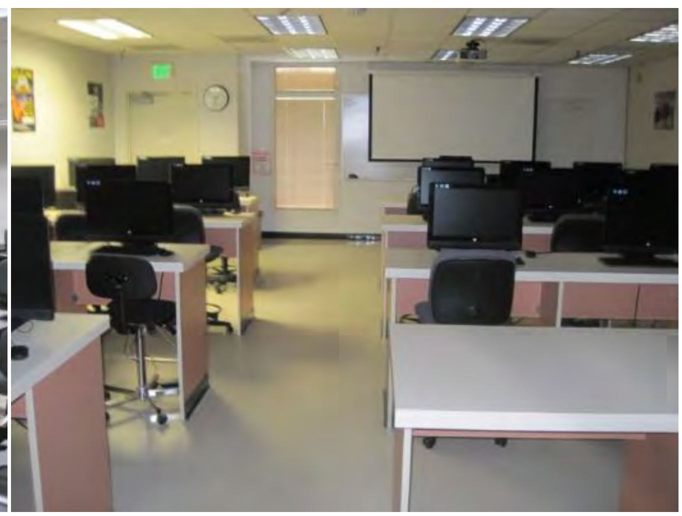
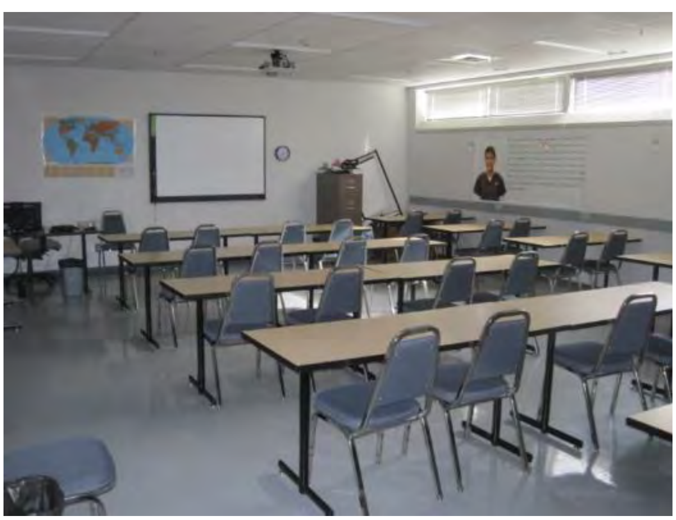



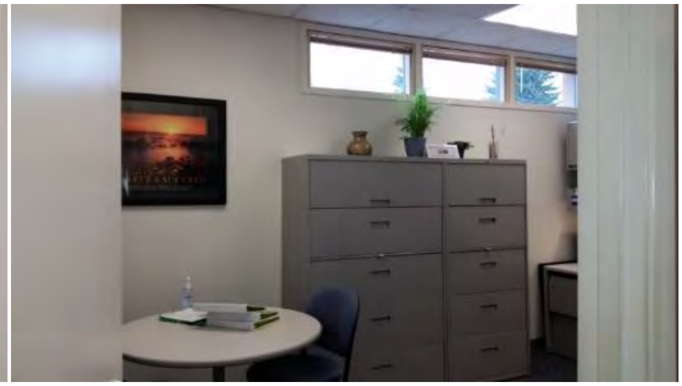

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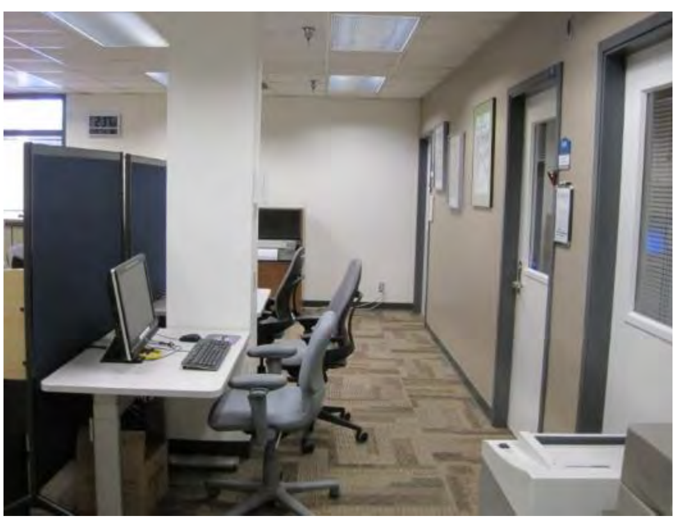
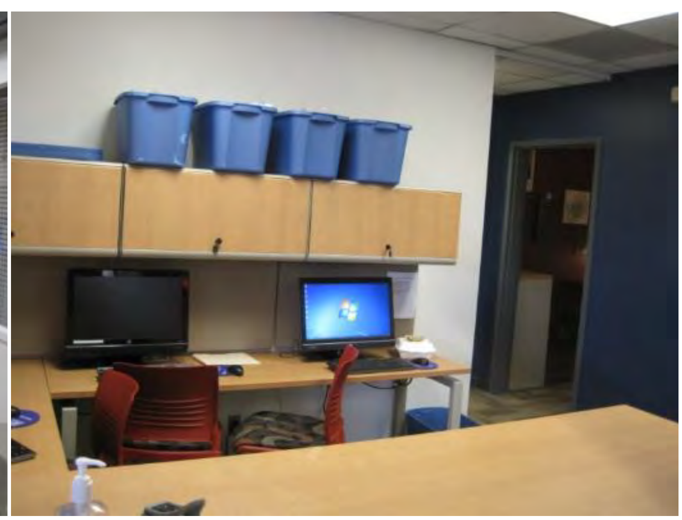
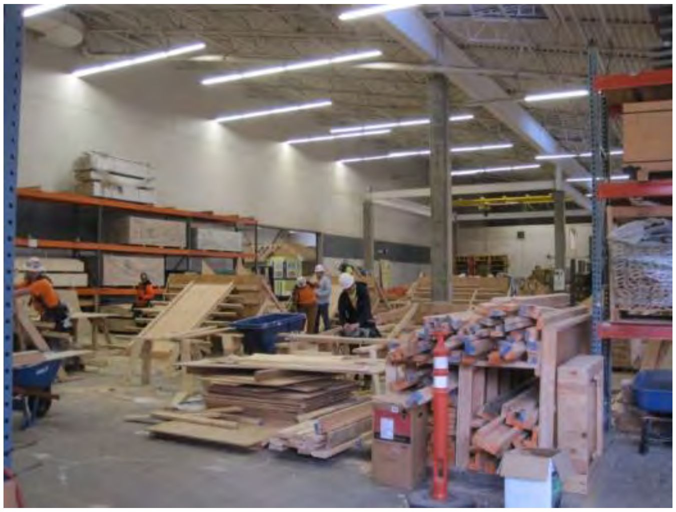
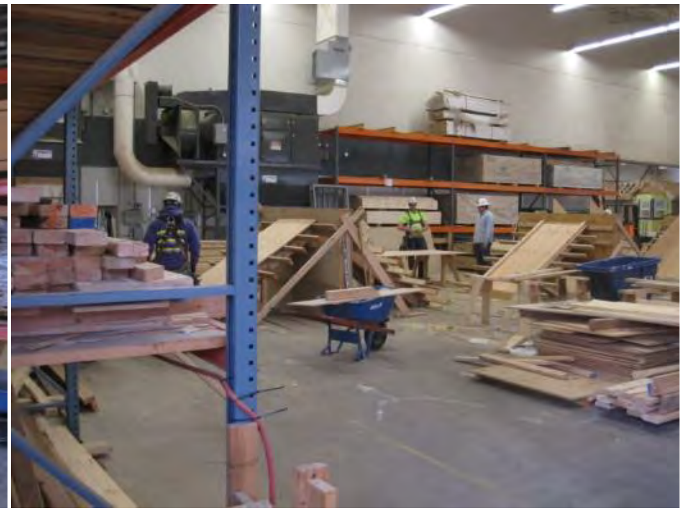
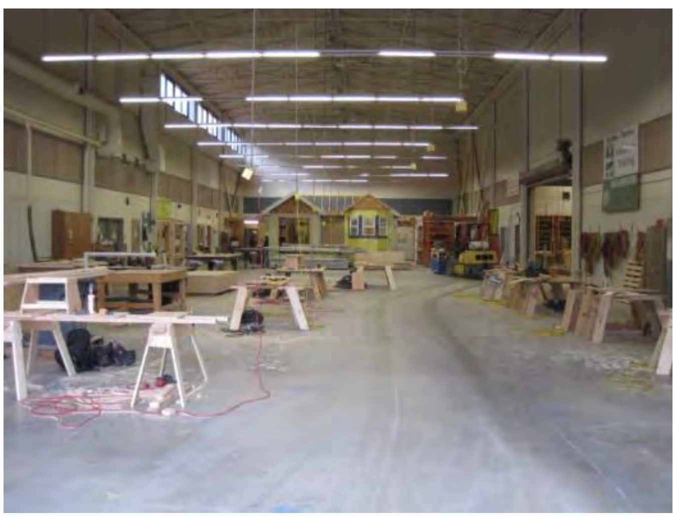
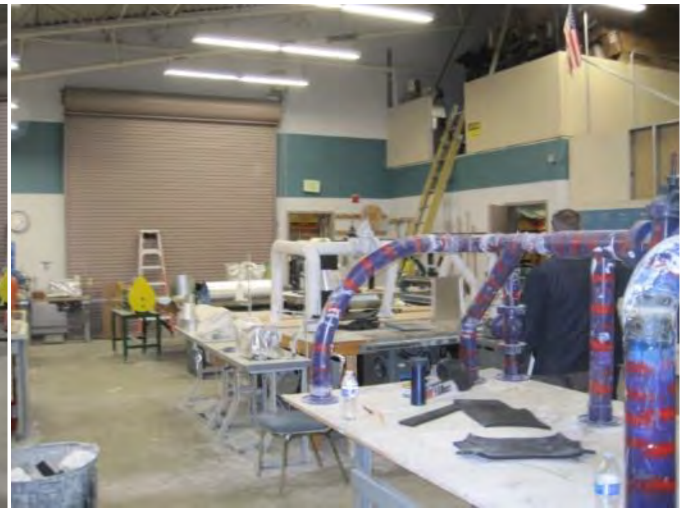
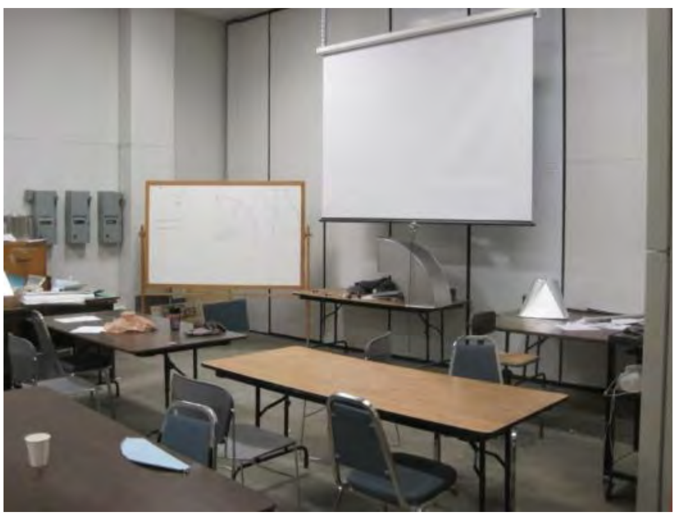



Existing Photos - Building L



Campus Civil Summary

The Renton Technical College Campus is located in the Highlands neighborhood of the City of Renton. It is located on a bluff above the main part of downtown, east of the 405 freeway. The campus is approximately 32-acres bounded by City streets; Monroe Ave to the east, Kirkland Ave to the west, NE 7th Street on the north and NE 4th Street to the south. Most of the adjacent neighborhood is residential, with some commercial and retail establishments off the east and south sides of the campus.

Most of the buildings on campus are clustered on the west side, and surface parking lots on the east. The east-west spilt in the campus is driven by two existing conditions. A Puget Sound Energy (PSE) transmission main runs north to south, in a 200-ft wide easement, parallel to Monroe Avenue, through the east part of campus, most of the campus parking is under this power main. Four sets of poles through the campus support this power line. Any redevelopment in this area would require extensive coordination with PSE and considerable expense to move the poles and PSE infrastructure.

The other issue that divides the campus is a steep grade drop from east to west. The eastern part of campus sits above the west by up to 20-feet in the north end, and about 5-feet in the south. Portions of the hillside within the campus are designated steep slopes by the City for permitting purposes.

This arrangement of PSE infrastructure and grade effectively limits redevelopment of the east side of campus to any use but the surface parking that is there today. Though PSE is working on a plan to revise the poles and simplify the support system, the overhead wires, some poles and the 200-foot wide easement will likely remain. Development in this easement will be restricted by proximity to the power infrastructure and PSE's needs to access it.

The site is served by the City of Renton for water, sewer and storm water. City water and sewer mains are available in the adjacent streets and also through portions of the campus to serve the buildings. Within the campus, College storm sewers and collection systems discharge to City systems, primarily off the west side of campus. All surface water discharged from the campus runs through City storm mains for discharge to Lake Washington.

Puget Sound Energy provides electricity and natural gas to the campus.

A new campus facility has recently been acquired at an old King County Court facility about one-half mile south of the main campus. Located on a 2-acre site with a 10,000-SF building on the east side, and a surface parking lot on the west side, the annex now houses the roofing program, and space is rented to community groups. The site is accessed off 2nd Avenue, from Monroe Avenue. This parcel is relatively flat, with only a few feet of grade from east to west.

This annex facility is also served by City water, sewer and storm systems.

Site Utility Systems

One of the biggest challenges for the planning of site work around the campus is the lack of good documentation of existing systems and infrastructure. The record drawings on campus are not current and tend to focus on the individual buildings that installed specific elements of the site utilities. There are not good campus records of the underground systems. Much of what is available are design drawings, and not corrected to as-built conditions, leaving questions as to what was actually installed and where it was installed.

Storm Water Systems

Renton Technical College is within the City of Renton, and all projects or improvements to the campus are permitted through the City for storm water matters. The City regulations dictate improvements needed to mitigate for new impervious surfaces. New impervious surfaces must be mitigated for flow control and if they are pollution generating (typically vehicle use), for water quality.

The campus is within a city storm water basin that is largely developed. Projects in this basin generally only need to mitigate for the increased impervious surface added, and match expected peak storm water flow rates to the existing, developed condition. New or replaced pollution generating surfaces over 5,000-SF must provide treatment of water collected off of them prior to being discharged from the campus. For this campus, a pollution generating surface is typically any vehicle use pavement.

The City will also require new development and re-development projects to incorporate low impact (green) storm water control measures where possible. Green roof, porous pavements, rain gardens or other low-impact storm facilities should be considered in any redevelopment project.

Currently, the campus is largely covered by paved parking and buildings, no significant undeveloped areas exist. The developed campus direct discharges storm water to the City storm system, with no flow control or water quality treatment facilities in the system. Recent projects, Building C, Building N, and the redeveloped Building M (operated by King County Health), have been developed to city standards current at the time of the project.

The entire storm infrastructure within the campus is owned by the college, and it is responsible for maintenance and upkeep.

Water Systems

The campus is served by City water systems to provide domestic and fire protection water. Mains are in the adjacent streets, and several cross through the campus in easements. Each building is separately metered for domestic and fire protection services. New development or significant renovations of existing buildings will require review and likely upgrade of existing backflow protection devices on the existing services. In most cases, except for the newest services on campus, the fire systems only have a single detector check valve, and most domestic services have no backflow devices.

Currently, new fire systems require a double detector check valve (DDCV) in an underground vault, and domestic services require a Reduced Pressure Backflow Assembly (RPBA) in a heated, above grade enclosure.

The campus is responsible for maintenance of the water systems from the meters to the buildings, including regular testing of the backflow prevention devices. The water mains and hydrants, even within the campus, are the City's responsibility.

Sewer Systems

The campus is served by City sewer systems. Mains are in the adjacent public streets, and several City mains cross through the campus in easements. Each building is separately served by side sewers to the City mains. In general, the sewers are adequate for new and future projects. Where on-campus, mains are typically under existing drive aisles. Unless a proposed development will encroach on the existing main's easement, no action should be needed on the mains.

The campus is responsible for maintenance of the side sewers from each building to the City main. Grease interceptors from buildings with food preparation areas should be regularly inspected and cleaned as needed. Other programs with special waste needs (automotive, medical, etc.) may need pretreatment or separation of waste streams before discharge from the site.

Site Pavements

Typically, there are two site pavement systems in use on the Renton Technical College Campus. Drive aisles and parking lots are typically paved in asphalt. Pedestrian walks and plazas are typically paved in Portland cement concrete. Details and thicknesses of the pavements within the campus are typically based on the City of Renton standards effective at the time the installations were made.

A significant issue for the replacement of a vehicle use paving area is the storm water element. If an existing pavement is removed and replaced from the subgrade (underlying soil) up, any areas over 5,000-Sf must have a water treatment system installed to clean the discharged water of oils and metals left by vehicles. For a large parking lot, adding this treatment can become a significant part of the project and limit funds available for other elements that may need upgrading. This can be mitigated by keeping up the condition of existing pavements, and re-surfacing without removal, before they become so degraded that they must be replaced.

Asphalt Pavements:

Most of the asphalt paving on campus, though in generally good condition, is aging. The large south parking lot was overlaid and re-striped in 2013. Other parking areas around campus have had spot repairs made as needed. The majority of the remaining asphalt on campus appears to be original. Continued maintenance and seal coat or overlay of paving is recommended to preserve and extend the life of this paving.

From a brief, qualitative walk through in May 2016, a couple areas of the campus has asphalt that is currently of concern.

- The drive/parking aisle on the west side of Building J has two parallel trench patches in it that run near the entire length of the drive. While apparently adequate for now, cuts and patches like this in the wheel paths of vehicles, with narrow strips between them are subject to more rapid degradation. Tree roots in this area are also a problem for this pavement. Consideration should be given to a grind, patch and overlay of this area. With attention to the tree roots that are heaving pavement.

No other significant areas of the site appear to be in immediate need of resurfacing some minor issues:

- Spot repairs may be needed in an area at the north end of the Visitor parking outside of the administration building. This area has a small concrete patch in it now, and the asphalt surface is starting to break up. The area involved is less than 100-sf
- In front of Building M, a tree too close to the planter island curb is heaving asphalt and the curb. This is more of a trip hazard now, but as tree continues to grow, the condition will worsen. The location of this tree will make this a continuing issue.

Concrete Pavements:

Concrete pavements on campus are generally for pedestrian traffic, and were installed with the buildings they serve. Concrete walks provide access from drives and pedestrian areas to the building entries. The concrete is generally in good shape, but some areas have issues with trees and roots heaving the panels. These areas should be looked at and dealt with if they become unsafe, either grinding off the edges or replacing panels. In some cases trees may need to be removed or the path re-positioned if possible to keep the problem from recurring.

Parking

An on-gong issue with the city and any discussions of redevelopment or new construction is on-campus parking.

Essentially all of the existing campus is developed now, there is no area available to expand or create new surface parking, within the existing limits of the campus. Recent efforts have added token increases in on-site and adjacent street parking. There is still a perceived (by the City and neighbors) deficit in parking at the campus. Any redevelopment or new construction will need to address this issue.

Most of the existing parking lots on campus do not have associated landscaping that meets current City standards. Revisions or reconfiguration of existing parking may trigger upgrades that might actually reduce available parking stalls, due to the need to add code required landscaping to parking lots.

Some possible solutions include:

- Acquiring adjacent land for parking, either permanently, by lease, or other agreement.
- Expand access to street parking from the west (Kirkland Avenue) side of campus
- A parking structure

Currently the only potential area for parking expansion that has been identified is at the south end of campus, south of Building A, against the 4th Street frontage. This area could be paved, and landscaped for about 20 more stalls.

Recommended Regular Maintenance

Utility systems:

Storm water collection and piping:

The onsite storm water system should be regularly inspected before the beginning of each rainy season (typically inspections should be done in August or September). The catch basins should be cleaned out so the sumps have room to collect debris and leaves that may flow in once the rains start.

If a pipe or area of drainage appears to be running slow, or backing up, video investigation of the pipe system may be warranted. Grates and other lids should be checked to make sure they are in place correctly and not rocking or otherwise out of location.

Sanitary Side Sewers:

Grease traps should be regularly inspected (quarterly or monthly depending on history of the system) and cleaned of grease when the volume exceeds 25% of the rated size of the structure. Records should be kept available for review by the City and other agencies that have jurisdiction (State and county departments of Health and Ecology). The baffles and piping should be observed and repaired as needed.

Removed grease should be disposed of per City and County standards, by an authorized hauler.

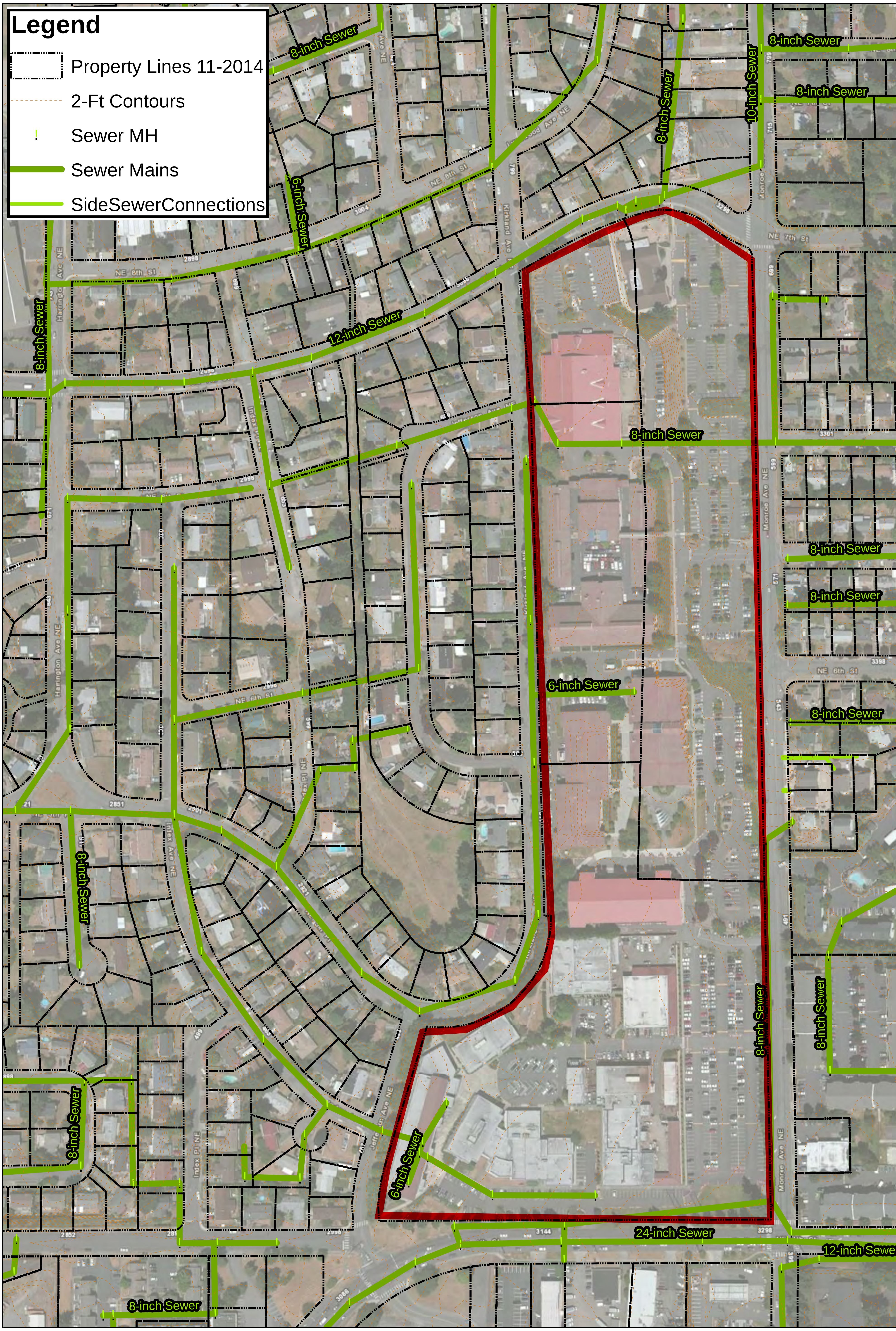
Water Services:

Each building has one or more water services (typically a fire and a domestic), most of the newer or renovated buildings have back flow devices associated with these services. These devices prevent water from flowing back into the City system after it has entered the private water piping. These devices should be inspected annually, by a certified tester, and test reports provided to the City Public Works department.

Pavements:

Asphalt pavements should be reviewed annually, and conditions where the surface is beginning to crack or “alligator” allowing water to penetrate the surface should be noted and watched. Winter can be hard on pavements, inspections and patching of small failing areas may extend the life of a larger area of existing pavements. Review of the asphalt at the end of the winter, and minor maintenance before the next winter is recommended.

Concrete pavements should be regularly reviewed and large shifts or cracks in panels remedied. Broken or heaved panels can be tripping hazards. Concrete changes are not as seasonal as asphalt, but reviewing both at the same time is recommended.

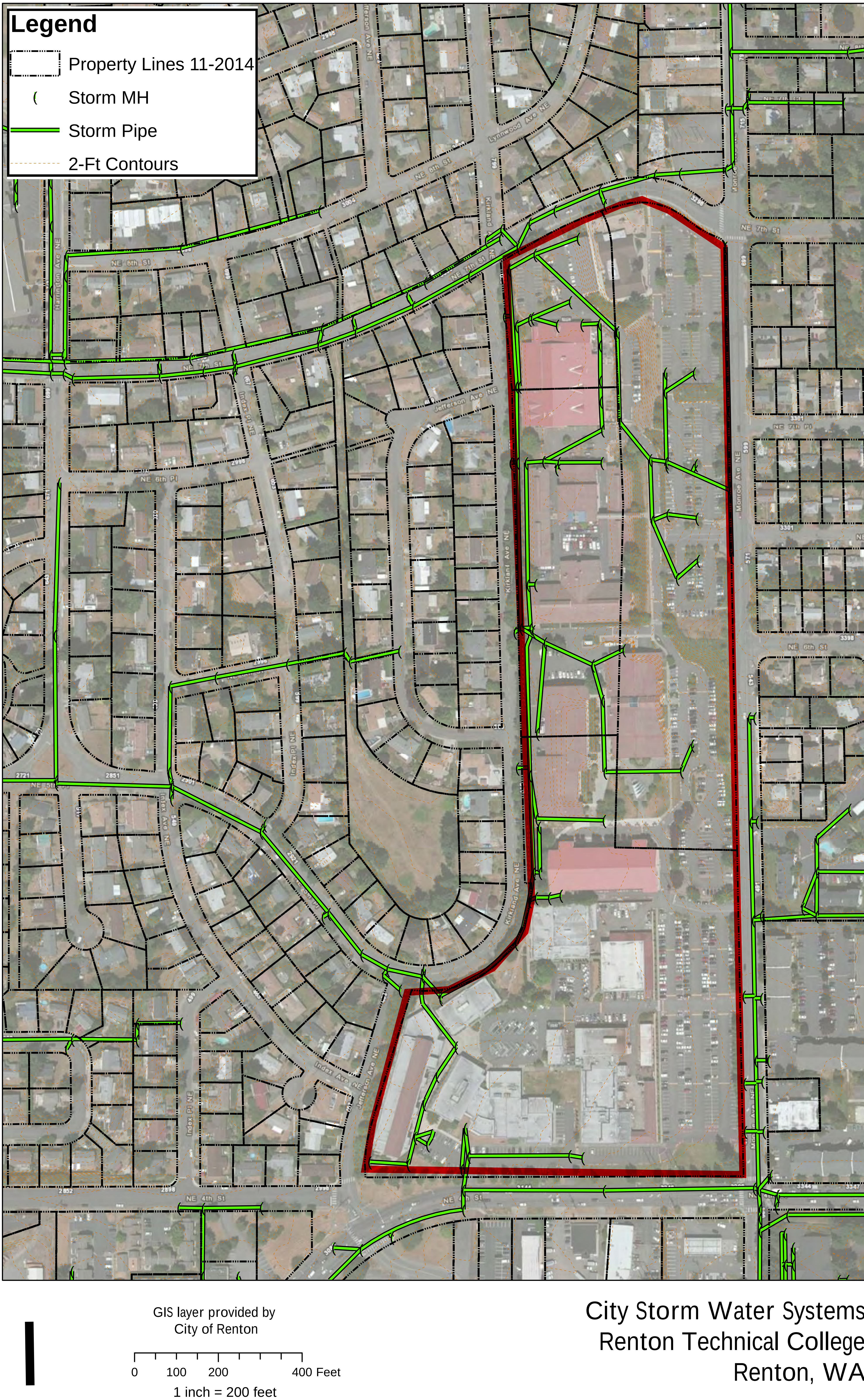


GIS layer provided by
City of Renton

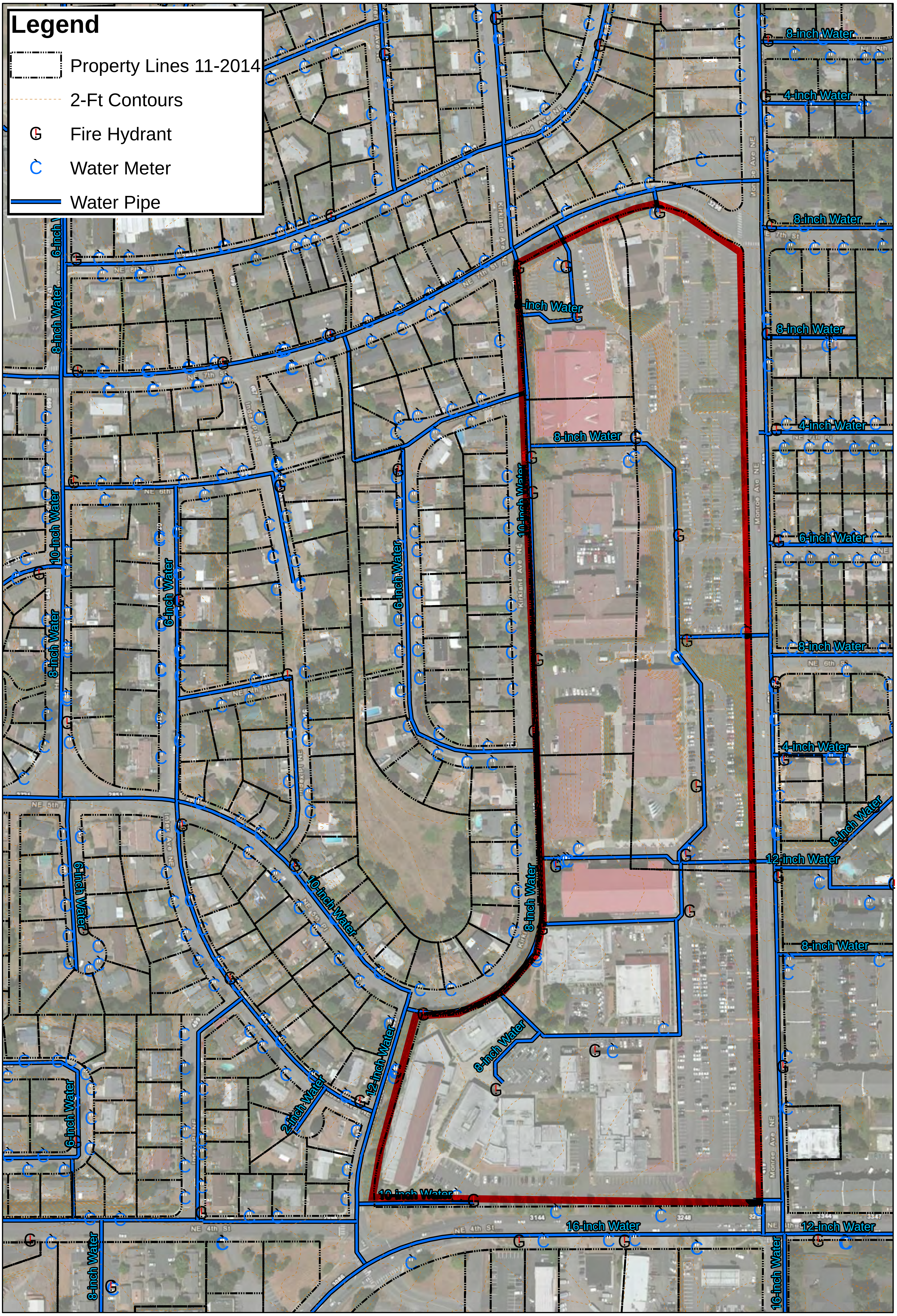
0 100 200 400 Feet

1 inch = 200 feet

City Sewer
Renton Technical College
Renton, WA



City Storm Water Systems
Renton Technical College
Renton, WA



GIS layer provided by
City of Renton

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City Water Systems
Renton Technical College
Renton, WA

GIS layer provided by
City of Renton

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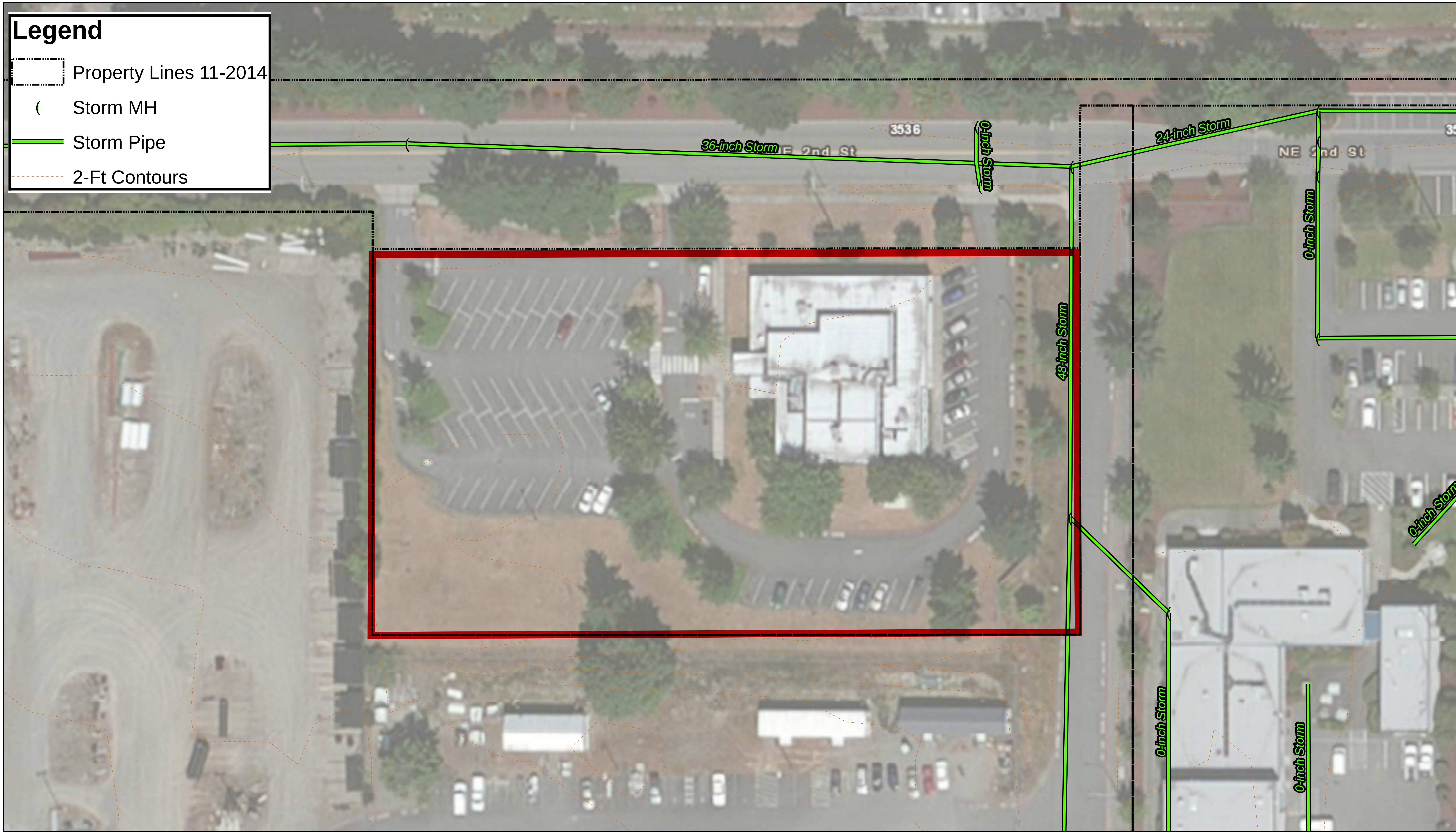
1 inch = 50 feet

City Sewer Systems
Renton Technical College Annex
Renton, WA



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City Storm Water Systems
Renton Technical College Annex
Renton, WA

GIS layer provided by
City of Renton

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1 inch = 50 feet

City Water Systems
Renton Technical College Annex
Renton, WA

2702 SOUTH 42ND STREET, SUITE 301, TACOMA, WA 98409-7315 TELEPHONE (253) 472-3300 FAX (253) 363-9402

RENTON TECHNICAL COLLEGE
EXISTING ELECTRICAL INFRASTUCTURE ASSESSMENT

I. PRIMARY POWER SYSTEM

The College's primary power distribution system consists of underground medium voltage cable installed in open-loop configuration with load break junction points tapping off to individual building service transformers.

The system is supplied from Puget Sound Energy primary power service pole with a 600 amperes rated primary metering cabinet. The primary power is distributed to three sectors of underground power feeders through a pad-mounted 15kV distribution switch connected to the load side of the primary metering cabinet. The first sector feeder serves Building C and Building G. The second feeder serves the southern campus buildings (Buildings A, B, D, E, F). The third feeder serves the northern campus buildings (Buildings H, I, J, K, L). Building M and Building N located on the north end of the campus boundary are not connected to the campus primary distribution system as these buildings are served directly through a dedicated Puget Sound Energy secondary metered transformer.

The primary power system is in fair working condition with adequate capacity to support future campus growth. To retain the system reliability and life expectancy, we recommend biannual preventive maintenance measures including transformer oil test, infrared temperature scan of 15kV conductor termination connections and visual inspection of 15kV conductor terminations for deterioration due to corona leakage and corrosion.

II. CAMPUS TELECOMMUNICATION DISTRIBUTION

The existing system consists of a cable and conduit distribution system serving a variety of building systems. Those systems include the College Data Network, Telephone System, Security System, Fire Alarm Management System, and Building Control System.

Optical Fiber is the primary media used and serves all of the above systems with the exception of the Telephone System, which is fed with multi pair copper. This fiber system radiates in a star configuration from the Main Distribution Room located in Building J. From this room, 12 strands of multimode fiber are distributed to each of Buildings A, B, C, D, E, F, G, H, I and L. In the new Building K3, (2) 24 strands multi-mode were added to the system. In the new Building C (TRC), an additional 24 strands of single mode cable were also installed.

The college telephone system contains VOIP (Voice Over Internet Protocol) equipment to support a majority of the campus's telephone needs with structured wired system for supplementary back-up.

The optical fiber and multi pair copper distribution cabling share a common conduit infrastructure between buildings. The conduit infrastructure consists of two primary systems. For the south half of the campus, a series of interconnected underground tunnels allows routing of conduit and cabling. These tunnels connect Buildings A, B, C, D, E, F and G. The northern half of the campus, consisting of Buildings H, I, J, K3, and L are connected via an underground duct bank system. This duct bank is oriented north-to-south and is located on a line to the west side of the campus. It extends from Building J to the north end of the campus. Manholes are located at various points in this duct bank, with conduits extended from the manholes to Buildings H, I, J, K3 and L. The duct bank is connected to the south tunnel system to complete the entire pathway.

The campus telecommunication system and the wiring between the buildings were placed in services over the 30+ years of time span. An accurate/complete as-built record of the wiring infrastructure between the buildings is not available. Some of the pathways connected between the buildings were over-crowded with old and non-functioning communication cables abandoned in place.

We recommend a complete survey of the campus telecommunication wiring infrastructure and remove all abandoned cable to free-up much needed space for future telecommunication system wiring needs.

III. FIRE ALARM SYSTEM

The fire alarm system is comprised of smoke detectors, heat detectors, horn/strobe units, and a Notifier addressable fire alarm control panel connected to a campus network by way of a dedicated fiber optics cable. The campus fire alarm system is connected to 24-hour monitoring service through a wireless radio antenna system by way of the fire alarm control panel located in Building N.

The campus fire alarm network nodes are listed in the following table:

Node	Building	FACP Location	FACP Model #	FACP Software Ver.	Network Module	Network Module Ver.
N1	A	Rm. 17	AFP-200	3.02	NAM-232-F	5.0
N2	B	Pool Elec Rm 100G	AFP-200	3.02	NAM-232-F	5.0
N3	G	Dr 302	AFP-200	3.02	NAM-232-F	5.0
N4	D	East Main Lobby	AFP-200	3.02	NAM-232-F	5.0
N5	E	West Mezz North Wall	AFP-200	3.02	NAM-232-F	5.0
N6	F	Mens Rm 100B in Mezz	AFP-200	3.02	NAM-232-F	5.0
N7	H	NW Elec Rm 200D	NFS2-640R	3.02	NAM-232-F	5.0
N8	I	North Elec Rm 100 A	AFP-200	3.02	NAM-232-F	5.0
N9	J	West Elec Rm 221	NFS2-640R	3.02	NAM-232-W	5.0
N10	K's	K3 - E. Elec Rm 100G	NFS2-640R	3.02	NAM-232-F	5.0
N11	L	East Elec Rm 100G	AFP-200	3.02	NAM-232-F	5.0
N12	M	King County Medical Clinic	NFS-320	Future	NCM-F	10.2.2
N13	N	South Lobby	NCA2	17.0	NCM-F	10.2.2
N15	C	Under Stair Elec Rm 100F	AFP-400	3.65	NAM-232-F	5.0

N16	N	South IDF	AFP-200	3.02	NAM-232-F	5.0

IV. LIGHTING

Most of the interior lighting fixtures consist of lensed fixtures with 32 watt fluorescent T-8 Lamps and compact fluorescent down lights.

Exit identification fixtures are mostly high maintenance non-LED type. A small portion of the fixtures were not equipped with the back-up battery to comply with life safety code. Emergency egress lighting is provided by battery-powered, wall-mounted directional lights located in egress paths.

Light control is mostly non-automatic and they are not integrated with occupancy sensor/daylight sensor/occupancy schedule.

Exterior lighting in the parking area and some walkways was recently upgraded with LED type fixtures integrated with automatic /internet base control timer. Areas equipped with new LED lighting fixtures are adequately illuminated to support night time operation. Some exterior pathways from the building perimeter to the parking lot areas are not adequately illuminated. We recommend to conduct a campus wide exterior illumination survey to identify area with inadequate illumination level and upgrade illumination level in these areas accordingly.

V. SECURITY/ACCESS CONTROL SYSTEM

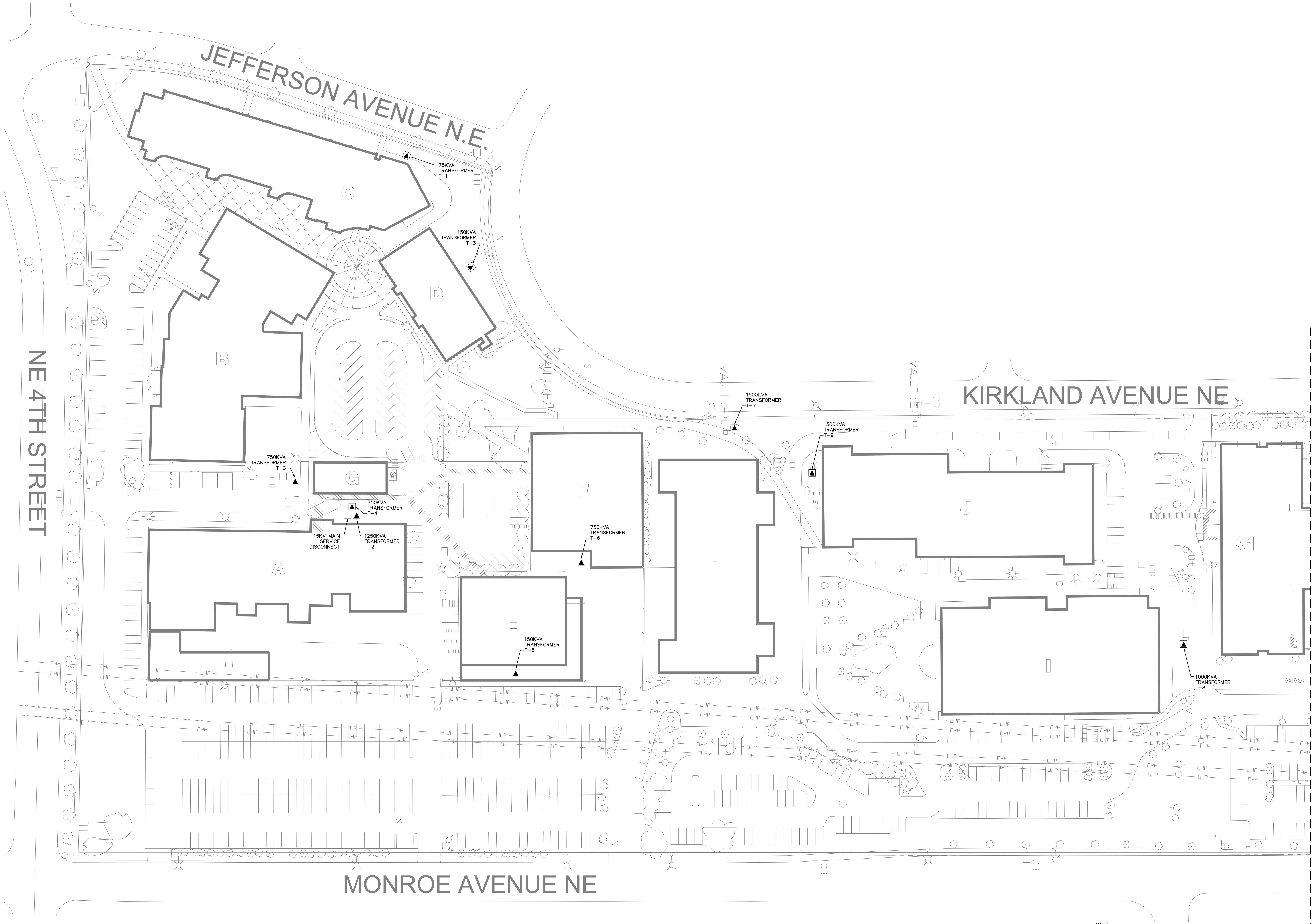
Each building on the campus is protected by an individual security alarm systems connected to a central station through a telephone dialer. Access control and video surveillance system were recently upgraded with new internet based head-end equipment located in Building J with remote access from Building N Facilities Office.

VI. EMERGENCY BACK-UP GENERATOR

Building J campus data network server room and Building N campus maintenance facility are pre-wired with transfer switches for connection to a trailer mounted portable power generator to serve the critical equipment on the event of prolonged power-outages.

VII. RECOMMENDATIONS

1. Conduct biannual preventive maintenance test on the 15 kv power distribution system. Test should include transformer oil test, visual and infrared temperature scan of the 15 KV cable connection and terminations.
2. Complete survey of campus telecommunication wiring infrastructure. Remove all abandoned ole telecommunication cable to free up pathway space. This task should start when funding is available.
3. Conduct exterior illumination survey to identify areas with inadequate illumination level. Add additional lighting fixtures in these areas to support building program for night time operation. This task should start when funding is available.



TRANSFORMER SITE PLAN (SOUTH)

1" = 40'-0"

PROJECT NORTH

SCALE: 1"=40'-0"

mcg-ARC

architect_
McGRANAHAN ARCHITECTS

electrical engineer_
TRES WEST ENGINEERS

NOT FOR CONSTRUCTION

project_
FACILITIES MASTER PLAN
WA STATE 2013-045 A(1)

client_
RENTON TECHNICAL COLLEGE

location_
RENTON,WA

Project No. 1226.00

TRANSFORMER SITE PLAN (SOUTH)

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ORIGINAL SHEET IS 30" x 42"

TRANSFORMER SITE PLAN (NORTH)

1" = 40'-0"

PROJECT NORTH

SCALE: 1"=40'-0"

ORIGINAL SHEET IS 30" x 42"

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(NORTH)

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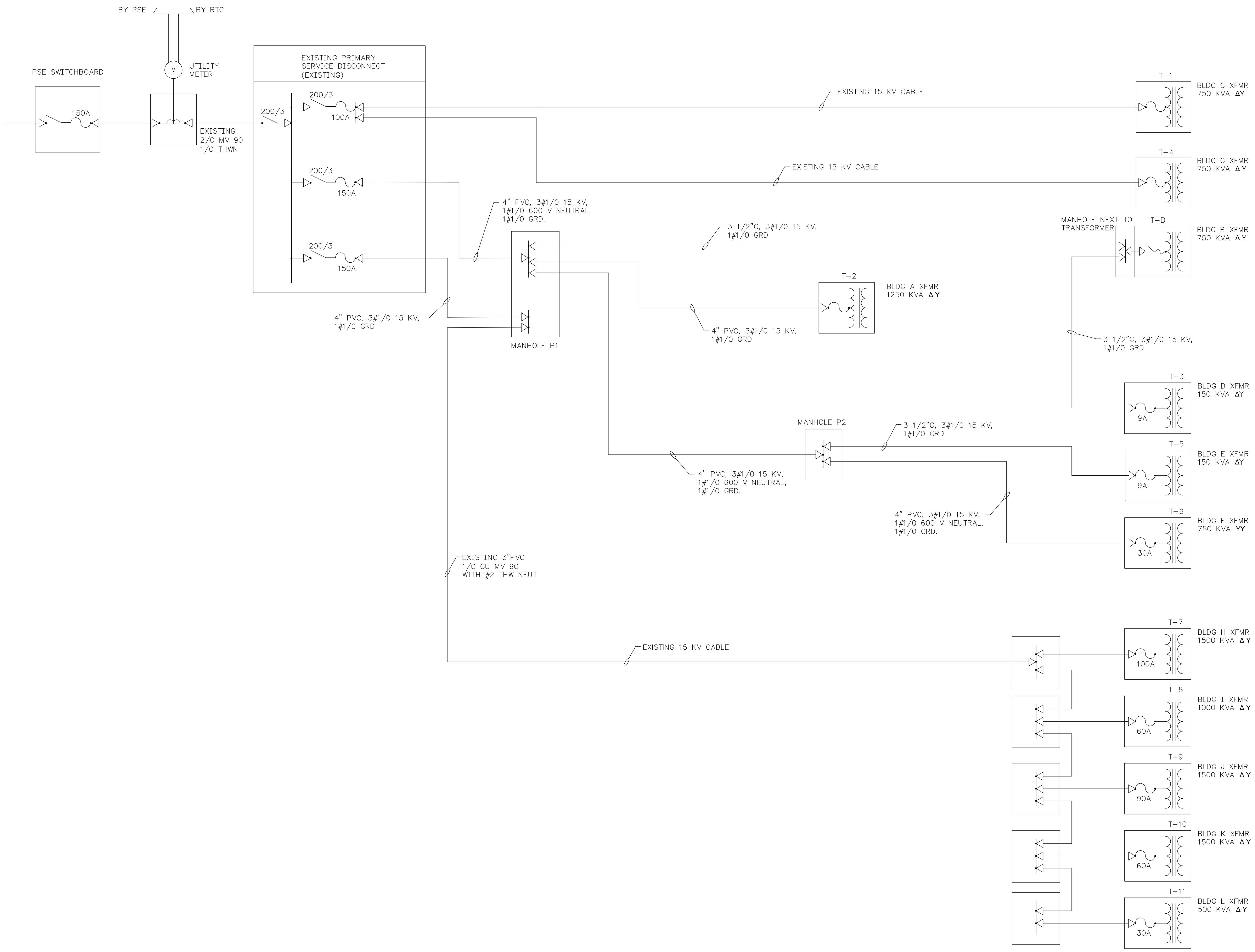

15KV SYSTEM ONE LINE DIAGRAM

N.T.S.

mcg-ARC

architect_
McGRANAHAN ARCHITECTS

electrical engineer_
TRES WEST ENGINEERS

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15KV SYSTEM
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ORIGINAL SHEET IS 30" x 42"

e. parking & trip generation report

MEMORANDUM

DATE: September 23, 2016

TO: Matt Lane/Gail Merth, McGranahan Architects

FROM: Michael J Read, P.E., Principal, TENW

SUBJECT: RTC Master Plan – Parking/Trip Generation Study and Transportation Recommendations
TENW Project No. 3356

This memorandum summarizes the results of the 2016 campus parking and utilization study conducted at the Renton Technical College (RTC) campus by Transportation Engineering Northwest, LLC (TENW), estimate future trip generation and parking demand of proposed Master Plan components, and recommends transportation improvements the College should consider as part of development of the Master Plan. The following elements are documented in this memorandum:

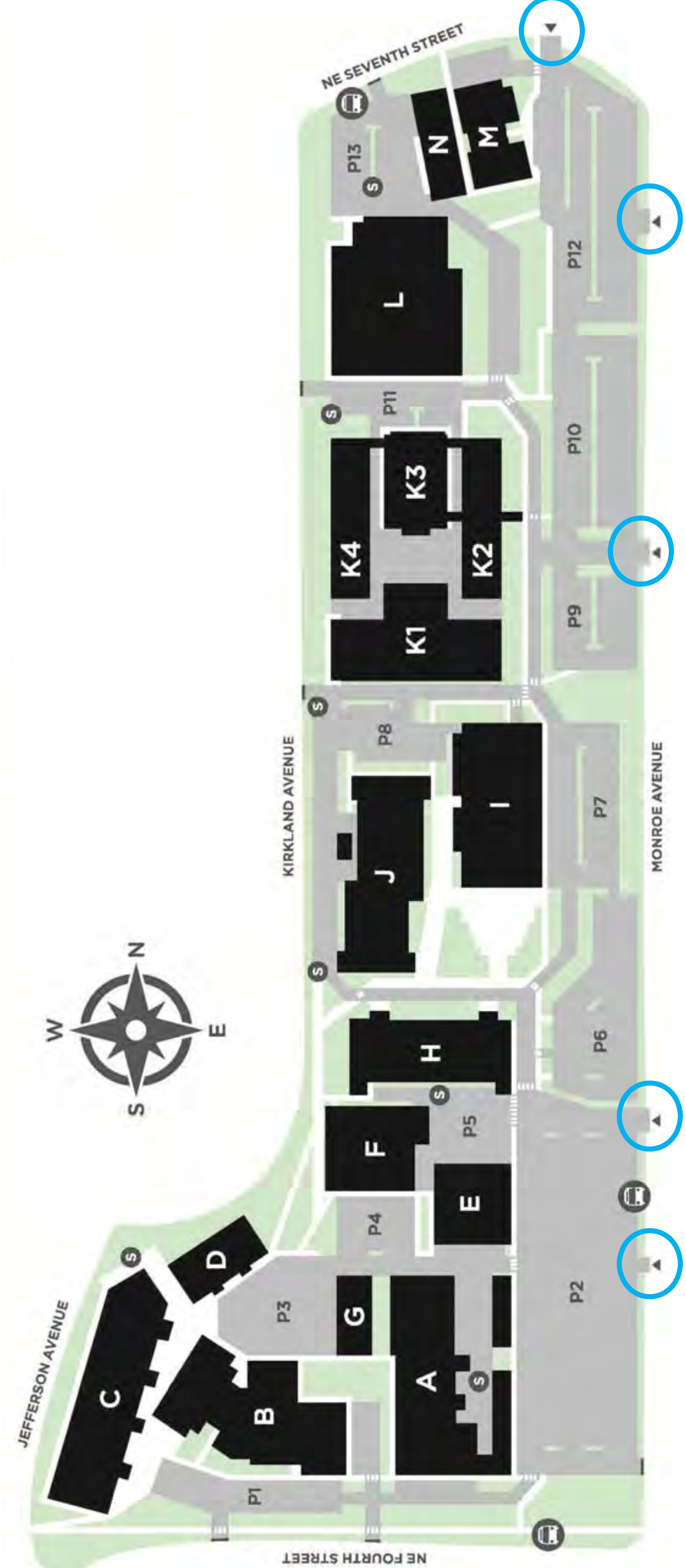
- Survey methodology and types of data collected,
- Existing vehicular trip generation and access distribution,
- Existing parking supply and demand at the campus, and
- Site utilization characteristics, parking management strategies, and other indices that will be used to evaluate future access and parking needs in the context of master planning needs of RTC.
- Recommendations of traffic and parking improvements for Master Plan buildout.

Existing Campus Survey Methodology

The main purpose of the RTC Parking and Trip Generation Study was to provide a detailed understanding of utilization of existing parking supply available to the campus, to determine what demand profiles are currently exhibited, and to gather other utilization characteristics necessary to support and identify future parking and access needs in the context of master planning efforts by the College. In addition to peak parking demand counts, vehicular trip generation during a.m. peak hours (6:00 a.m. to 9:00 p.m.), midday peak hours (11:00 a.m. to 1:00 pm), and p.m. peak hours (4:00 p.m. to 6:00 p.m.) were conducted and to determine the overall distribution or access/egress patterns of existing students, employees, and guests to the campus.

To accomplish this data need, video cameras were placed at six separate locations along the street frontages of NE 7th Street and Monroe Avenue to capture all entering/exiting vehicles as well as internal distribution of traffic (see Figure 1 for locations of 2-day count locations). In addition, traffic volumes for all movements at each driveway location were tabulated to evaluate intersection operations and traffic delays and direct counts of parking occupancy levels by TENW staff were made during peak class periods to determine the utilization and adequacy of existing on-site parking supply. In addition, based on field work prior to the RTC Parking and Trip Generation Study, on-street parking was also generated along Jefferson Avenue, Monroe Avenue, and a small segment of NE 5th Place/Kirkland Avenue NE in the vicinity of the southwest corner of campus. As such, periodic sweeps through the RTC campus included this on-street supply to determine the magnitude of off campus parking impacts currently generated.

Figure 1 – Turning Movement Count Locations at RTC Campus



Observation Periods

Several weeks after the beginning of Winter Quarter in 2016, TENW began the parking and trip generation surveys. Survey days included Tuesday, January 19th and Wednesday, January 20th.

Peak hourly volumes generated by the campus occurred from 7:00 am to 8:00 a.m. during the a.m. peak period of adjacent street traffic (845 a.m. peak hour trips), from 11:45 a.m. to 12:45 p.m. during the midday peak period (362 peak hour trips), and from 5:00 p.m. to 6:00 p.m. during the p.m. peak period of adjacent street traffic (297 p.m. peak hour trips). The peak hour of the entire campus throughout the course of the study occurs in the morning during peak arrivals of classes by students and faculty.

To provide a comparative trip generation rate for a college campus, typically two different types of indices are considered: 1) total gross floor area of buildings provide on the campus, and 2) student population levels. Each of these is a measure of the size or capacity of buildings for students and staff, or a measure of peak students that can be served on campus simultaneously. For the RTC campus, these distinct "capacity" or utilization figures in Winter Quarter of 2016 include approximately 450,513 square-feet in gross floor area of buildings on the campus with a 4,176 peak student headcount population that occurs by approximately 9:00 a.m. Based on these two indices, existing peak hour trip generation rates are calculated in Table 1. As shown, peak hour trip generation per 1,000 square-feet in gross floor area range from approximately 0.66 trips/1,000 square-feet during the p.m. peak hour and 1.88 trips/1,000 square-feet during the a.m. peak hour. On a per student basis, trip generation rates range from 0.07 trips per student in the p.m. peak hour to 0.20 trips per student during the a.m. peak hour.

Table 1
Observed Trip Generation Rates of RTC Campus - Winter Quarter 2016

Index	Vehicle Trips	Index Measure	Trip Generation Rate
		AM Peak Hour	
Gross Floor Area	845	450,513	1.88 trips/1,000 SF
Student Headcount	845	4,176	0.20 trips/student
		PM Peak Hour	
Gross Floor Area	297	450,513	0.66 trips/1,000 SF
Student Headcount	297	4,176	0.07 trips/student

Source: TENW summary of data collected by IDax Data Solutions, January 2016. Source data provided as **Attachment A**.

These observed vehicle trip generation rates are significantly lower than published rates in the *Trip Generation Manual, 9th Edition*, Institute of Transportation Engineers (ITE), 2012, for Junior/Community College land uses, which have published rates of 2.54 trips/1,000 square-feet in gross floor area during the p.m. peak hour and 2.99 trips/1,000 square-feet in gross floor area during the a.m. peak hour.

Campus Parking "Zone" Designations and Existing Demand Analysis

Generally, existing parking zones currently identified by RTC (zones P1 through P13 in Attachment B) were used as the basis for parking zone observations by TENW. Parking "outside" these zones was also noted during data collection efforts. Currently, there are approximately 997 stalls provided on-site at the RTC Campus, with 42 stalls designated as ADA, and an additional 68 stalls at the RTC Annex. In total, off-street parking supply is approximately 1,065 stalls for RTC programs. In addition to these stalls within off-street parking lots, parallel parking along the street frontages of Jackson Avenue, NE 5th Place/Kirkland Avenue NE, and Monroe Avenue NE were also utilized by activities at the RTC Campus.

Figure 2 overviews the existing configuration of parking throughout the RTC campus and the location of observed "off-campus" parallel parking along adjacent streets. Table 2 summarizes parking counts collected by TENW in January 2016. As shown, with observed "off-campus parking", average peak demand was approximately 1,047 stalls at 11:00 a.m., resulting in a utilization rate of approximately 98 percent. Based on peak average observations, an existing peak parking demand rate of approximately 2.32 stalls per 1,000 square-feet of gross floor area was determined. Based on a per student parking ratio, a 0.25 stalls per student was observed (or 1 stall per every 4 students). It should be noted, that this peak parking demand ratio includes students, faculty, and staff.

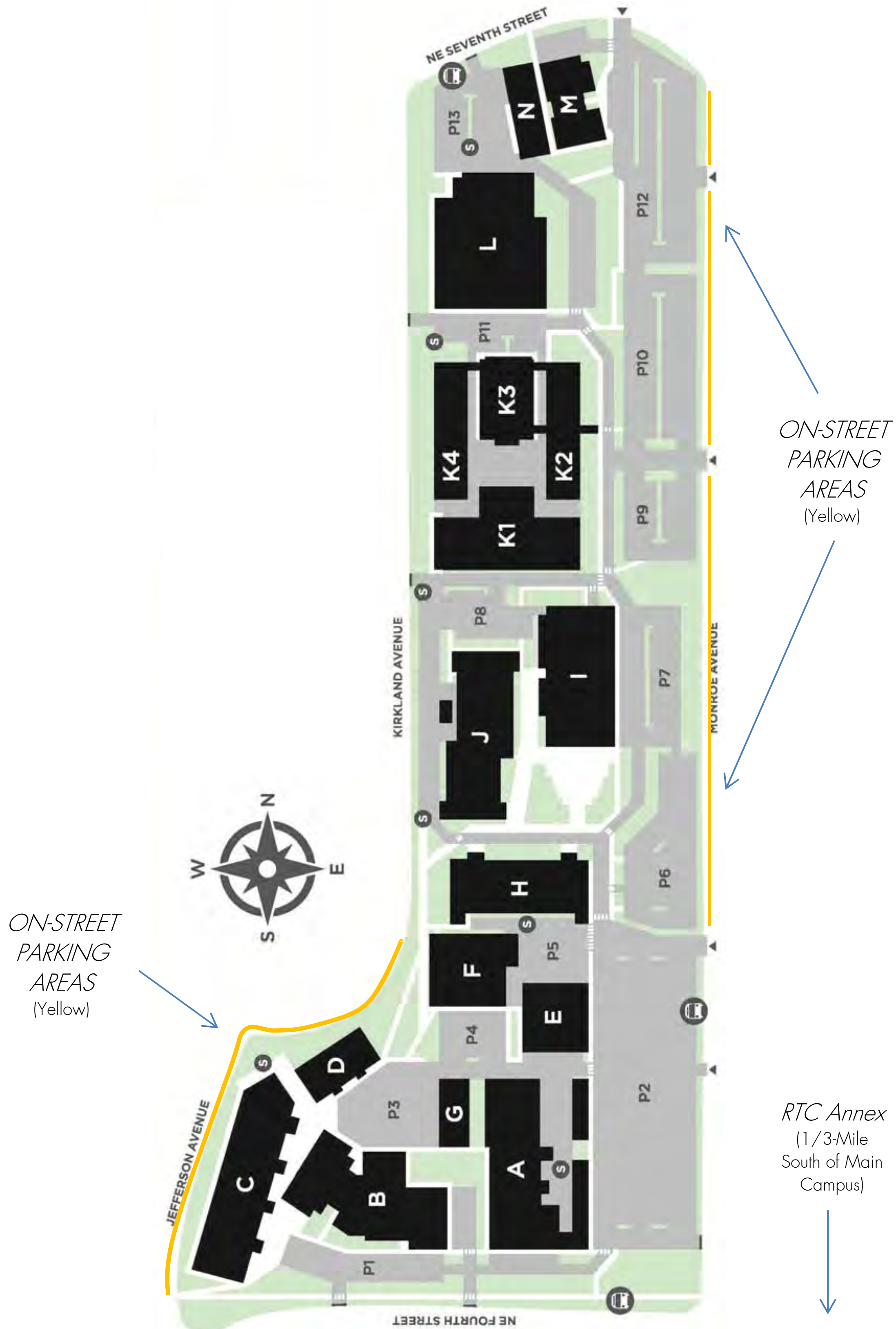
Table 2
RTC Campus Peak Parking Utilization
Winter Quarter 2016

Parking Lot	Average Peak Observed Demand	Percent Utilization
Average Weekday		
6:00 AM	96	9.0%
9:00 AM	1,041	97.7%
11:00 AM	1,047	98.3%
1:00 PM	910	85.4%
4:00 PM	521	48.9%
6:00 PM	273	25.6%

Source: TENW summary of data collected by observations, Winter Quarter 2016.

As noted above, the currently observed parking ratio is 0.25 stalls per student (which includes all faculty and staff demand as well). Removal of parking demand associated with 364 faculty/staff on-site to estimate "student only" parking demand, would result in a parking ratio of approximately 0.17 stalls per student. Current City code requires a minimum of 1 stall per employee, plus 0.5 space for every full-time student not residing on campus. As documented in this trip generation and parking demand study, "observed" parking demand is significantly less than this code requirement, and would neither be feasible or practical to meet this requirement for existing or future campus buildings. In addition, the peak observed parking demand of 1,047 stalls is below the built off-street supply currently available to the RTC campus (1,065 stalls) by approximately 22 stalls.

Figure 2 – Parking Zones at RTC Campus



Other Observations/Findings of Existing Campus

In addition to parking counts, general observations were also conducted by TENW to determine any pedestrian, traffic and/or queueing conflicts within the campus parking lots, access driveways onto Monroe Avenue NE and NE 4th Street, as well as other observations of parking and circulation conditions along Jefferson Avenue NE, and Kirkland Avenue NE. All noteworthy observations can be best divided into three time periods: 6:00 a.m. to 9:00 a.m. (when most vehicles enter the campus), 11:00 a.m. to 1:00 p.m. during campus lunch hours and a transition period between morning and afternoon classes, and from 2:00 p.m. to 4:00 p.m. (as most vehicles exit the campus).

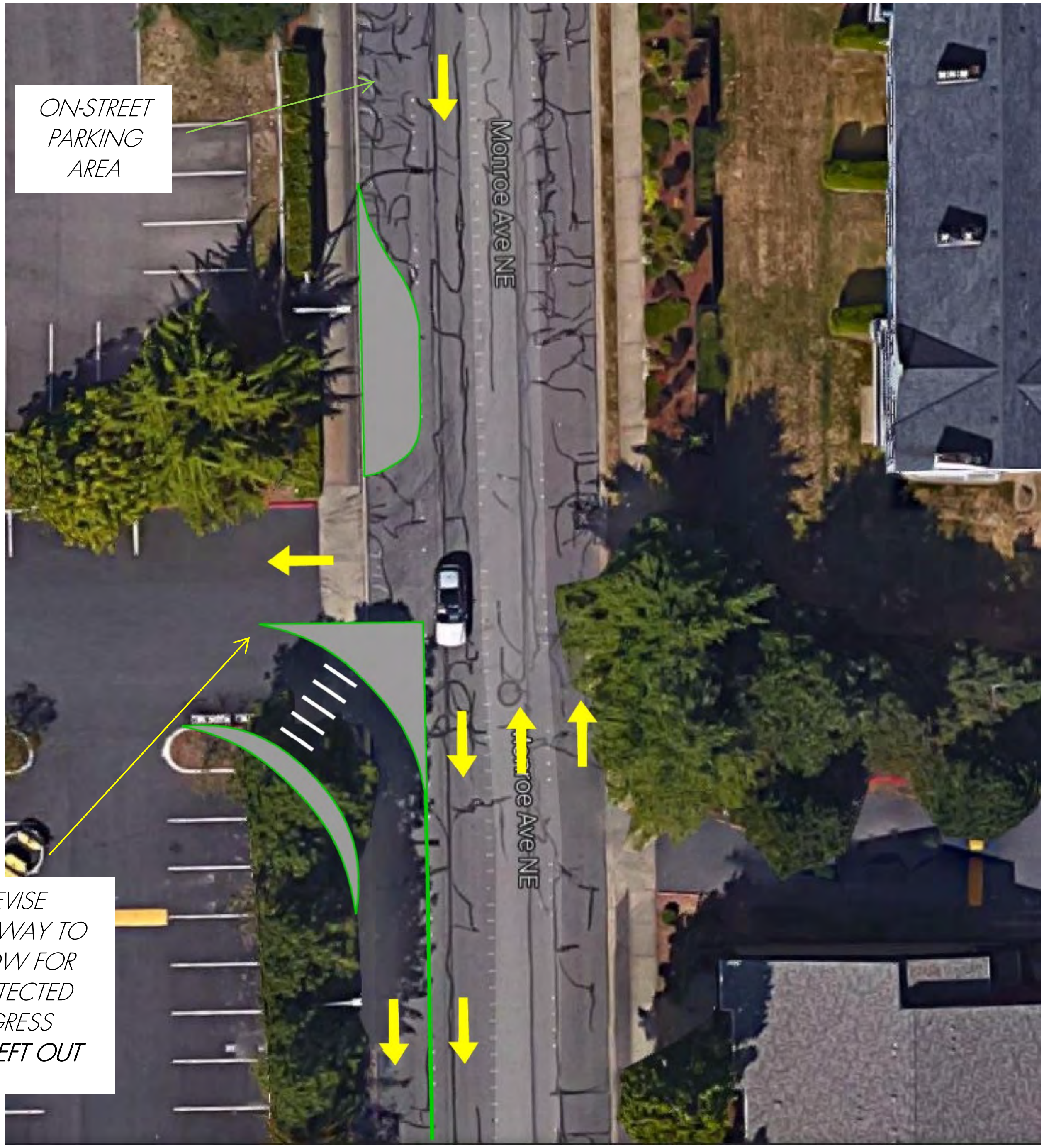
6:00 – 9:00 a.m.: As the bulk of Renton Technical College students enter campus, the campus parking lots and adjacent street parking generally fill up from the southernmost lot and Monroe Avenue NE to the northernmost lot. As the southernmost parking lot reaches capacity, vehicles begin parking on Jefferson Avenue NE and Kirkland Avenue NE. During this period, the only observed queueing occurred as vehicles made eastbound left-turns from NE 4th Street onto Monroe Avenue NE between approximately 7:45 a.m. and 8:15 a.m. The vehicle queue reached between 20 and 25 vehicles, with vehicles completing left-turns within two cycle lengths of the signal. No vehicle or pedestrian conflicts occur elsewhere.

11:00 a.m. – 1:00 p.m.: During campus lunch hours, few vehicles enter or exit the parking lots and no internal campus or external queueing or conflicts observed. No vehicle or pedestrian conflicts were noted during either survey day.

2:00 p.m. – 4:00 p.m.: Most vehicles exit campus between 2:30 p.m. and 2:45 p.m. During this time, queues of up to 7 vehicles and delays of between 2-3 minutes occur on the southernmost campus parking lot. The southernmost parking lot queues mainly occur because a high volume of vehicles exit the lot onto Monroe Avenue E, which contains a single southbound thru lane. Southbound vehicle queueing from the Monroe Avenue NE & NE 4th Street signalize intersection were also noted to block several times this driveway. In addition, vehicles exiting campus from the northern parking lots further limit the available gaps in traffic for these exiting vehicles. No large vehicle queues occur on other driveway exits further north on Monroe Avenue that serve campus parking lots, or on Jefferson Avenue NE and Kirkland Avenue NE as vehicles that have been parked on-street exit. No pedestrian conflicts occur.

Currently, between 40 and 50 percent of all traffic (depending upon time of day) enters and leaves the main RTC Campus via the most southern driveway onto Monroe Avenue. The next two driveways on Monroe Avenue accommodate an additional 40 to 45 percent of all traffic (depending upon time of day), while driveways further north and on NE 7th Street serve the remainder. Given that up to 50 percent of all entering/exiting traffic utilize the most southern driveway on Monroe Avenue (affording approximately 400 feet of distance away from NE 4th Street), the relative demand an proximity to the signalized intersection currently functions, but does result in vehicle queuing and traffic flow conflicts along Monroe Avenue. Figure 3 overviews a potential access consolidation that would revise the more central driveway on Monroe with protected egress movements to allow for ease of campus dismissal periods both on-street and off-street. This would restrict movements to the north exiting the campus at this location and allow for a more central distribution of traffic entering/exiting the campus off of Monroe Avenue. For illustrative purposes Figure 3 presents one option. Further design elements to enhance the overall entry components, wayfinding system, and operations is recommended if this is considered further by the College.

Figure 3 – Campus Access Consolidation



Allied Health Replacement

As part of the RTC Master Plan, the College plans to acquire the King County Renton Health Building opposite the RTC campus on the southwest quadrant of the NE 3rd Street/NE 4th Street and Jackson Avenue NE signalized intersection. This 4.7-acre site currently comprises an 8,630 square-foot building with 95 on-site parking stalls. Use of the existing building until a new building could be funded for additional campus parking and programs would require only 20 parking stalls for its size (2.32 stalls per 1,000 square-feet), resulting in approximately 75 stalls that would be available for general campus use.

The RTC Master Plan calls for a replacement building for Allied Health programs of up to 70,000 square-feet. Given observed parking demand of the existing RTC Campus (2.32 stalls per 1,000 square-feet), a minimum off-street supply of 163 on-site parking stalls would be recommended for construction as part of Allied Health programs at this site.

As part of site development, pedestrian mobility between the main RTC campus and the proposed Allied Health building on this property is an important aspect of trip reduction and accessibility between campus buildings. As shown in Attachment C, existing on-campus pedestrian facilities, sidewalks, marked crosswalks, and a signalized pedestrian crossing of the NE 3rd Street/NE 4th Street corridor at Jackson Avenue NE provide a continuous pedestrian system between the main RTC campus and the proposed Allied Health building. Depending upon when the Allied Health building receives funding, upgrades to the signalized pedestrian crossing to meet current ADA standards should be expected. This would include reconstruction of the ADA ramps, pedestrian push buttons and APS pedestrian heads.

Recommendations

As noted from the RTC Campus Parking and Utilization Study conducted in the Winter quarter of 2016, peak parking demands of the campus could be met with currently provided off-street parking capacity provided at the main RTC campus and the RTC Annex and limited vehicle queuing was observed during peak arrival and dismissal periods over the course of 2 survey days. Parking management and specific site egress/circulation recommendations include:

- As on-site buildings are replaced/rehabilitated on the RTC Campus, identify opportunities for capacity improvements within existing or new parking areas to increase on-site capacity adjacent to classroom buildings to reduce the use of on-street parking that occurs due to better proximity.
- Consider additional incentives for carpool/transit options for both students and faculty/staff demand to reduce overall parking demand. This could take the form of preferred parking stalls, transit subsidies, charging a fee for single-occupant parking, and other parking management techniques.
- Consider potential vehicular access consolidation that would revise the more central driveway on Monroe with protected egress movements to allow for ease of campus dismissal periods both on-street and off-street.
- Adjacent to Building H, relocate the existing stop bar interior to the drive aisle further east to allow better sight distance availability and stop control/yield movements between drivers entering this interior intersection (see Attachment D).
- As part of Allied Health Replacement being considered on the new south property at NE 3rd Street/NE 4th Street and Jackson Avenue NE intersection, provide a minimum of 163 on-site parking stalls with development of a 70,000 square-foot building and assume ADA upgrades to the signalized intersection are required (up to $75,000).

If you have any questions regarding these recommendations, please feel free to contact me at (206) 361-7333, ext. 101 or mikeread@tenw.com.

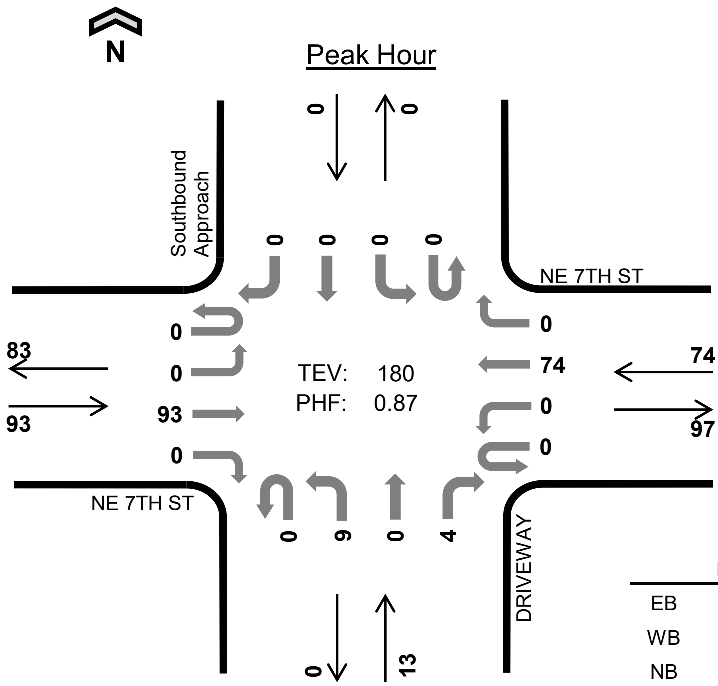
ATTACHMENT A

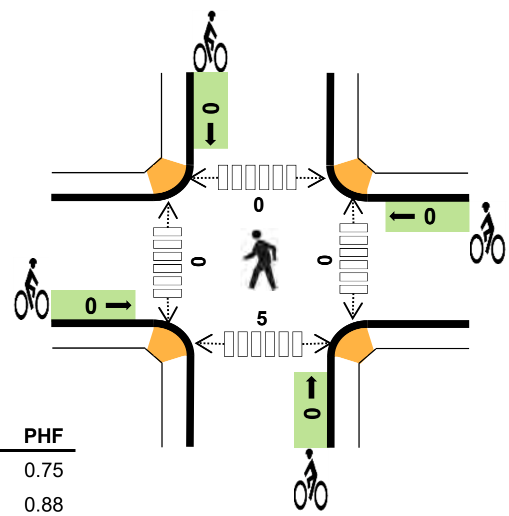
IDax Turning Movement Counts

DRIVEWAY
NE 7TH ST

Date: Wed, Jan 20, 2016
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 5:00 PM to 6:00 PM

Peak Hour





	HV %:	PHF
EB	2.2%	0.75
WB	1.4%	0.88
NB	0.0%	0.36
SB	-	-
TOTAL	1.7%	0.87

Two-Hour Count Summaries

Interval Start	NE 7TH ST Eastbound UT	LT	TH	RT	NE 7TH ST Westbound UT	LT	TH	RT	DRIVEWAY Northbound UT	LT	TH	RT	Southbound Approach Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
4:00 PM	0	0	24	1	0	0	19	0	0	0	0	0	0	0	0	0	44	0
4:15 PM	0	0	24	0	0	0	18	0	0	1	0	0	0	0	0	0	43	0
4:30 PM	0	0	20	0	0	0	28	1	0	2	0	0	0	0	0	0	51	0
4:45 PM	0	0	15	1	0	0	23	0	0	1	0	0	0	0	0	0	40	178
5:00 PM	**0**	**0**	**11**	**0**	**0**	**0**	**15**	**0**	**0**	**6**	**0**	**3**	**0**	**0**	**0**	**0**	**35**	169
5:15 PM	**0**	**0**	**25**	**0**	**0**	**0**	**21**	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**48**	174
5:30 PM	**0**	**0**	**26**	**0**	**0**	**0**	**18**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**45**	168
5:45 PM	**0**	**0**	**31**	**0**	**0**	**0**	**20**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**52**	**180**
Count Total	0	0	176	2	0	0	162	1	0	13	0	4	0	0	0	0	358	0
Peak Hour	**0**	**0**	**93**	**0**	**0**	**0**	**74**	**0**	**0**	**9**	**0**	**4**	**0**	**0**	**0**	**0**	**180**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

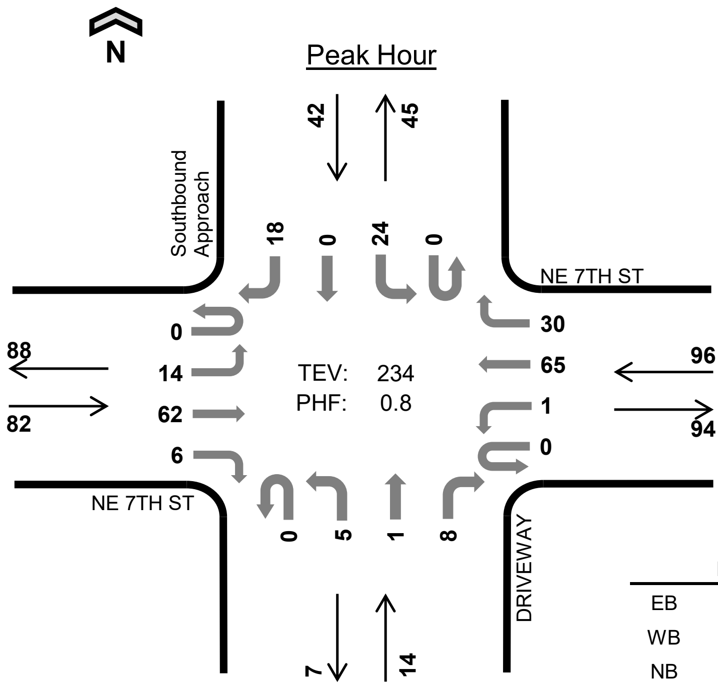
Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
4:00 PM	1	0	0	0	*1*	0	0	0	0	*0*	0	0	0	0	*0*
4:15 PM	1	2	0	0	*3*	0	0	0	0	*0*	0	0	0	0	*0*
4:30 PM	0	1	0	0	*1*	0	0	0	0	*0*	0	0	0	0	*0*
4:45 PM	0	0	0	0	*0*	1	0	0	0	*1*	0	0	0	0	*0*
5:00 PM	**1**	**0**	**0**	**0**	***1***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**1**	*1*
5:15 PM	**0**	**1**	**0**	**0**	***1***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**1**	*1*
5:30 PM	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**2**	*2*
5:45 PM	**1**	**0**	**0**	**0**	***1***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**1**	*1*
Count Total	4	4	0	0	*8*	1	0	0	0	*1*	0	0	0	5	*5*
Peak Hour	**2**	**1**	**0**	**0**	***3***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**5**	***5***

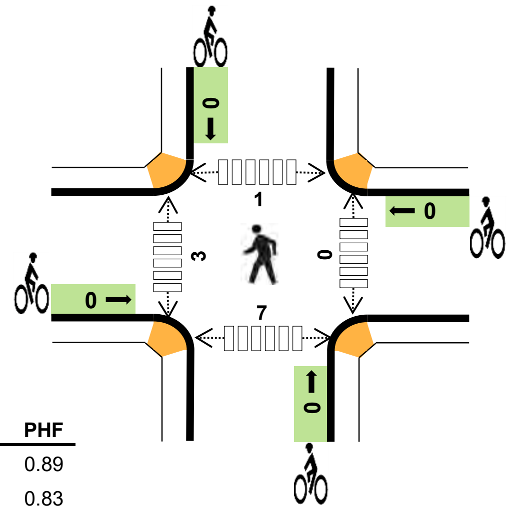
Mark Skaggs: (425) 250-0777 mark.skaggs@idaxdata.com

DRIVEWAY
NE 7TH ST

Date: Wed, Jan 20, 2016
Count Period: 11:00 AM to 1:00 PM
Peak Hour: 11:00 AM to 12:00 PM

Peak Hour





	HV %:	PHF
EB	3.7%	0.89
WB	4.2%	0.83
NB	0.0%	0.88
SB	0.0%	0.48
TOTAL	3.0%	0.80

Two-Hour Count Summaries

Interval Start	NE 7TH ST				NE 7TH ST				DRIVEWAY				Southbound Approach				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
11:00 AM	**0**	**1**	**15**	**1**	**0**	**0**	**22**	**3**	**0**	**2**	**1**	**1**	**0**	**0**	**0**	**0**	**46**	0
11:15 AM	**0**	**5**	**16**	**2**	**0**	**0**	**14**	**11**	**0**	**1**	**0**	**3**	**0**	**0**	**0**	**1**	**53**	0
11:30 AM	**0**	**4**	**13**	**2**	**0**	**0**	**17**	**12**	**0**	**1**	**0**	**2**	**0**	**14**	**0**	**8**	**73**	0
11:45 AM	**0**	**4**	**18**	**1**	**0**	**1**	**12**	**4**	**0**	**1**	**0**	**2**	**0**	**10**	**0**	**9**	**62**	**234**
12:00 PM	0	0	19	1	0	1	13	0	0	3	0	3	0	0	0	1	41	229
12:15 PM	0	0	18	0	0	0	11	0	0	0	0	0	0	0	0	0	29	205
12:30 PM	0	0	15	3	0	3	8	0	0	0	0	0	0	0	0	1	30	162
12:45 PM	0	0	16	2	0	2	13	0	0	0	0	1	0	0	0	0	34	134
Count Total	0	14	130	12	0	7	110	30	0	8	1	12	0	24	0	20	368	0
Peak Hour	**0**	**14**	**62**	**6**	**0**	**1**	**65**	**30**	**0**	**5**	**1**	**8**	**0**	**24**	**0**	**18**	**234**	**0**

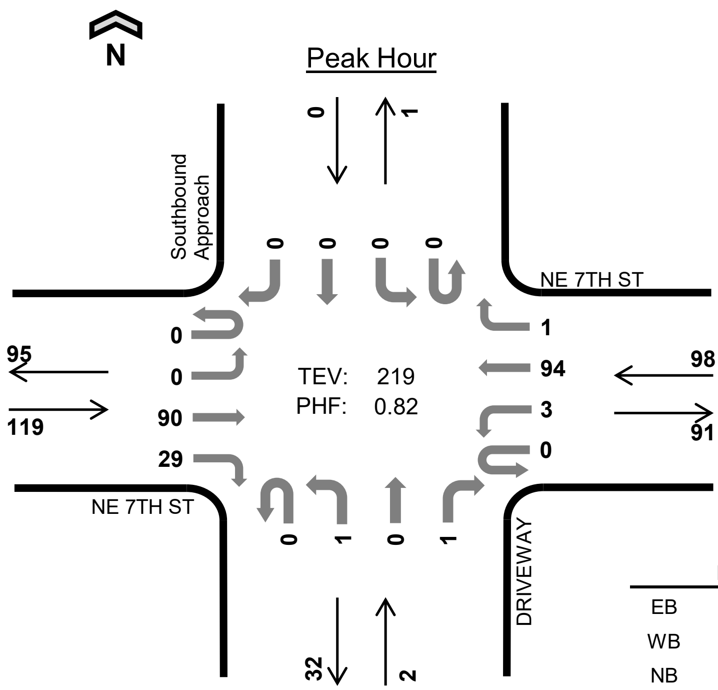
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

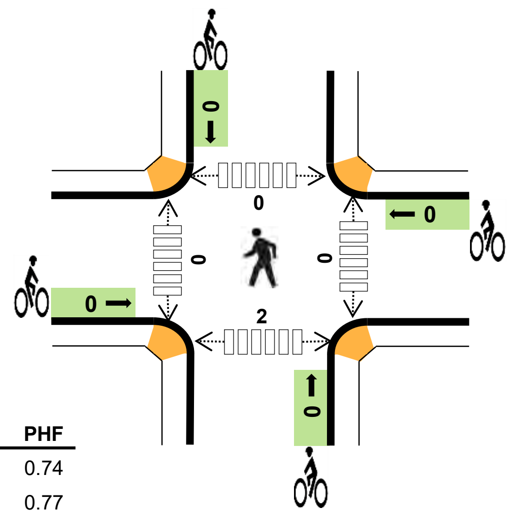
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
11:00 AM	**1**	**0**	**0**	**0**	*1*	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**0**	**5**	*7*
11:15 AM	**1**	**3**	**0**	**0**	*4*	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**1**	**0**	*2*
11:30 AM	**0**	**0**	**0**	**0**	*0*	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**1**	*1*
11:45 AM	**1**	**1**	**0**	**0**	*2*	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**1**	*1*
12:00 PM	3	1	0	0	*4*	0	0	0	0	*0*	0	2	0	2	*4*
12:15 PM	2	1	0	0	*3*	0	0	0	0	*0*	0	0	0	1	*1*
12:30 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	0	1	*1*
12:45 PM	2	0	0	0	*2*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	10	6	0	0	*16*	0	0	0	0	*0*	0	5	1	11	*17*
Peak Hour	**3**	**4**	**0**	**0**	***7***	**0**	**0**	**0**	**0**	***0***	**0**	**3**	**1**	**7**	***11***

Mark Skaggs: (425) 250-0777 mark.skaggs@idaxdata.com

DRIVEWAY
NE 7TH ST

Date: Wed, Jan 20, 2016
Count Period: 6:00 AM to 9:00 AM
Peak Hour: 7:15 AM to 8:15 AM





	HV %:	PHF
EB	1.7%	0.74
WB	4.1%	0.77
NB	0.0%	0.50
SB	-	-
TOTAL	2.7%	0.82

Three-Hour Count Summaries

Interval Start	NE 7TH ST Eastbound UT	LT	TH	RT	NE 7TH ST Westbound UT	LT	TH	RT	DRIVEWAY Northbound UT	LT	TH	RT	Southbound Approach Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
7:15 AM	0	0	23	7	0	0	26	0	0	0	0	0	0	0	0	0	56	0
7:30 AM	0	0	32	8	0	0	26	0	0	0	0	1	0	0	0	0	67	0
7:45 AM	0	0	17	7	0	1	13	0	0	0	0	0	0	0	0	0	38	0
8:00 AM	0	0	18	7	0	2	29	1	0	1	0	0	0	0	0	0	58	219
Peak Hour	0	0	90	29	0	3	94	1	0	1	0	1	0	0	0	0	219	0

Note: For all three-hour count summary, see next page.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
7:15 AM	0	2	0	0	*2*	0	0	0	0	*0*	0	0	0	0	*0*
7:30 AM	0	1	0	0	*1*	0	0	0	0	*0*	0	0	0	0	*0*
7:45 AM	2	1	0	0	*3*	0	0	0	0	*0*	0	0	0	0	*0*
8:00 AM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	0	2	*2*
Peak Hour	2	4	0	0	*6*	0	0	0	0	*0*	0	0	0	2	*2*

Mark Skaggs: (425) 250-0777 mark.skaggs@idaxdata.com

Three-Hour Count Summaries

Interval Start	NE 7TH ST Eastbound UT	LT	TH	RT	NE 7TH ST Westbound UT	LT	TH	RT	DRIVEWAY Northbound UT	LT	TH	RT	Southbound Approach Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
6:00 AM	0	0	2	0	0	0	10	0	0	0	0	0	0	0	0	0	12	0
6:15 AM	0	0	7	0	0	0	6	0	0	0	0	0	0	0	0	0	13	0
6:30 AM	0	0	13	0	0	0	12	0	0	0	0	0	0	0	0	0	25	0
6:45 AM	0	0	14	0	0	0	16	1	0	0	0	0	0	0	0	0	31	81
7:00 AM	0	0	12	2	0	0	16	0	0	0	0	0	0	0	0	1	31	100
7:15 AM	**0**	**0**	**23**	**7**	**0**	**0**	**26**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**56**	143
7:30 AM	**0**	**0**	**32**	**8**	**0**	**0**	**26**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**67**	185
7:45 AM	**0**	**0**	**17**	**7**	**0**	**1**	**13**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**38**	192
8:00 AM	**0**	**0**	**18**	**7**	**0**	**2**	**29**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**58**	**219**
8:15 AM	0	0	22	2	0	1	21	1	0	1	0	0	0	0	0	1	49	212
8:30 AM	0	0	15	0	0	1	21	1	0	0	0	0	0	0	0	0	38	183
8:45 AM	0	0	15	0	0	1	9	15	0	0	0	1	0	0	0	1	42	187
Count Total	0	0	190	33	0	6	205	19	0	2	0	2	0	0	0	3	460	0
Peak Hour	**0**	**0**	**90**	**29**	**0**	**3**	**94**	**1**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**219**	**0**

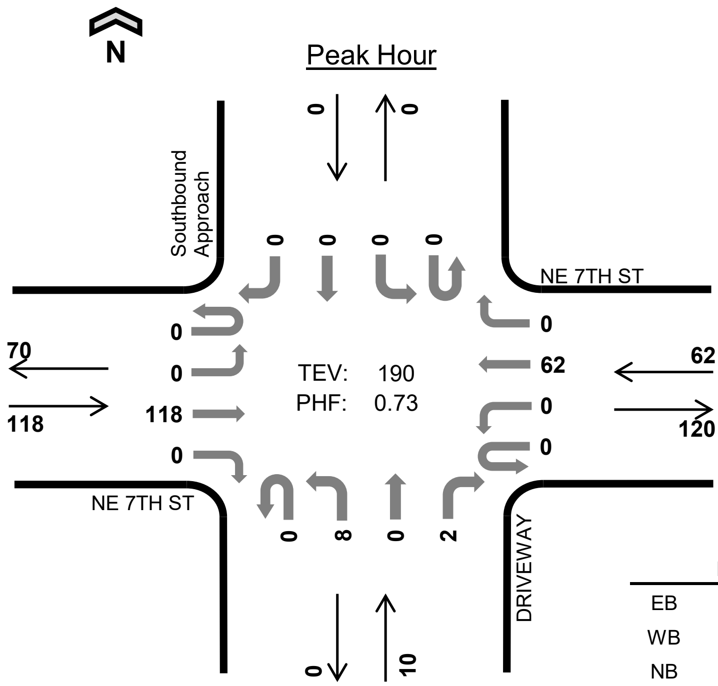
Note: Three-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

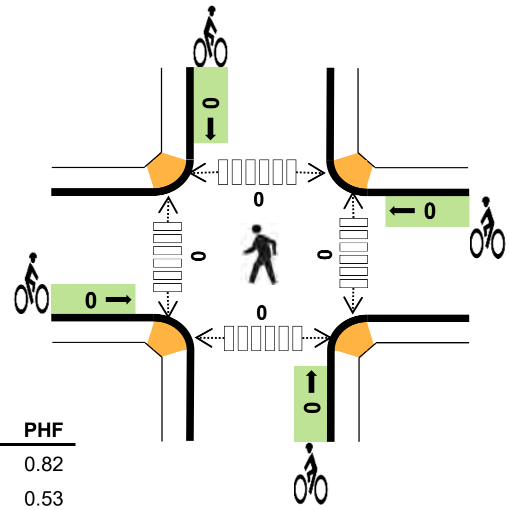
Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
6:00 AM	0	1	0	0	*1*	0	0	0	0	*0*	0	1	0	0	*1*
6:15 AM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	0	2	*2*
6:30 AM	2	0	0	0	*2*	0	0	0	0	*0*	0	0	0	0	*0*
6:45 AM	1	0	0	0	*1*	0	0	0	0	*0*	0	0	0	0	*0*
7:00 AM	2	0	0	0	*2*	0	0	0	0	*0*	0	0	0	1	*1*
7:15 AM	**0**	**2**	**0**	**0**	***2***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
7:30 AM	**0**	**1**	**0**	**0**	***1***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
7:45 AM	**2**	**1**	**0**	**0**	***3***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
8:00 AM	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**2**	***2***
8:15 AM	0	2	0	0	*2*	0	0	0	0	*0*	0	0	0	1	*1*
8:30 AM	0	1	0	0	*1*	0	0	0	0	*0*	0	0	0	0	*0*
8:45 AM	0	1	0	0	*1*	1	0	0	0	*1*	0	0	0	0	*0*
Count Total	7	9	0	0	*16*	1	0	0	0	*1*	0	1	0	6	*7*
Peak Hour	**2**	**4**	**0**	**0**	***6***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**2**	***2***

DRIVEWAY
NE 7TH ST

Date: Tue, Jan 19, 2016
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 5:00 PM to 6:00 PM

Peak Hour





	HV %:	PHF
EB	2.5%	0.82
WB	1.6%	0.53
NB	0.0%	0.28
SB	-	-
TOTAL	2.1%	0.73

Two-Hour Count Summaries

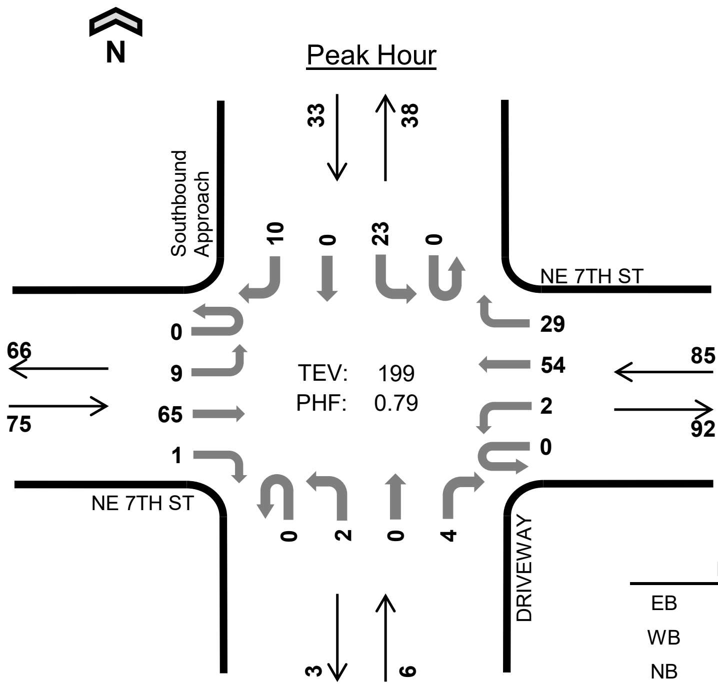
Interval Start	NE 7TH ST				NE 7TH ST				DRIVEWAY				Southbound Approach				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	21	0	0	1	14	0	0	0	0	1	0	0	0	0	37	0
4:15 PM	0	0	18	0	0	0	24	0	0	0	0	0	0	0	0	0	42	0
4:30 PM	0	0	19	0	0	0	19	0	0	2	0	1	0	0	0	0	41	0
4:45 PM	0	0	28	0	0	0	26	0	0	1	0	0	0	0	0	0	55	175
5:00 PM	**0**	**0**	**17**	**0**	**0**	**0**	**13**	**0**	**0**	**8**	**0**	**1**	**0**	**0**	**0**	**0**	**39**	177
5:15 PM	**0**	**0**	**29**	**0**	**0**	**0**	**9**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**39**	174
5:30 PM	**0**	**0**	**36**	**0**	**0**	**0**	**11**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**47**	180
5:45 PM	**0**	**0**	**36**	**0**	**0**	**0**	**29**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**65**	**190**
Count Total	0	0	204	0	0	1	145	0	0	11	0	4	0	0	0	0	365	0
Peak Hour	**0**	**0**	**118**	**0**	**0**	**0**	**62**	**0**	**0**	**8**	**0**	**2**	**0**	**0**	**0**	**0**	**190**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

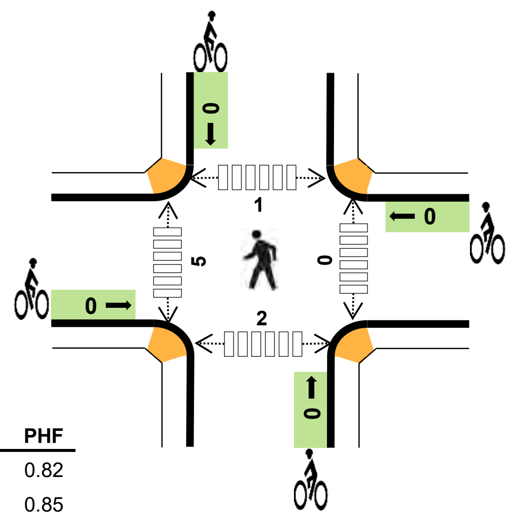
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	1	0	0	0	*1*	0	0	0	0	*0*	0	0	0	0	*0*
4:15 PM	0	2	0	0	*2*	0	0	0	0	*0*	0	0	0	0	*0*
4:30 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	0	0	*0*
4:45 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	0	0	*0*
5:00 PM	**1**	**0**	**0**	**0**	***1***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
5:15 PM	**0**	**1**	**0**	**0**	***1***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
5:30 PM	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
5:45 PM	**2**	**0**	**0**	**0**	***2***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
Count Total	4	3	0	0	*7*	0	0	0	0	*0*	0	0	0	0	*0*
Peak Hour	**3**	**1**	**0**	**0**	***4***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***

DRIVEWAY
NE 7TH ST

Date: Tue, Jan 19, 2016
Count Period: 11:00 AM to 1:00 PM
Peak Hour: 11:15 AM to 12:15 PM



	HV %:	PHF
EB	2.7%	0.82
WB	4.7%	0.85
NB	0.0%	0.50
SB	0.0%	0.52
TOTAL	3.0%	0.79



Two-Hour Count Summaries

Interval Start	NE 7TH ST Eastbound UT	LT	TH	RT	NE 7TH ST Westbound UT	LT	TH	RT	DRIVEWAY Northbound UT	LT	TH	RT	Southbound Approach Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
11:00 AM	0	0	13	1	0	0	10	2	0	2	0	2	0	0	0	1	31	0
11:15 AM	**0**	**3**	**14**	**0**	**0**	**1**	**12**	**12**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**45**	0
11:30 AM	**0**	**5**	**17**	**1**	**0**	**0**	**11**	**11**	**0**	**2**	**0**	**0**	**0**	**13**	**0**	**3**	**63**	0
11:45 AM	**0**	**1**	**15**	**0**	**0**	**1**	**15**	**6**	**0**	**0**	**0**	**1**	**0**	**9**	**0**	**7**	**55**	194
12:00 PM	**0**	**0**	**19**	**0**	**0**	**0**	**16**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**36**	**199**
12:15 PM	0	0	19	4	0	1	16	1	0	0	0	1	0	0	0	1	43	197
12:30 PM	0	0	20	1	0	2	14	0	0	0	0	1	0	0	0	1	39	173
12:45 PM	0	0	13	0	0	1	8	0	0	2	0	3	0	1	0	0	28	146
Count Total	0	9	130	7	0	6	102	32	0	6	0	11	0	24	0	13	340	0
Peak Hour	**0**	**9**	**65**	**1**	**0**	**2**	**54**	**29**	**0**	**2**	**0**	**4**	**0**	**23**	**0**	**10**	**199**	**0**

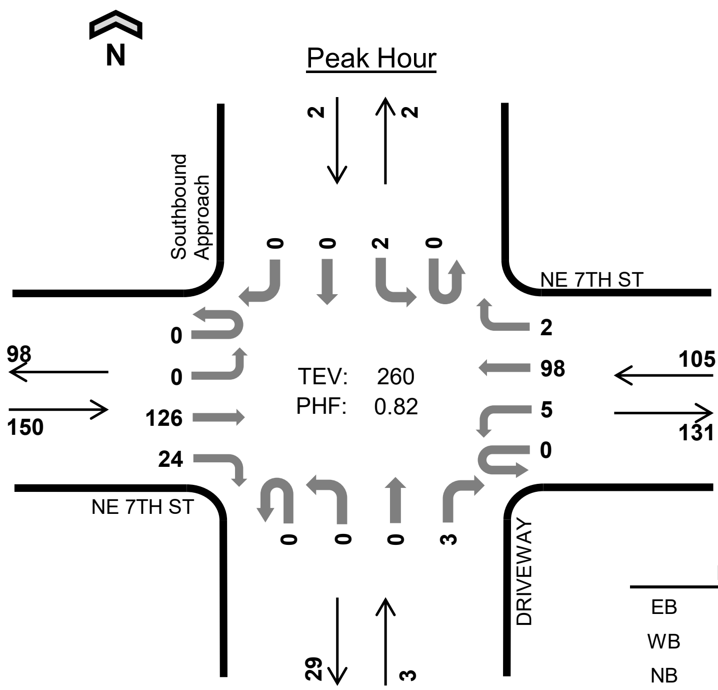
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

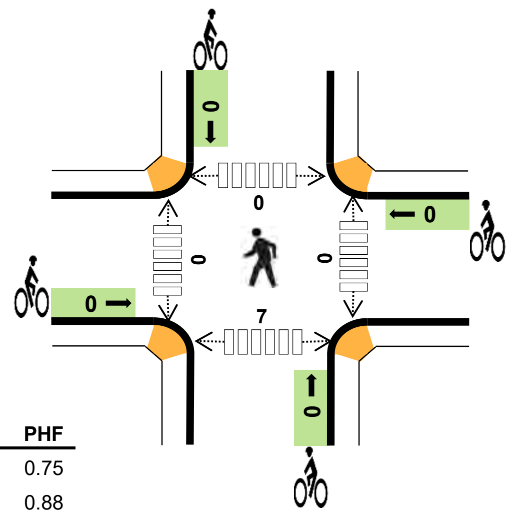
Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
11:00 AM	1	0	1	0	*2*	0	1	0	0	*1*	1	0	0	5	*6*
11:15 AM	**0**	**1**	**0**	**0**	***1***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**1**	**2**	*4*
11:30 AM	**0**	**1**	**0**	**0**	***1***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**0**	*1*
11:45 AM	**2**	**1**	**0**	**0**	***3***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
12:00 PM	**0**	**1**	**0**	**0**	***1***	**0**	**0**	**0**	**0**	***0***	**0**	**3**	**0**	**0**	*3*
12:15 PM	0	2	0	0	*2*	0	0	0	0	*0*	0	0	0	1	*1*
12:30 PM	2	1	0	1	*4*	0	0	0	0	*0*	0	0	0	2	*2*
12:45 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	5	7	1	1	*14*	0	1	0	0	*1*	1	5	1	10	*17*
Peak Hour	**2**	**4**	**0**	**0**	***6***	**0**	**0**	**0**	**0**	***0***	**0**	**5**	**1**	**2**	***8***

Mark Skaggs: (425) 250-0777 mark.skaggs@idaxdata.com

DRIVEWAY
NE 7TH ST

Date: Tue, Jan 19, 2016
Count Period: 6:00 AM to 9:00 AM
Peak Hour: 7:15 AM to 8:15 AM





	HV %:	PHF
EB	2.0%	0.75
WB	3.8%	0.88
NB	0.0%	0.38
SB	0.0%	0.25
TOTAL	2.7%	0.82

Three-Hour Count Summaries

Interval Start	NE 7TH ST				NE 7TH ST				DRIVEWAY				Southbound Approach				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:15 AM	0	0	42	6	0	0	22	0	0	0	0	0	0	0	0	0	70	0
7:30 AM	0	0	41	9	0	0	29	0	0	0	0	0	0	0	0	0	79	0
7:45 AM	0	0	27	3	0	1	27	2	0	0	0	2	0	2	0	0	64	0
8:00 AM	0	0	16	6	0	4	20	0	0	0	0	1	0	0	0	0	47	260
Peak Hour	0	0	126	24	0	5	98	2	0	0	0	3	0	2	0	0	260	0

Note: For all three-hour count summary, see next page.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:15 AM	1	3	0	0	*4*	0	0	0	0	*0*	0	0	0	4	*4*
7:30 AM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	0	0	*0*
7:45 AM	2	1	0	0	*3*	0	0	0	0	*0*	0	0	0	0	*0*
8:00 AM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	0	3	*3*
Peak Hour	3	4	0	0	*7*	0	0	0	0	*0*	0	0	0	7	*7*

Three-Hour Count Summaries

Interval Start	NE 7TH ST Eastbound UT	LT	TH	RT	NE 7TH ST Westbound UT	LT	TH	RT	DRIVEWAY Northbound UT	LT	TH	RT	Southbound Approach Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
6:00 AM	0	0	5	0	0	0	11	0	0	0	0	0	0	0	0	0	16	0
6:15 AM	0	0	6	0	0	0	7	0	0	0	0	0	0	0	0	0	13	0
6:30 AM	0	0	12	0	0	0	9	0	0	0	0	0	0	0	0	0	21	0
6:45 AM	0	0	17	1	0	0	15	0	0	0	0	0	0	0	0	0	33	83
7:00 AM	0	0	13	1	0	0	22	0	0	0	0	0	0	0	0	0	36	103
7:15 AM	**0**	**0**	**42**	**6**	**0**	**0**	**22**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**70**	160
7:30 AM	**0**	**0**	**41**	**9**	**0**	**0**	**29**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**79**	218
7:45 AM	**0**	**0**	**27**	**3**	**0**	**1**	**27**	**2**	**0**	**0**	**0**	**2**	**0**	**2**	**0**	**0**	**64**	249
8:00 AM	**0**	**0**	**16**	**6**	**0**	**4**	**20**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**47**	**260**
8:15 AM	0	0	7	3	0	0	26	1	0	2	0	0	0	0	0	1	40	230
8:30 AM	0	0	13	0	0	0	24	3	0	1	0	1	0	0	0	0	42	193
8:45 AM	0	0	16	1	0	2	10	15	0	1	0	1	0	0	0	1	47	176
Count Total	0	0	215	30	0	7	222	21	0	4	0	5	0	2	0	2	508	0
Peak Hour	**0**	**0**	**126**	**24**	**0**	**5**	**98**	**2**	**0**	**0**	**0**	**3**	**0**	**2**	**0**	**0**	**260**	**0**

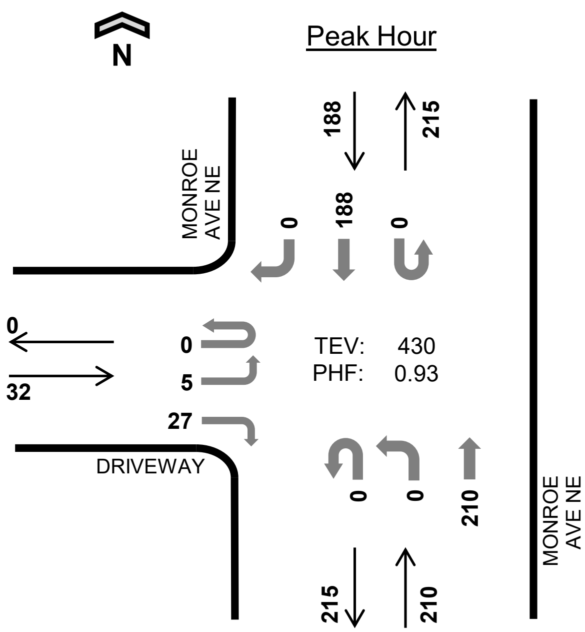
Note: Three-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

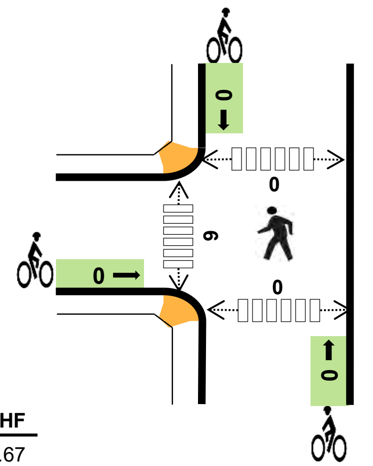
Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
6:00 AM	0	0	0	0	*0*	0	0	0	0	*0*	0	1	0	3	*4*
6:15 AM	1	0	0	0	*1*	0	0	0	0	*0*	0	0	0	1	*1*
6:30 AM	0	1	0	0	*1*	0	0	0	0	*0*	0	0	0	0	*0*
6:45 AM	1	0	0	0	*1*	0	0	0	0	*0*	0	0	0	0	*0*
7:00 AM	1	0	0	0	*1*	0	0	0	0	*0*	0	0	0	0	*0*
7:15 AM	**1**	**3**	**0**	**0**	***4***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**4**	*4*
7:30 AM	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
7:45 AM	**2**	**1**	**0**	**0**	***3***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
8:00 AM	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**3**	***3***
8:15 AM	0	1	0	0	*1*	0	0	0	0	*0*	0	0	0	1	*1*
8:30 AM	1	1	0	0	*2*	0	0	0	0	*0*	0	1	0	1	*2*
8:45 AM	0	1	0	0	*1*	0	0	0	0	*0*	0	0	2	1	*3*
Count Total	7	8	0	0	*15*	0	0	0	0	*0*	0	2	2	14	*18*
Peak Hour	**3**	**4**	**0**	**0**	***7***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**7**	***7***

Mark Skaggs: (425) 250-0777 mark.skaggs@idaxdata.com

MONROE AVE NE
DRIVEWAY

Date: Wed, Jan 20, 2016
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:30 PM to 5:30 PM





	HV %:	PHF
EB	0.0%	0.67
WB	-	-
NB	0.5%	0.95
SB	1.6%	0.77
TOTAL	0.9%	0.93

Two-Hour Count Summaries

Interval Start	DRIVEWAY Eastbound UT	LT	TH	RT	0 Westbound UT	LT	TH	RT	MONROE AVE NE Northbound UT	LT	TH	RT	MONROE AVE NE Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
4:00 PM	0	2	0	2	0	0	0	0	0	1	47	0	0	0	56	2	110	0
4:15 PM	0	2	0	1	0	0	0	0	0	0	49	0	0	0	53	0	105	0
4:30 PM	**0**	**1**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**55**	**0**	**0**	**0**	**41**	**0**	**101**	0
4:45 PM	**0**	**1**	**0**	**11**	**0**	**0**	**0**	**0**	**0**	**0**	**55**	**0**	**0**	**0**	**41**	**0**	**108**	424
5:00 PM	**0**	**2**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**54**	**0**	**0**	**0**	**45**	**0**	**105**	419
5:15 PM	**0**	**1**	**0**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**46**	**0**	**0**	**0**	**61**	**0**	**116**	**430**
5:30 PM	0	0	0	3	0	0	0	0	0	0	39	0	0	0	59	0	101	430
5:45 PM	0	0	0	0	0	0	0	0	0	0	58	0	0	0	48	0	106	428
Count Total	0	9	0	33	0	0	0	0	0	1	403	0	0	0	404	2	852	0
Peak Hour	**0**	**5**	**0**	**27**	**0**	**0**	**0**	**0**	**0**	**0**	**210**	**0**	**0**	**0**	**188**	**0**	**430**	**0**

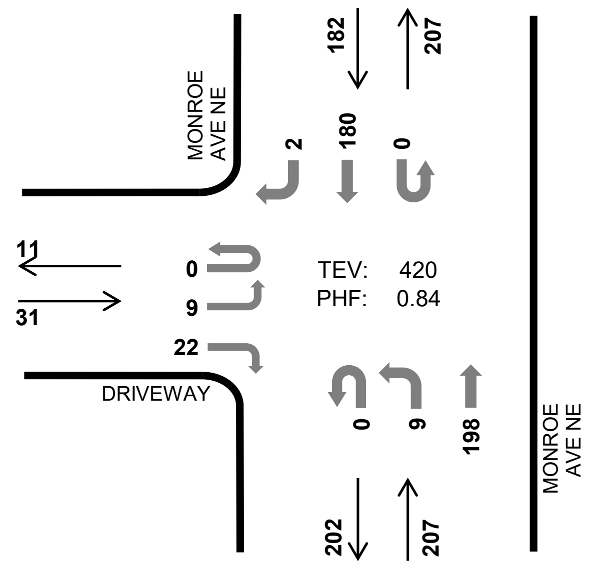
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

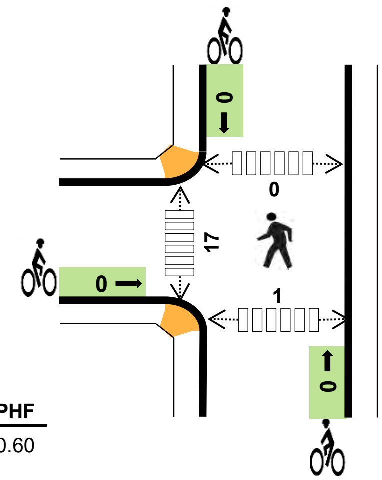
Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
4:00 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	2	0	0	*2*
4:15 PM	0	0	1	1	*2*	0	0	0	0	*0*	0	0	0	0	*0*
4:30 PM	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***	**0**	**4**	**0**	**0**	*4*
4:45 PM	**0**	**0**	**0**	**2**	***2***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**0**	*1*
5:00 PM	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***	**0**	**3**	**0**	**0**	*3*
5:15 PM	**0**	**0**	**1**	**1**	***2***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**0**	***1***
5:30 PM	0	0	0	2	*2*	0	0	0	0	*0*	0	1	0	0	*1*
5:45 PM	0	0	1	1	*2*	0	0	0	0	*0*	0	1	0	0	*1*
Count Total	0	0	3	7	*10*	0	0	0	0	*0*	0	13	0	0	*13*
Peak Hr	**0**	**0**	**1**	**3**	***4***	**0**	**0**	**0**	**0**	***0***	**0**	**9**	**0**	**0**	***9***

MONROE AVE NE
DRIVEWAY

Date: Wed, Jan 20, 2016
Count Period: 11:00 AM to 1:00 PM
Peak Hour: 11:15 AM to 12:15 PM

Peak Hour





	HV %:	PHF
EB	3.2%	0.60
WB	-	-
NB	2.4%	0.85
SB	2.7%	0.75
TOTAL	2.6%	0.84

Two-Hour Count Summaries

Interval Start	DRIVEWAY Eastbound UT	LT	TH	RT	0 Westbound UT	LT	TH	RT	MONROE AVE NE Northbound UT	LT	TH	RT	MONROE AVE NE Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
11:00 AM	0	2	0	3	0	0	0	0	0	2	50	0	0	0	37	0	94	0
11:15 AM	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**1**	**53**	**0**	**0**	**0**	**29**	**0**	**89**	0
11:30 AM	**0**	**2**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**60**	**0**	**0**	**0**	**60**	**1**	**125**	0
11:45 AM	**0**	**2**	**0**	**7**	**0**	**0**	**0**	**0**	**0**	**4**	**50**	**0**	**0**	**0**	**43**	**1**	**107**	415
12:00 PM	**0**	**5**	**0**	**8**	**0**	**0**	**0**	**0**	**0**	**3**	**35**	**0**	**0**	**0**	**48**	**0**	**99**	**420**
12:15 PM	0	0	0	0	0	0	0	0	1	2	36	0	0	0	33	2	74	405
12:30 PM	0	0	0	2	0	0	0	0	0	2	47	0	0	0	35	0	86	366
12:45 PM	0	3	0	1	0	0	0	0	0	1	40	0	0	0	41	1	87	346
Count Total	0	14	0	28	0	0	0	0	1	16	371	0	0	0	326	5	761	0
Peak Hour	**0**	**9**	**0**	**22**	**0**	**0**	**0**	**0**	**0**	**9**	**198**	**0**	**0**	**0**	**180**	**2**	**420**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

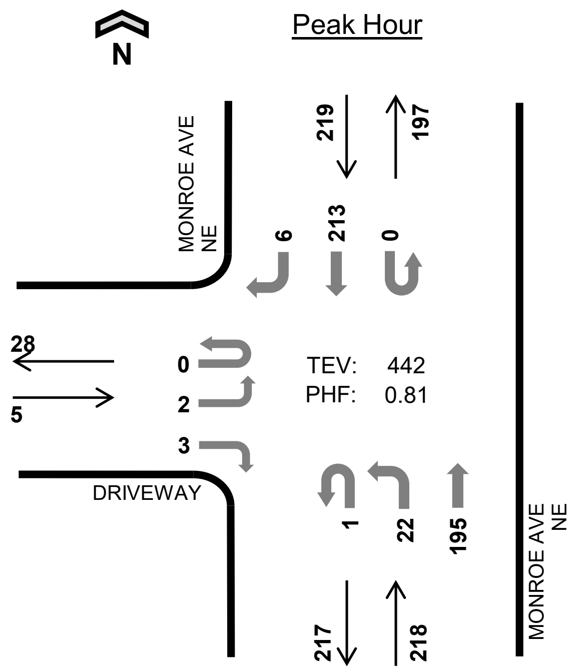
Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
11:00 AM	0	0	3	1	*4*	0	0	0	0	*0*	0	2	0	0	*2*
11:15 AM	**0**	**0**	**2**	**1**	***3***	**0**	**0**	**0**	**0**	***0***	**0**	**3**	**0**	**1**	*4*
11:30 AM	**0**	**0**	**1**	**1**	***2***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**0**	**0**	*2*
11:45 AM	**0**	**0**	**2**	**1**	***3***	**0**	**0**	**0**	**0**	***0***	**0**	**7**	**0**	**0**	*7*
12:00 PM	**1**	**0**	**0**	**2**	***3***	**0**	**0**	**0**	**0**	***0***	**0**	**5**	**0**	**0**	***5***
12:15 PM	0	0	1	3	*4*	0	0	0	0	*0*	0	2	0	0	*2*
12:30 PM	0	0	2	2	*4*	0	0	0	0	*0*	0	1	0	0	*1*
12:45 PM	0	0	0	5	*5*	0	0	0	0	*0*	0	4	0	0	*4*
Count Total	1	0	11	16	*28*	0	0	0	0	*0*	0	26	0	1	*27*
Peak Hr	**1**	**0**	**5**	**5**	***11***	**0**	**0**	**0**	**0**	***0***	**0**	**17**	**0**	**1**	***18***

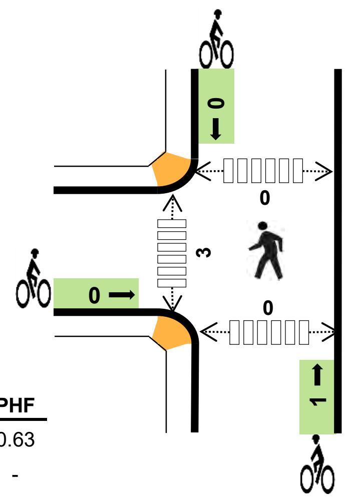
Mark Skaggs: (425) 250-0777 mark.skaggs@idaxdata.com

MONROE AVE NE
DRIVEWAY

Date: Wed, Jan 20, 2016
Count Period: 6:00 AM to 9:00 AM
Peak Hour: 7:15 AM to 8:15 AM

Peak Hour





	HV %:	PHF
EB	0.0%	0.63
WB	-	-
NB	5.5%	0.91
SB	1.4%	0.72
TOTAL	3.4%	0.81

Three-Hour Count Summaries

Interval Start	DRIVEWAY Eastbound UT	LT	TH	RT	0 Westbound UT	LT	TH	RT	MONROE AVE NE Northbound UT	LT	TH	RT	MONROE AVE NE Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
7:15 AM	0	1	0	0	0	0	0	0	0	2	47	0	0	0	51	0	101	0
7:30 AM	0	0	0	1	0	0	0	0	0	4	56	0	0	0	76	0	137	0
7:45 AM	0	0	0	1	0	0	0	0	0	11	40	0	0	0	55	4	111	0
8:00 AM	0	1	0	1	0	0	0	0	1	5	52	0	0	0	31	2	93	442
Peak Hour	0	2	0	3	0	0	0	0	1	22	195	0	0	0	213	6	442	0

Note: For all three-hour count summary, see next page.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
7:15 AM	0	0	4	1	*5*	0	0	1	0	*1*	0	2	0	0	*2*
7:30 AM	0	0	4	1	*5*	0	0	0	0	*0*	0	0	0	0	*0*
7:45 AM	0	0	1	1	*2*	0	0	0	0	*0*	0	1	0	0	*1*
8:00 AM	0	0	3	0	*3*	0	0	0	0	*0*	0	0	0	0	*0*
Peak Hour	0	0	12	3	*15*	0	0	1	0	*1*	0	3	0	0	*3*

Mark Skaggs: (425) 250-0777 mark.skaggs@idaxdata.com

Three-Hour Count Summaries

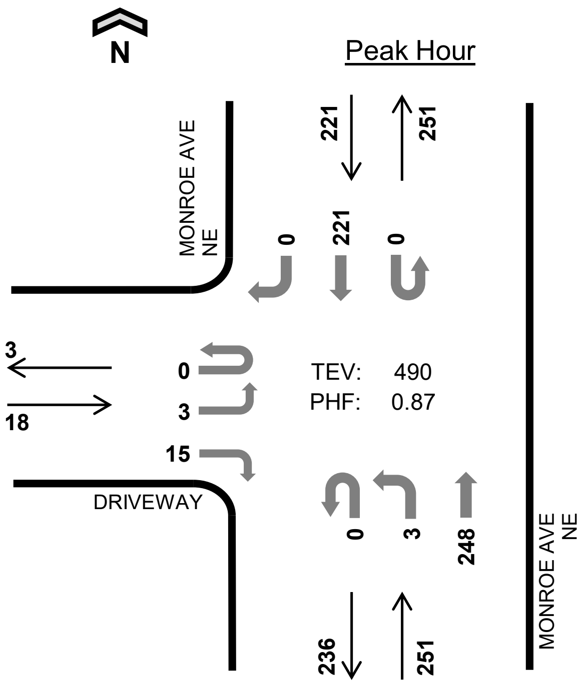
Interval Start	DRIVEWAY Eastbound UT	LT	TH	RT	0 Westbound UT	LT	TH	RT	MONROE AVE NE Northbound UT	LT	TH	RT	MONROE AVE NE Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
6:00 AM	0	0	0	0	0	0	0	0	0	2	25	0	0	0	12	0	39	0
6:15 AM	0	0	0	1	0	0	0	0	0	2	21	0	0	0	23	0	47	0
6:30 AM	0	0	0	0	0	0	0	0	0	4	36	0	0	0	29	0	69	0
6:45 AM	0	0	0	0	0	0	0	0	0	0	32	0	0	0	31	1	64	219
7:00 AM	0	0	0	1	0	0	0	0	0	1	31	0	0	0	29	0	62	242
7:15 AM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**47**	**0**	**0**	**0**	**51**	**0**	**101**	296
7:30 AM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**4**	**56**	**0**	**0**	**0**	**76**	**0**	**137**	364
7:45 AM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**11**	**40**	**0**	**0**	**0**	**55**	**4**	**111**	411
8:00 AM	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**5**	**52**	**0**	**0**	**0**	**31**	**2**	**93**	**442**
8:15 AM	0	0	0	1	0	0	0	0	0	2	33	0	0	0	32	0	68	409
8:30 AM	0	2	0	4	0	0	0	0	0	4	58	0	0	0	26	1	95	367
8:45 AM	0	1	0	0	0	0	0	0	1	0	53	0	0	0	34	1	90	346
Count Total	0	5	0	10	0	0	0	0	2	37	484	0	0	0	429	9	976	0
Peak Hour	**0**	**2**	**0**	**3**	**0**	**0**	**0**	**0**	**1**	**22**	**195**	**0**	**0**	**0**	**213**	**6**	**442**	**0**

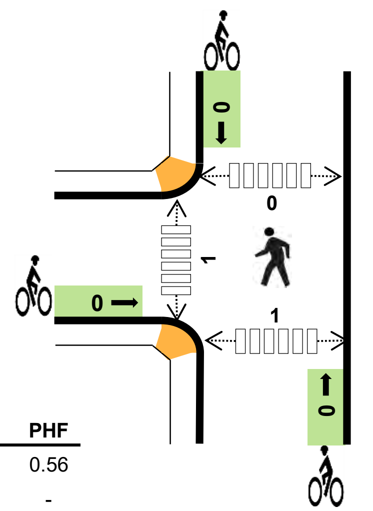
Note: Three-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
6:00 AM	0	0	1	0	*1*	0	0	0	1	*1*	0	0	0	0	*0*
6:15 AM	0	0	0	0	*0*	0	0	0	0	*0*	0	2	0	0	*2*
6:30 AM	0	0	1	1	*2*	0	0	0	0	*0*	0	0	0	0	*0*
6:45 AM	0	0	0	1	*1*	0	0	0	0	*0*	0	1	0	0	*1*
7:00 AM	0	0	2	1	*3*	0	0	0	0	*0*	0	3	0	0	*3*
7:15 AM	**0**	**0**	**4**	**1**	***5***	**0**	**0**	**1**	**0**	***1***	**0**	**2**	**0**	**0**	*2*
7:30 AM	**0**	**0**	**4**	**1**	***5***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
7:45 AM	**0**	**0**	**1**	**1**	***2***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**0**	*1*
8:00 AM	**0**	**0**	**3**	**0**	***3***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
8:15 AM	0	0	1	1	*2*	0	0	0	0	*0*	0	0	0	1	*1*
8:30 AM	0	0	2	1	*3*	0	0	0	0	*0*	0	2	0	0	*2*
8:45 AM	0	0	2	2	*4*	0	0	0	0	*0*	0	4	0	0	*4*
Count Total	0	0	21	10	*31*	0	0	1	1	*2*	0	15	0	1	*16*
Peak Hr	**0**	**0**	**12**	**3**	***15***	**0**	**0**	**1**	**0**	***1***	**0**	**3**	**0**	**0**	***3***

MONROE AVE NE
DRIVEWAY

Date: Tue, Jan 19, 2016
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:00 PM to 5:00 PM





	HV %:	PHF
EB	0.0%	0.56
WB	-	-
NB	0.8%	0.80
SB	3.2%	0.91
TOTAL	1.8%	0.87

Two-Hour Count Summaries

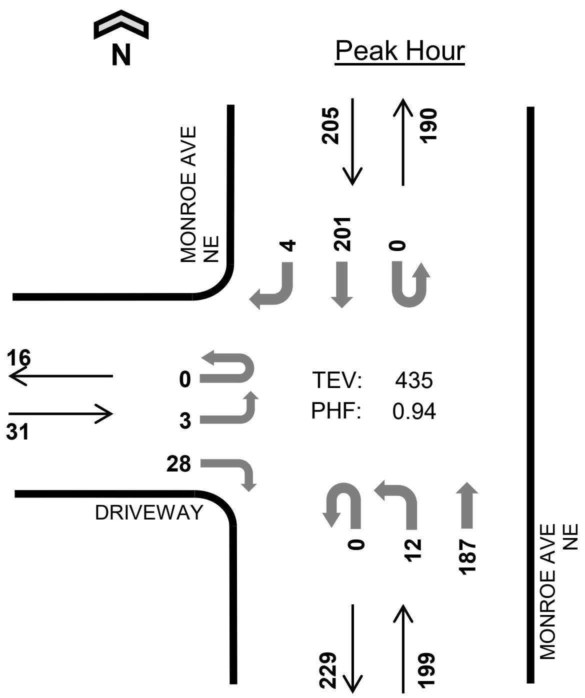
Interval Start	DRIVEWAY				0				MONROE AVE NE				MONROE AVE NE				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	**0**	**2**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**3**	**75**	**0**	**0**	**0**	**57**	**0**	**141**	0
4:15 PM	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**59**	**0**	**0**	**0**	**60**	**0**	**122**	0
4:30 PM	**0**	**1**	**0**	**7**	**0**	**0**	**0**	**0**	**0**	**0**	**52**	**0**	**0**	**0**	**43**	**0**	**103**	0
4:45 PM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**62**	**0**	**0**	**0**	**61**	**0**	**124**	**490**
5:00 PM	0	2	0	10	0	0	0	0	0	0	56	0	0	0	43	0	111	460
5:15 PM	0	0	0	10	0	0	0	0	0	0	33	0	1	0	55	0	99	437
5:30 PM	0	0	0	0	0	0	0	0	0	0	44	0	0	0	60	0	104	438
5:45 PM	0	0	0	1	0	0	0	0	0	0	51	0	0	0	69	0	121	435
Count Total	0	5	0	36	0	0	0	0	0	3	432	0	1	0	448	0	925	0
Peak Hour	**0**	**3**	**0**	**15**	**0**	**0**	**0**	**0**	**0**	**3**	**248**	**0**	**0**	**0**	**221**	**0**	**490**	**0**

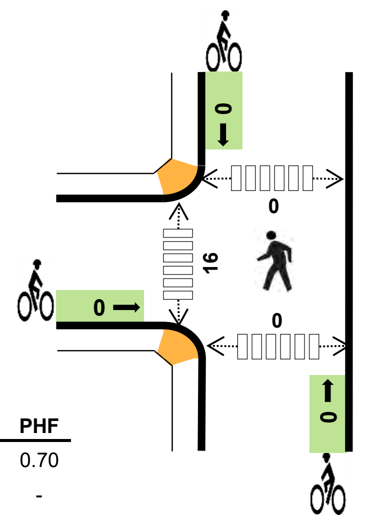
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	**0**	**0**	**1**	**2**	***3***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**1**	*1*
4:15 PM	**0**	**0**	**1**	**2**	***3***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
4:30 PM	**0**	**0**	**0**	**1**	***1***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
4:45 PM	**0**	**0**	**0**	**2**	***2***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**0**	*1*
5:00 PM	0	0	1	0	*1*	0	0	0	0	*0*	0	0	0	0	*0*
5:15 PM	0	0	1	0	*1*	0	0	0	0	*0*	0	2	0	0	*2*
5:30 PM	0	0	0	1	*1*	0	0	0	0	*0*	0	2	0	0	*2*
5:45 PM	0	0	0	2	*2*	0	0	0	0	*0*	0	2	0	0	*2*
Count Total	0	0	4	10	*14*	0	0	0	0	*0*	0	7	0	1	*8*
Peak Hr	**0**	**0**	**2**	**7**	***9***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**1**	*2*

MONROE AVE NE
DRIVEWAY

Date: Tue, Jan 19, 2016
Count Period: 11:00 AM to 1:00 PM
Peak Hour: 11:30 AM to 12:30 PM





	HV %:	PHF
EB	0.0%	0.70
WB	-	-
NB	3.5%	0.94
SB	3.4%	0.85
TOTAL	3.2%	0.94

Two-Hour Count Summaries

Interval Start	DRIVEWAY Eastbound UT	LT	TH	RT	0 Westbound UT	LT	TH	RT	MONROE AVE NE Northbound UT	LT	TH	RT	MONROE AVE NE Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
11:00 AM	0	2	0	5	0	0	0	0	0	3	38	0	0	0	25	0	73	0
11:15 AM	0	1	0	8	0	0	0	0	0	0	44	0	0	0	27	1	81	0
11:30 AM	**0**	**0**	**0**	**7**	**0**	**0**	**0**	**0**	**0**	**3**	**46**	**0**	**0**	**0**	**58**	**2**	**116**	0
11:45 AM	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**3**	**50**	**0**	**0**	**0**	**50**	**0**	**105**	375
12:00 PM	**0**	**1**	**0**	**10**	**0**	**0**	**0**	**0**	**0**	**4**	**48**	**0**	**0**	**0**	**39**	**1**	**103**	405
12:15 PM	**0**	**2**	**0**	**9**	**0**	**0**	**0**	**0**	**0**	**2**	**43**	**0**	**0**	**0**	**54**	**1**	**111**	**435**
12:30 PM	0	2	0	2	0	0	0	0	0	3	35	0	0	0	41	0	83	402
12:45 PM	0	0	0	3	0	0	0	0	0	2	40	0	0	0	39	0	84	381
Count Total	0	8	0	46	0	0	0	0	0	20	344	0	0	0	333	5	756	0
Peak Hour	**0**	**3**	**0**	**28**	**0**	**0**	**0**	**0**	**0**	**12**	**187**	**0**	**0**	**0**	**201**	**4**	**435**	**0**

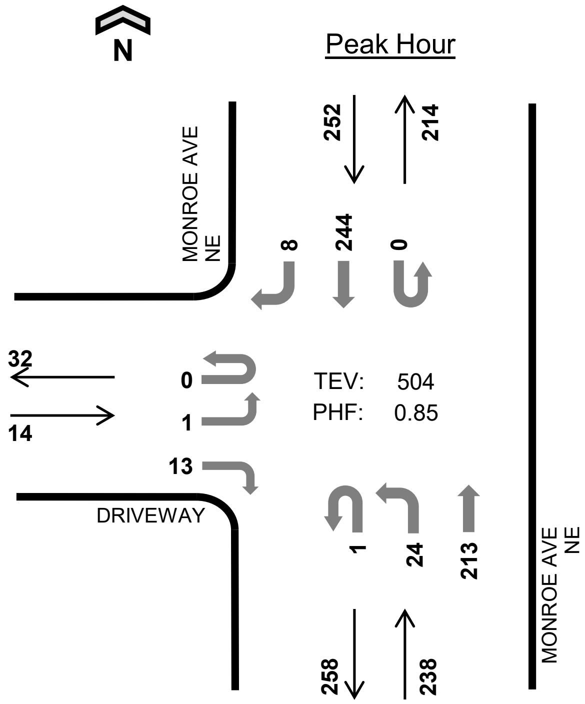
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

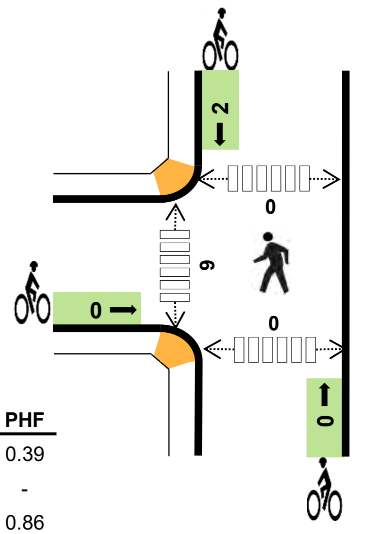
Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
11:00 AM	0	0	0	0	*0*	0	0	0	0	*0*	0	3	0	1	*4*
11:15 AM	0	0	0	1	*1*	0	0	0	0	*0*	0	0	0	0	*0*
11:30 AM	**0**	**0**	**1**	**2**	***3***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**0**	**0**	*2*
11:45 AM	**0**	**0**	**3**	**3**	***6***	**0**	**0**	**0**	**0**	***0***	**0**	**5**	**0**	**0**	*5*
12:00 PM	**0**	**0**	**1**	**0**	***1***	**0**	**0**	**0**	**0**	***0***	**0**	**7**	**0**	**0**	*7*
12:15 PM	**0**	**0**	**2**	**2**	***4***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**0**	**0**	*2*
12:30 PM	1	0	0	3	*4*	0	0	0	0	*0*	0	1	0	0	*1*
12:45 PM	0	0	1	1	*2*	0	0	0	0	*0*	0	4	0	0	*4*
Count Total	1	0	8	12	*21*	0	0	0	0	*0*	0	24	0	1	*25*
Peak Hr	**0**	**0**	**7**	**7**	***14***	**0**	**0**	**0**	**0**	***0***	**0**	**16**	**0**	**0**	***16***

Mark Skaggs: (425) 250-0777 mark.skaggs@idaxdata.com

MONROE AVE NE
DRIVEWAY

Date: Tue, Jan 19, 2016
Count Period: 6:00 AM to 9:00 AM
Peak Hour: 7:15 AM to 8:15 AM





	HV %:	PHF
EB	0.0%	0.39
WB	-	-
NB	3.8%	0.86
SB	1.6%	0.76
TOTAL	2.6%	0.85

Three-Hour Count Summaries

Interval Start	DRIVEWAY				0				MONROE AVE NE				MONROE AVE NE				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:15 AM	0	0	0	0	0	0	0	0	0	4	42	0	0	0	69	0	115	0
7:30 AM	0	0	0	0	0	0	0	0	0	2	63	0	0	0	82	1	148	0
7:45 AM	0	1	0	8	0	0	0	0	1	13	55	0	0	0	59	4	141	0
8:00 AM	0	0	0	5	0	0	0	0	0	5	53	0	0	0	34	3	100	504
Peak Hour	0	1	0	13	0	0	0	0	1	24	213	0	0	0	244	8	504	0

Note: For all three-hour count summary, see next page.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:15 AM	0	0	3	0	*3*	0	0	0	0	*0*	0	2	0	0	*2*
7:30 AM	0	0	2	2	*4*	0	0	0	2	*2*	0	1	0	0	*1*
7:45 AM	0	0	1	1	*2*	0	0	0	0	*0*	0	2	0	0	*2*
8:00 AM	0	0	3	1	*4*	0	0	0	0	*0*	0	4	0	0	*4*
Peak Hour	0	0	9	4	*13*	0	0	0	2	*2*	0	9	0	0	*9*

Mark Skaggs: (425) 250-0777 mark.skaggs@idaxdata.com

Three-Hour Count Summaries

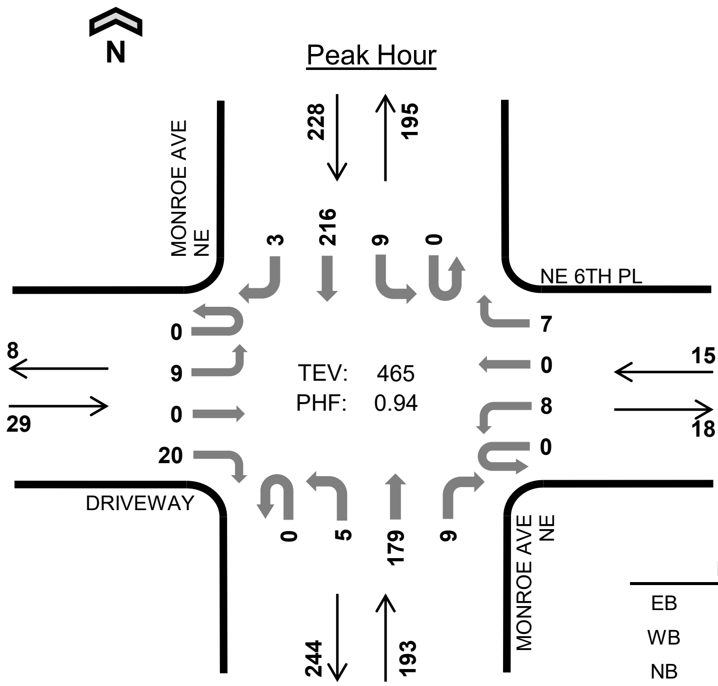
Interval Start	DRIVEWAY				0				MONROE AVE NE				MONROE AVE NE				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
6:00 AM	0	0	0	0	0	0	0	0	0	1	26	0	0	0	12	1	40	0
6:15 AM	0	0	0	0	0	0	0	0	0	3	22	0	0	0	24	0	49	0
6:30 AM	0	0	0	0	0	0	0	0	0	3	40	0	0	0	30	0	73	0
6:45 AM	0	0	0	1	0	0	0	0	0	0	27	0	0	0	34	0	62	224
7:00 AM	0	0	0	0	0	0	0	0	0	0	34	0	0	0	22	0	56	240
7:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**42**	**0**	**0**	**0**	**69**	**0**	**115**	306
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**63**	**0**	**0**	**0**	**82**	**1**	**148**	381
7:45 AM	**0**	**1**	**0**	**8**	**0**	**0**	**0**	**0**	**1**	**13**	**55**	**0**	**0**	**0**	**59**	**4**	**141**	460
8:00 AM	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**5**	**53**	**0**	**0**	**0**	**34**	**3**	**100**	**504**
8:15 AM	0	0	0	4	0	0	0	0	0	4	51	0	0	0	27	0	86	475
8:30 AM	0	0	0	1	0	0	0	0	0	4	50	0	0	0	27	0	82	409
8:45 AM	0	1	0	1	0	0	0	0	0	0	53	0	0	0	39	1	95	363
Count Total	0	2	0	20	0	0	0	0	1	39	516	0	0	0	459	10	1,047	0
Peak Hour	**0**	**1**	**0**	**13**	**0**	**0**	**0**	**0**	**1**	**24**	**213**	**0**	**0**	**0**	**244**	**8**	**504**	**0**

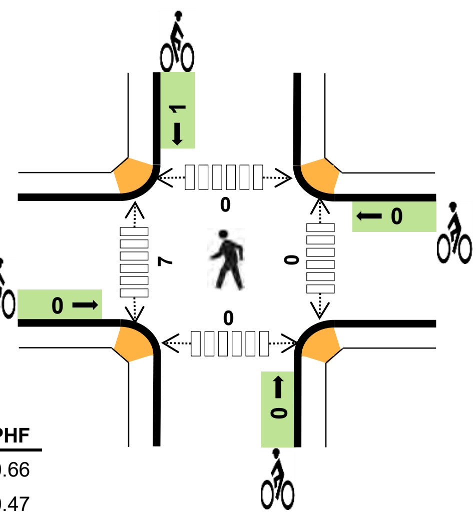
Note: Three-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
6:00 AM	0	0	0	0	*0*	0	0	0	2	*2*	0	2	0	0	*2*
6:15 AM	0	0	1	1	*2*	0	0	0	0	*0*	0	2	0	0	*2*
6:30 AM	0	0	1	0	*1*	0	0	0	0	*0*	0	0	0	0	*0*
6:45 AM	0	0	2	2	*4*	0	0	0	0	*0*	0	0	0	0	*0*
7:00 AM	0	0	1	1	*2*	0	0	0	0	*0*	0	2	0	0	*2*
7:15 AM	**0**	**0**	**3**	**0**	***3***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**0**	**0**	*2*
7:30 AM	**0**	**0**	**2**	**2**	***4***	**0**	**0**	**0**	**2**	***2***	**0**	**1**	**0**	**0**	*1*
7:45 AM	**0**	**0**	**1**	**1**	***2***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**0**	**0**	*2*
8:00 AM	**0**	**0**	**3**	**1**	***4***	**0**	**0**	**0**	**0**	***0***	**0**	**4**	**0**	**0**	*4*
8:15 AM	0	0	3	2	*5*	0	0	0	0	*0*	0	1	0	0	*1*
8:30 AM	0	0	0	1	*1*	0	0	0	0	*0*	0	0	0	0	*0*
8:45 AM	0	0	1	1	*2*	0	0	0	0	*0*	0	3	0	0	*3*
Count Total	0	0	18	12	*30*	0	0	0	4	*4*	0	19	0	0	*19*
Peak Hr	**0**	**0**	**9**	**4**	***13***	**0**	**0**	**0**	**2**	***2***	**0**	**9**	**0**	**0**	***9***

MONROE AVE NE
NE 6TH PL

Date: Wed, Jan 20, 2016
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:45 PM to 5:45 PM





	HV %:	PHF
EB	0.0%	0.66
WB	0.0%	0.47
NB	1.0%	0.91
SB	2.2%	0.85
TOTAL	1.5%	0.94

Two-Hour Count Summaries

Interval Start	DRIVEWAY				NE 6TH PL				MONROE AVE NE				MONROE AVE NE				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	2	0	7	0	3	0	1	0	0	40	1	0	2	51	2	109	0
4:15 PM	0	2	0	1	0	0	0	0	0	0	50	1	0	6	47	0	107	0
4:30 PM	0	5	0	3	0	2	0	5	0	0	42	2	0	1	38	4	102	0
4:45 PM	**0**	**4**	**0**	**7**	**0**	**7**	**0**	**1**	**0**	**0**	**51**	**2**	**0**	**0**	**52**	**0**	**124**	442
5:00 PM	**0**	**3**	**0**	**8**	**0**	**1**	**0**	**2**	**0**	**3**	**46**	**2**	**0**	**3**	**43**	**0**	**111**	444
5:15 PM	**0**	**2**	**0**	**2**	**0**	**0**	**0**	**1**	**0**	**1**	**46**	**4**	**0**	**3**	**64**	**0**	**123**	460
5:30 PM	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**3**	**0**	**1**	**36**	**1**	**0**	**3**	**57**	**3**	**107**	**465**
5:45 PM	0	3	0	3	0	2	0	3	0	2	48	1	0	2	43	2	109	450
Count Total	0	21	0	34	0	15	0	16	0	7	359	14	0	20	395	11	892	0
Peak Hour	**0**	**9**	**0**	**20**	**0**	**8**	**0**	**7**	**0**	**5**	**179**	**9**	**0**	**9**	**216**	**3**	**465**	**0**

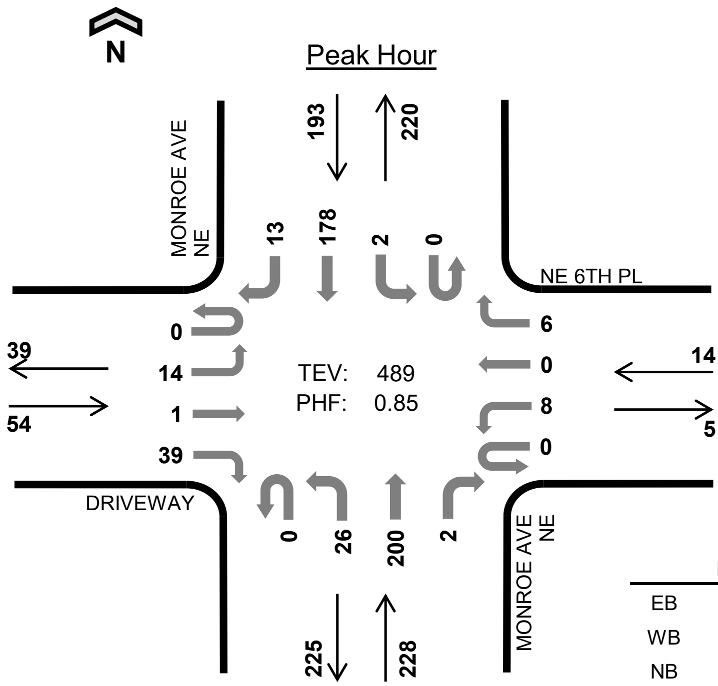
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

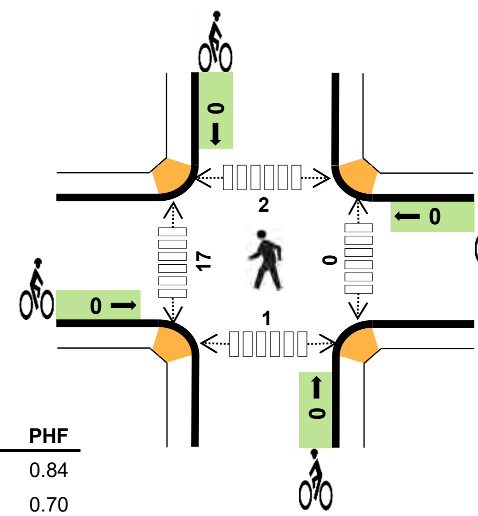
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	1	0	0	*1*
4:15 PM	0	0	1	1	*2*	0	0	0	0	*0*	0	0	0	0	*0*
4:30 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	3	0	0	*3*
4:45 PM	**0**	**0**	**0**	**2**	***2***	**0**	**0**	**0**	**1**	***1***	**0**	**2**	**0**	**0**	*2*
5:00 PM	**0**	**0**	**1**	**0**	***1***	**0**	**0**	**0**	**0**	***0***	**0**	**3**	**0**	**0**	*3*
5:15 PM	**0**	**0**	**1**	**1**	***2***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**0**	*1*
5:30 PM	**0**	**0**	**0**	**2**	***2***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**0**	***1***
5:45 PM	0	0	0	1	*1*	0	0	0	0	*0*	0	2	0	0	*2*
Count Total	0	0	3	7	*10*	0	0	0	1	*1*	0	13	0	0	*13*
Peak Hour	**0**	**0**	**2**	**5**	***7***	**0**	**0**	**0**	**1**	***1***	**0**	**7**	**0**	**0**	***7***

Mark Skaggs: (425) 250-0777 mark.skaggs@idaxdata.com

MONROE AVE NE
NE 6TH PL

Date: Wed, Jan 20, 2016
Count Period: 11:00 AM to 1:00 PM
Peak Hour: 11:00 AM to 12:00 PM





	HV %:	PHF
EB	3.7%	0.84
WB	7.1%	0.70
NB	4.4%	0.98
SB	2.6%	0.74
TOTAL	3.7%	0.85

Two-Hour Count Summaries

Interval Start	DRIVEWAY Eastbound UT	LT	TH	RT	NE 6TH PL Westbound UT	LT	TH	RT	MONROE AVE NE Northbound UT	LT	TH	RT	MONROE AVE NE Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
11:00 AM	**0**	**2**	**0**	**8**	**0**	**3**	**0**	**1**	**0**	**6**	**48**	**1**	**0**	**0**	**37**	**5**	**111**	0
11:15 AM	**0**	**2**	**0**	**11**	**0**	**1**	**0**	**2**	**0**	**5**	**52**	**1**	**0**	**1**	**31**	**3**	**109**	0
11:30 AM	**0**	**7**	**1**	**8**	**0**	**3**	**0**	**2**	**0**	**4**	**53**	**0**	**0**	**1**	**62**	**2**	**143**	0
11:45 AM	**0**	**3**	**0**	**12**	**0**	**1**	**0**	**1**	**0**	**11**	**47**	**0**	**0**	**0**	**48**	**3**	**126**	**489**
12:00 PM	0	2	1	9	0	0	0	0	0	6	34	2	0	3	47	4	108	486
12:15 PM	0	2	0	6	0	0	0	2	0	10	40	1	0	2	30	2	95	472
12:30 PM	0	5	1	5	0	1	0	0	0	5	41	1	0	1	33	3	96	425
12:45 PM	0	5	0	3	0	3	0	0	0	4	35	2	0	0	40	4	96	395
Count Total	0	28	3	62	0	12	0	8	0	51	350	8	0	8	328	26	884	0
Peak Hour	**0**	**14**	**1**	**39**	**0**	**8**	**0**	**6**	**0**	**26**	**200**	**2**	**0**	**2**	**178**	**13**	**489**	**0**

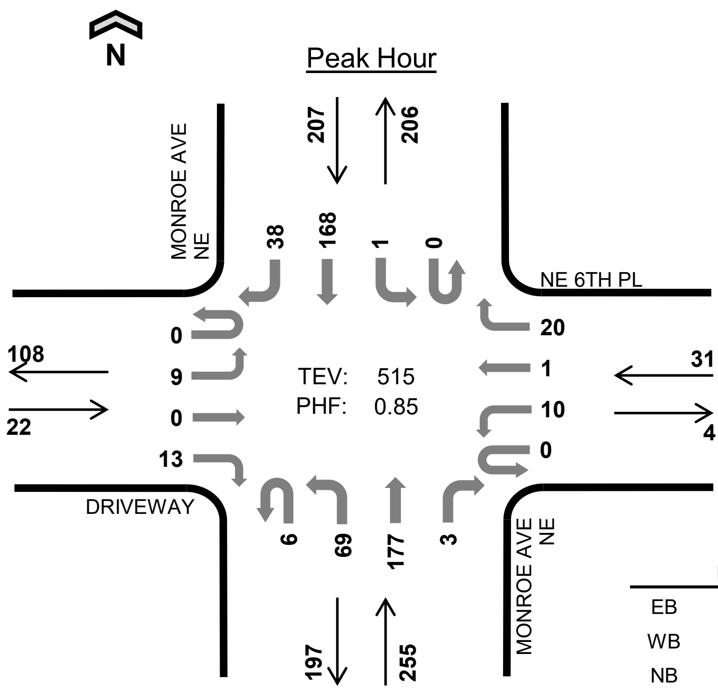
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

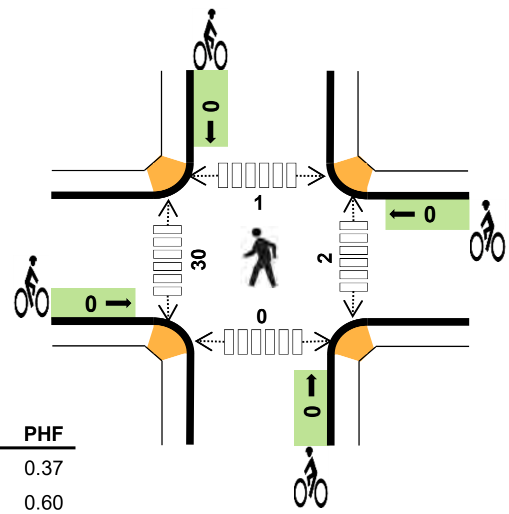
Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
11:00 AM	**0**	**0**	**3**	**1**	*4*	**0**	**0**	**0**	**0**	*0*	**0**	**4**	**1**	**0**	*5*
11:15 AM	**1**	**1**	**2**	**1**	*5*	**0**	**0**	**0**	**0**	*0*	**0**	**1**	**0**	**0**	*1*
11:30 AM	**0**	**0**	**2**	**1**	*3*	**0**	**0**	**0**	**0**	*0*	**0**	**8**	**1**	**1**	*10*
11:45 AM	**1**	**0**	**3**	**2**	*6*	**0**	**0**	**0**	**0**	*0*	**0**	**4**	**0**	**0**	*4*
12:00 PM	0	0	0	3	*3*	0	0	0	0	*0*	0	20	0	0	*20*
12:15 PM	0	0	2	2	*4*	0	0	0	0	*0*	0	11	0	0	*11*
12:30 PM	0	0	1	2	*3*	0	0	0	0	*0*	0	11	0	0	*11*
12:45 PM	0	0	0	5	*5*	0	0	0	0	*0*	0	14	0	0	*14*
Count Total	2	1	13	17	*33*	0	0	0	0	*0*	0	73	2	1	*76*
Peak Hour	**2**	**1**	**10**	**5**	***18***	**0**	**0**	**0**	**0**	***0***	**0**	**17**	**2**	**1**	***20***

Mark Skaggs: (425) 250-0777 mark.skaggs@idaxdata.com

MONROE AVE NE
NE 6TH PL

Date: Wed, Jan 20, 2016
Count Period: 6:00 AM to 9:00 AM
Peak Hour: 7:15 AM to 8:15 AM





	HV %:	PHF
EB	0.0%	0.37
WB	6.5%	0.60
NB	3.5%	0.90
SB	0.5%	0.73
TOTAL	2.3%	0.85

Three-Hour Count Summaries

Interval Start	DRIVEWAY Eastbound UT	LT	TH	RT	NE 6TH PL Westbound UT	LT	TH	RT	MONROE AVE NE Northbound UT	LT	TH	RT	MONROE AVE NE Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
7:15 AM	0	1	0	0	0	2	0	4	0	14	38	0	0	0	42	5	106	0
7:30 AM	0	2	0	2	0	5	1	7	0	16	47	1	0	0	53	18	152	0
7:45 AM	0	5	0	10	0	2	0	5	3	24	41	0	0	1	49	10	150	0
8:00 AM	0	1	0	1	0	1	0	4	3	15	51	2	0	0	24	5	107	515
Peak Hour	0	9	0	13	0	10	1	20	6	69	177	3	0	1	168	38	515	0

Note: For all three-hour count summary, see next page.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
7:15 AM	0	2	2	0	*4*	0	0	0	0	*0*	2	0	0	0	*2*
7:30 AM	0	0	3	0	*3*	0	0	0	0	*0*	0	3	1	0	*4*
7:45 AM	0	0	1	1	*2*	0	0	0	0	*0*	0	4	0	0	*4*
8:00 AM	0	0	3	0	*3*	0	0	0	0	*0*	0	23	0	0	*23*
Peak Hour	0	2	9	1	*12*	0	0	0	0	*0*	2	30	1	0	*33*

Three-Hour Count Summaries

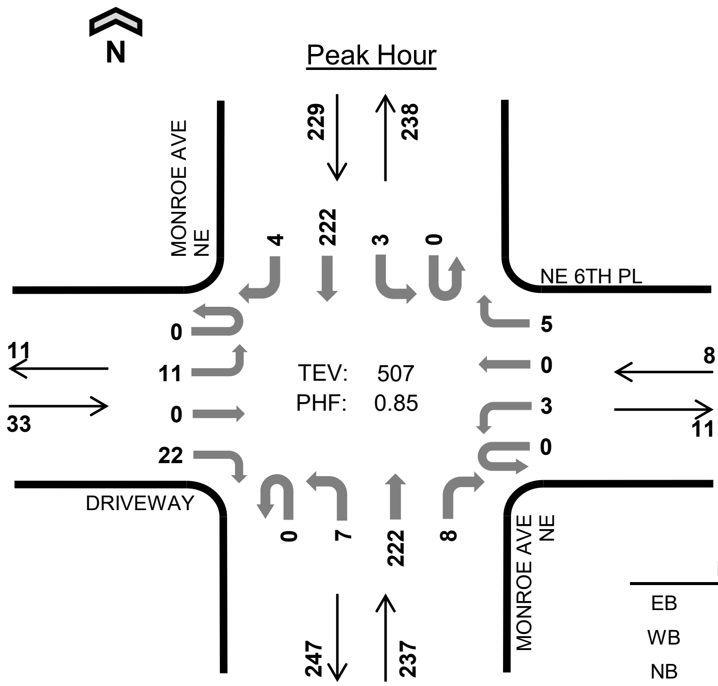
Interval Start	DRIVEWAY				NE 6TH PL				MONROE AVE NE				MONROE AVE NE				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
6:00 AM	0	1	0	0	0	1	0	5	0	11	22	0	0	0	11	2	53	0
6:15 AM	0	0	0	2	0	2	0	0	0	24	24	1	0	0	17	4	74	0
6:30 AM	0	1	0	0	0	5	0	4	0	33	35	1	0	0	31	4	114	0
6:45 AM	0	0	0	1	0	0	1	1	0	29	30	1	0	0	20	8	91	332
7:00 AM	0	0	0	0	0	4	1	2	0	20	32	1	0	3	20	8	91	370
7:15 AM	**0**	**1**	**0**	**0**	**0**	**2**	**0**	**4**	**0**	**14**	**38**	**0**	**0**	**0**	**42**	**5**	**106**	402
7:30 AM	**0**	**2**	**0**	**2**	**0**	**5**	**1**	**7**	**0**	**16**	**47**	**1**	**0**	**0**	**53**	**18**	**152**	440
7:45 AM	**0**	**5**	**0**	**10**	**0**	**2**	**0**	**5**	**3**	**24**	**41**	**0**	**0**	**1**	**49**	**10**	**150**	499
8:00 AM	**0**	**1**	**0**	**1**	**0**	**1**	**0**	**4**	**3**	**15**	**51**	**2**	**0**	**0**	**24**	**5**	**107**	**515**
8:15 AM	0	2	0	1	0	4	0	3	1	9	30	2	0	2	24	4	82	491
8:30 AM	0	1	0	5	0	0	0	2	0	9	56	1	0	0	25	3	102	441
8:45 AM	0	3	0	4	0	0	0	0	0	7	48	1	0	0	31	4	98	389
Count Total	0	17	0	26	0	26	3	37	7	211	454	11	0	6	347	75	1,220	0
Peak Hour	**0**	**9**	**0**	**13**	**0**	**10**	**1**	**20**	**6**	**69**	**177**	**3**	**0**	**1**	**168**	**38**	**515**	**0**

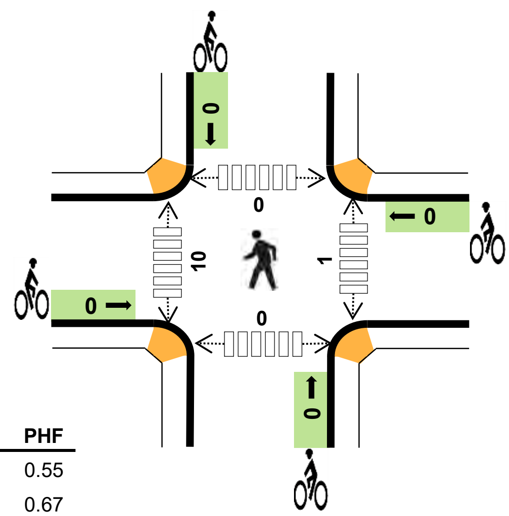
Note: Three-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
6:00 AM	0	0	1	0	*1*	0	0	0	0	*0*	0	4	0	0	*4*
6:15 AM	0	0	1	0	*1*	0	0	0	1	*1*	0	2	0	0	*2*
6:30 AM	0	0	2	1	*3*	0	0	0	0	*0*	0	6	0	0	*6*
6:45 AM	0	0	2	1	*3*	0	0	0	0	*0*	0	9	0	0	*9*
7:00 AM	0	0	3	1	*4*	1	0	0	0	*1*	1	2	0	0	*3*
7:15 AM	**0**	**2**	**2**	**0**	***4***	**0**	**0**	**0**	**0**	***0***	**2**	**0**	**0**	**0**	*2*
7:30 AM	**0**	**0**	**3**	**0**	***3***	**0**	**0**	**0**	**0**	***0***	**0**	**3**	**1**	**0**	*4*
7:45 AM	**0**	**0**	**1**	**1**	***2***	**0**	**0**	**0**	**0**	***0***	**0**	**4**	**0**	**0**	*4*
8:00 AM	**0**	**0**	**3**	**0**	***3***	**0**	**0**	**0**	**0**	***0***	**0**	**23**	**0**	**0**	***23***
8:15 AM	0	0	1	1	*2*	0	0	0	0	*0*	0	17	1	0	*18*
8:30 AM	1	0	4	1	*6*	0	0	0	0	*0*	0	17	1	0	*18*
8:45 AM	0	0	3	3	*6*	0	0	0	1	*1*	0	8	0	0	*8*
Count Total	1	2	26	9	*38*	1	0	0	2	*3*	3	95	3	0	*101*
Peak Hour	**0**	**2**	**9**	**1**	***12***	**0**	**0**	**0**	**0**	***0***	**2**	**30**	**1**	**0**	***33***

MONROE AVE NE
NE 6TH PL

Date: Tue, Jan 19, 2016
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:00 PM to 5:00 PM





	HV %:	PHF
EB	0.0%	0.55
WB	0.0%	0.67
NB	0.8%	0.83
SB	1.7%	0.94
TOTAL	1.2%	0.85

Two-Hour Count Summaries

Interval Start	DRIVEWAY Eastbound UT	LT	TH	RT	NE 6TH PL Westbound UT	LT	TH	RT	MONROE AVE NE Northbound UT	LT	TH	RT	MONROE AVE NE Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
4:00 PM	**0**	**4**	**0**	**11**	**0**	**1**	**0**	**1**	**0**	**1**	**70**	**0**	**0**	**1**	**58**	**2**	**149**	0
4:15 PM	**0**	**2**	**0**	**0**	**0**	**1**	**0**	**2**	**0**	**1**	**52**	**4**	**0**	**2**	**59**	**0**	**123**	0
4:30 PM	**0**	**4**	**0**	**8**	**0**	**1**	**0**	**1**	**0**	**1**	**48**	**2**	**0**	**0**	**47**	**2**	**114**	0
4:45 PM	**0**	**1**	**0**	**3**	**0**	**0**	**0**	**1**	**0**	**4**	**52**	**2**	**0**	**0**	**58**	**0**	**121**	**507**
5:00 PM	0	2	0	8	0	0	0	5	0	1	45	4	0	4	47	3	119	477
5:15 PM	0	3	0	3	0	0	0	0	0	3	34	0	0	4	55	2	104	458
5:30 PM	0	3	0	1	0	1	0	3	0	0	36	1	0	1	55	3	104	448
5:45 PM	0	0	0	3	0	1	0	0	0	7	53	0	0	5	59	2	130	457
Count Total	0	19	0	37	0	5	0	13	0	18	390	13	0	17	438	14	964	0
Peak Hour	**0**	**11**	**0**	**22**	**0**	**3**	**0**	**5**	**0**	**7**	**222**	**8**	**0**	**3**	**222**	**4**	**507**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

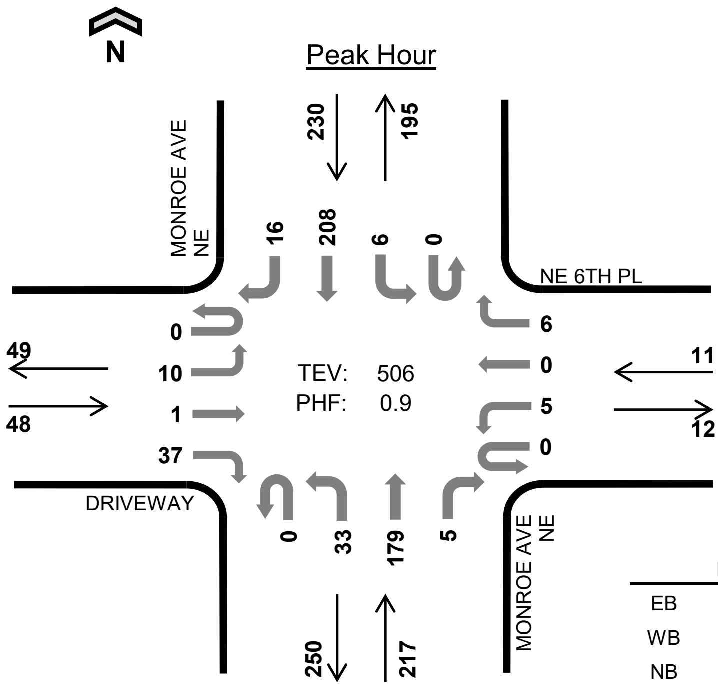
Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
4:00 PM	**0**	**0**	**1**	**2**	***3***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**0**	*1*
4:15 PM	**0**	**0**	**1**	**0**	***1***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**0**	**0**	*2*
4:30 PM	**0**	**0**	**0**	**1**	***1***	**0**	**0**	**0**	**0**	***0***	**1**	**2**	**0**	**0**	*3*
4:45 PM	**0**	**0**	**0**	**1**	***1***	**0**	**0**	**0**	**0**	***0***	**0**	**5**	**0**	**0**	***5***
5:00 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	1	0	0	*1*
5:15 PM	0	0	1	0	*1*	0	0	0	0	*0*	0	1	0	0	*1*
5:30 PM	0	0	0	1	*1*	0	0	0	0	*0*	0	2	0	1	*3*
5:45 PM	0	0	0	1	*1*	0	0	0	0	*0*	0	2	1	0	*3*
Count Total	0	0	3	6	*9*	0	0	0	0	*0*	1	16	1	1	*19*
Peak Hour	**0**	**0**	**2**	**4**	***6***	**0**	**0**	**0**	**0**	***0***	**1**	**10**	**0**	**0**	***11***

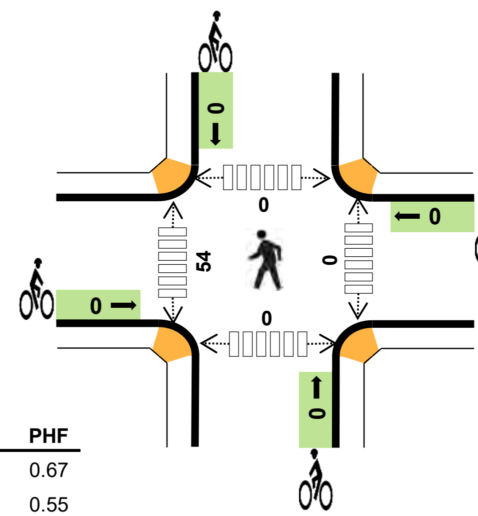
Mark Skaggs: (425) 250-0777 mark.skaggs@idaxdata.com

MONROE AVE NE
NE 6TH PL

Date: Tue, Jan 19, 2016
Count Period: 11:00 AM to 1:00 PM
Peak Hour: 11:30 AM to 12:30 PM

Peak Hour





	HV %:	PHF
EB	6.3%	0.67
WB	9.1%	0.55
NB	4.1%	0.94
SB	3.0%	0.85
TOTAL	4.0%	0.90

Two-Hour Count Summaries

Interval Start	DRIVEWAY				NE 6TH PL				MONROE AVE NE				MONROE AVE NE				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
11:00 AM	0	3	0	9	0	1	0	1	0	5	38	1	0	0	29	1	88	0
11:15 AM	0	2	0	6	0	1	0	4	0	5	37	0	0	0	31	2	88	0
11:30 AM	**0**	**2**	**0**	**8**	**0**	**4**	**0**	**1**	**0**	**10**	**46**	**2**	**0**	**1**	**62**	**5**	**141**	0
11:45 AM	**0**	**3**	**0**	**15**	**0**	**0**	**0**	**3**	**0**	**10**	**46**	**2**	**0**	**1**	**45**	**4**	**129**	446
12:00 PM	**0**	**2**	**1**	**7**	**0**	**1**	**0**	**1**	**0**	**7**	**49**	**1**	**0**	**2**	**45**	**5**	**121**	479
12:15 PM	**0**	**3**	**0**	**7**	**0**	**0**	**0**	**1**	**0**	**6**	**38**	**0**	**0**	**2**	**56**	**2**	**115**	**506**
12:30 PM	0	2	0	10	0	3	0	1	0	1	36	2	0	3	38	0	96	461
12:45 PM	0	2	0	7	0	2	0	2	0	5	37	1	0	1	40	0	97	429
Count Total	0	19	1	69	0	12	0	14	0	49	327	9	0	10	346	19	875	0
Peak Hour	**0**	**10**	**1**	**37**	**0**	**5**	**0**	**6**	**0**	**33**	**179**	**5**	**0**	**6**	**208**	**16**	**506**	**0**

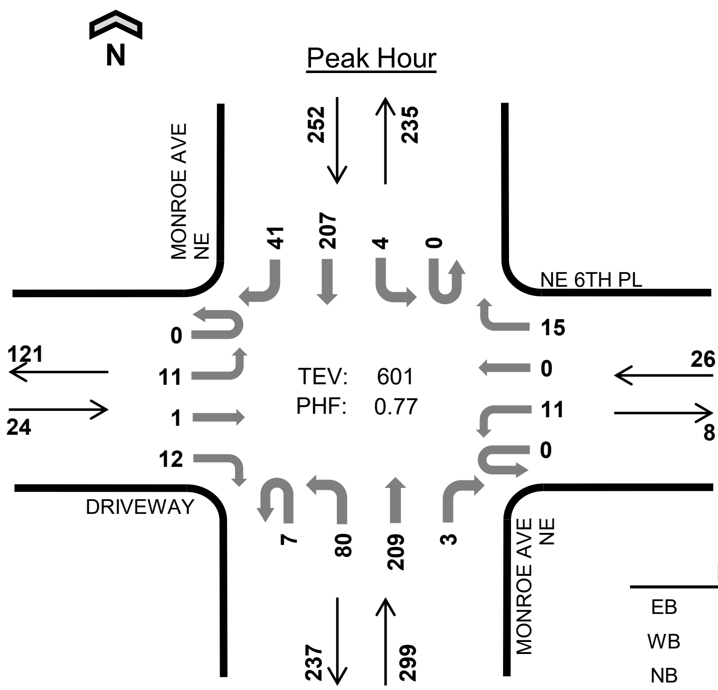
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

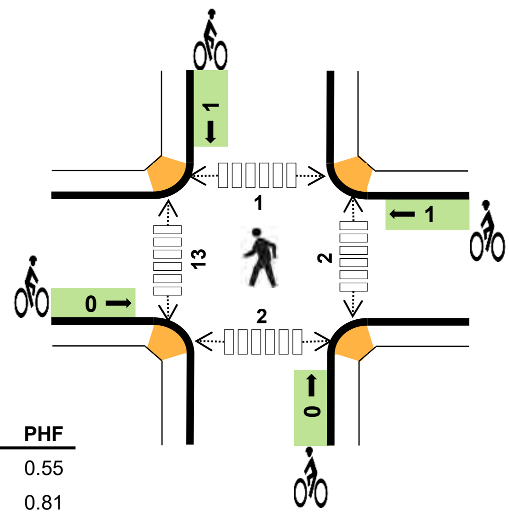
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
11:00 AM	1	0	0	0	*1*	0	0	0	0	*0*	0	26	0	0	*26*
11:15 AM	0	0	1	1	*2*	0	0	0	0	*0*	0	17	0	1	*18*
11:30 AM	**0**	**1**	**2**	**3**	***6***	**0**	**0**	**0**	**0**	***0***	**0**	**28**	**0**	**0**	***28***
11:45 AM	**0**	**0**	**1**	**3**	***4***	**0**	**0**	**0**	**0**	***0***	**0**	**20**	**0**	**0**	***20***
12:00 PM	**1**	**0**	**4**	**0**	***5***	**0**	**0**	**0**	**0**	***0***	**0**	**4**	**0**	**0**	***4***
12:15 PM	**2**	**0**	**2**	**1**	***5***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**0**	**0**	***2***
12:30 PM	0	0	1	3	*4*	0	0	0	0	*0*	0	1	0	2	*3*
12:45 PM	0	0	0	1	*1*	0	0	0	0	*0*	0	2	0	0	*2*
Count Total	4	1	11	12	*28*	0	0	0	0	*0*	0	100	0	3	*103*
Peak Hour	**3**	**1**	**9**	**7**	***20***	**0**	**0**	**0**	**0**	***0***	**0**	**54**	**0**	**0**	***54***

Mark Skaggs: (425) 250-0777 mark.skaggs@idaxdata.com

MONROE AVE NE
NE 6TH PL

Date: Tue, Jan 19, 2016
Count Period: 6:00 AM to 9:00 AM
Peak Hour: 7:15 AM to 8:15 AM





	HV %:	PHF
EB	0.0%	0.55
WB	0.0%	0.81
NB	3.7%	0.64
SB	1.6%	0.75
TOTAL	2.5%	0.77

Three-Hour Count Summaries

Interval Start	DRIVEWAY				NE 6TH PL				MONROE AVE NE				MONROE AVE NE				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:15 AM	0	0	0	1	0	3	0	5	0	10	39	0	0	0	55	11	124	0
7:30 AM	0	3	0	1	0	4	0	3	0	14	55	0	0	2	69	13	164	0
7:45 AM	0	2	1	8	0	3	0	2	6	43	66	2	0	2	49	11	195	0
8:00 AM	0	6	0	2	0	1	0	5	1	13	49	1	0	0	34	6	118	601
Peak Hour	0	11	1	12	0	11	0	15	7	80	209	3	0	4	207	41	601	0

Note: For all three-hour count summary, see next page.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:15 AM	0	0	3	0	*3*	0	0	0	0	*0*	0	0	0	0	*0*
7:30 AM	0	0	4	2	*6*	0	0	0	1	*1*	0	0	1	0	*1*
7:45 AM	0	0	1	1	*2*	0	1	0	0	*1*	0	8	0	2	*10*
8:00 AM	0	0	3	1	*4*	0	0	0	0	*0*	2	5	0	0	*7*
Peak Hour	0	0	11	4	*15*	0	1	0	1	*2*	2	13	1	2	*18*

Three-Hour Count Summaries

Interval Start	DRIVEWAY				NE 6TH PL				MONROE AVE NE				MONROE AVE NE				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
6:00 AM	0	0	0	0	0	1	0	3	0	8	23	1	0	0	10	2	48	0
6:15 AM	0	0	0	1	0	1	0	0	0	21	24	1	0	0	19	4	71	0
6:30 AM	0	1	0	2	0	6	0	3	0	30	35	0	0	0	25	7	109	0
6:45 AM	0	0	0	1	0	0	0	3	1	39	25	2	0	0	25	9	105	333
7:00 AM	0	1	0	0	0	3	0	5	0	22	30	1	0	2	19	6	89	374
7:15 AM	**0**	**0**	**0**	**1**	**0**	**3**	**0**	**5**	**0**	**10**	**39**	**0**	**0**	**0**	**55**	**11**	**124**	427
7:30 AM	**0**	**3**	**0**	**1**	**0**	**4**	**0**	**3**	**0**	**14**	**55**	**0**	**0**	**2**	**69**	**13**	**164**	482
7:45 AM	**0**	**2**	**1**	**8**	**0**	**3**	**0**	**2**	**6**	**43**	**66**	**2**	**0**	**2**	**49**	**11**	**195**	572
8:00 AM	**0**	**6**	**0**	**2**	**0**	**1**	**0**	**5**	**1**	**13**	**49**	**1**	**0**	**0**	**34**	**6**	**118**	**601**
8:15 AM	0	0	1	4	0	1	0	4	0	9	48	3	0	1	21	3	95	572
8:30 AM	0	0	0	3	0	0	0	1	0	4	52	1	0	0	24	3	88	496
8:45 AM	0	0	0	5	0	0	0	1	0	6	50	0	0	0	34	4	100	401
Count Total	0	13	2	28	0	23	0	35	8	219	496	12	0	7	384	79	1,306	0
Peak Hour	**0**	**11**	**1**	**12**	**0**	**11**	**0**	**15**	**7**	**80**	**209**	**3**	**0**	**4**	**207**	**41**	**601**	**0**

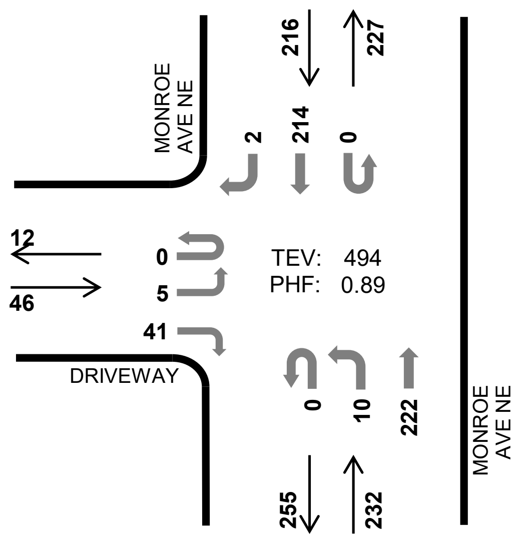
Note: Three-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

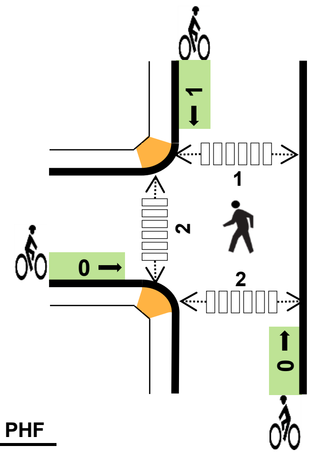
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
6:00 AM	0	0	0	0	*0*	0	0	0	2	*2*	0	2	1	0	*3*
6:15 AM	1	0	2	1	*4*	0	0	0	0	*0*	0	2	0	0	*2*
6:30 AM	0	0	2	0	*2*	0	0	0	0	*0*	0	0	0	0	*0*
6:45 AM	1	0	2	2	*5*	0	0	0	0	*0*	0	1	0	0	*1*
7:00 AM	0	0	1	1	*2*	0	0	0	0	*0*	0	1	0	0	*1*
7:15 AM	**0**	**0**	**3**	**0**	***3***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
7:30 AM	**0**	**0**	**4**	**2**	***6***	**0**	**0**	**0**	**1**	***1***	**0**	**0**	**1**	**0**	*1*
7:45 AM	**0**	**0**	**1**	**1**	***2***	**0**	**1**	**0**	**0**	***1***	**0**	**8**	**0**	**2**	*10*
8:00 AM	**0**	**0**	**3**	**1**	***4***	**0**	**0**	**0**	**0**	***0***	**2**	**5**	**0**	**0**	***7***
8:15 AM	0	0	5	2	*7*	0	0	0	0	*0*	0	1	2	0	*3*
8:30 AM	0	0	0	1	*1*	0	0	0	0	*0*	0	0	1	0	*1*
8:45 AM	0	0	2	0	*2*	0	0	0	0	*0*	0	3	0	1	*4*
Count Total	2	0	25	11	*38*	0	1	0	3	*4*	2	23	5	3	*33*
Peak Hour	**0**	**0**	**11**	**4**	***15***	**0**	**1**	**0**	**1**	***2***	**2**	**13**	**1**	**2**	***18***

MONROE AVE NE
DRIVEWAY

Date: Tue, Jan 19, 2016
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:00 PM to 5:00 PM

Peak Hour





	HV %:	PHF
EB	0.0%	0.77
WB	-	-
NB	0.9%	0.89
SB	2.3%	0.92
TOTAL	1.4%	0.89

Two-Hour Count Summaries

Interval Start	DRIVEWAY				0				MONROE AVE NE				MONROE AVE NE				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	**0**	**1**	**0**	**14**	**0**	**0**	**0**	**0**	**0**	**2**	**63**	**0**	**0**	**0**	**59**	**0**	**139**	0
4:15 PM	**0**	**0**	**0**	**11**	**0**	**0**	**0**	**0**	**0**	**3**	**60**	**0**	**0**	**0**	**48**	**1**	**123**	0
4:30 PM	**0**	**2**	**0**	**9**	**0**	**0**	**0**	**0**	**0**	**2**	**42**	**0**	**0**	**0**	**55**	**0**	**110**	0
4:45 PM	**0**	**2**	**0**	**7**	**0**	**0**	**0**	**0**	**0**	**3**	**57**	**0**	**0**	**0**	**52**	**1**	**122**	**494**
5:00 PM	0	1	0	8	0	0	0	0	0	4	59	0	0	0	42	3	117	472
5:15 PM	0	2	0	8	0	0	0	0	0	7	33	0	0	0	47	1	98	447
5:30 PM	0	0	0	2	0	0	0	0	0	7	38	0	0	0	37	5	89	426
5:45 PM	0	0	0	3	0	0	0	0	0	6	53	0	0	0	46	7	115	419
Count Total	0	8	0	62	0	0	0	0	0	34	405	0	0	0	386	18	913	0
Peak Hour	**0**	**5**	**0**	**41**	**0**	**0**	**0**	**0**	**0**	**10**	**222**	**0**	**0**	**0**	**214**	**2**	**494**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

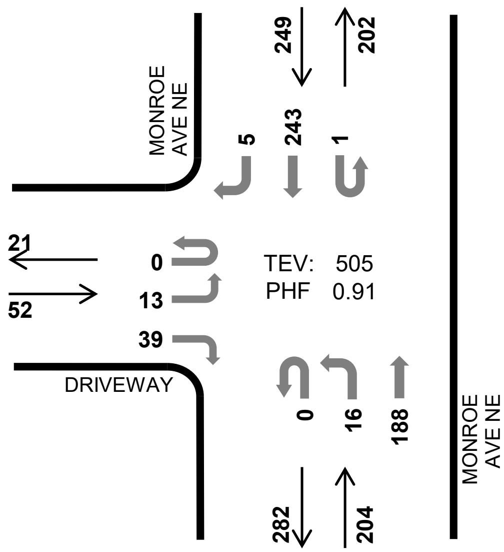
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	**0**	**0**	**1**	**3**	***4***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**0**	*1*
4:15 PM	**0**	**0**	**1**	**0**	***1***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
4:30 PM	**0**	**0**	**0**	**1**	***1***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**1**	**2**	*4*
4:45 PM	**0**	**0**	**0**	**1**	***1***	**0**	**0**	**0**	**1**	***1***	**0**	**0**	**0**	**0**	***0***
5:00 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	2	0	0	*2*
5:15 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	0	0	*0*
5:30 PM	0	0	0	1	*1*	0	0	0	0	*0*	0	1	1	0	*2*
5:45 PM	0	0	0	1	*1*	0	0	0	0	*0*	0	4	0	1	*5*
Count Total	0	0	2	7	*9*	0	0	0	1	*1*	0	9	2	3	*14*
Peak Hr	**0**	**0**	**2**	**5**	***7***	**0**	**0**	**0**	**1**	***1***	**0**	**2**	**1**	**2**	***5***

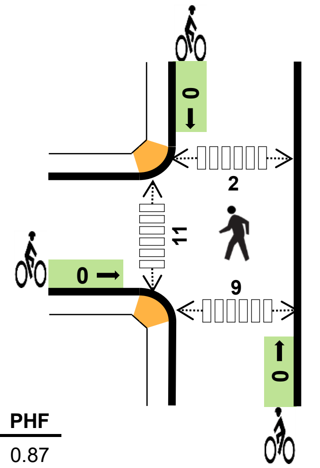
Mark Skaggs: (425) 250-0777 mark.skaggs@idaxdata.com

MONROE AVE NE
DRIVEWAY

Date: Tue, Jan 19, 2016
Count Period: 11:00 AM to 1:00 PM
Peak Hour: 11:30 AM to 12:30 PM

Peak Hour





	HV %:	PHF
EB	3.8%	0.87
WB	-	-
NB	5.4%	0.86
SB	2.4%	0.86
TOTAL	3.8%	0.91

Two-Hour Count Summaries

Interval Start	DRIVEWAY				0				MONROE AVE NE				MONROE AVE NE				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
11:00 AM	0	3	0	7	0	0	0	0	0	3	37	0	0	0	40	3	93	0
11:15 AM	0	0	0	6	0	0	0	0	0	10	37	0	0	0	34	3	90	0
11:30 AM	**0**	**1**	**0**	**9**	**0**	**0**	**0**	**0**	**0**	**4**	**53**	**0**	**0**	**0**	**72**	**0**	**139**	0
11:45 AM	**0**	**3**	**0**	**11**	**0**	**0**	**0**	**0**	**0**	**4**	**55**	**0**	**1**	**0**	**54**	**4**	**132**	454
12:00 PM	**0**	**6**	**0**	**9**	**0**	**0**	**0**	**0**	**0**	**3**	**41**	**0**	**0**	**0**	**59**	**1**	**119**	480
12:15 PM	**0**	**3**	**0**	**10**	**0**	**0**	**0**	**0**	**0**	**5**	**39**	**0**	**0**	**0**	**58**	**0**	**115**	**505**
12:30 PM	0	0	0	15	0	0	0	0	0	4	42	0	0	0	51	1	113	479
12:45 PM	0	1	0	10	0	0	0	0	0	5	42	0	0	0	46	2	106	453
Count Total	0	17	0	77	0	0	0	0	0	38	346	0	1	0	414	14	907	0
Peak Hour	**0**	**13**	**0**	**39**	**0**	**0**	**0**	**0**	**0**	**16**	**188**	**0**	**1**	**0**	**243**	**5**	**505**	**0**

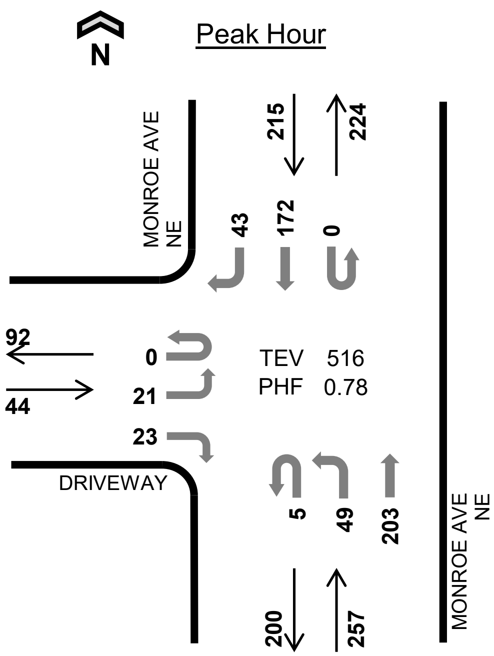
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
11:00 AM	0	0	0	1	*1*	0	0	0	0	*0*	0	1	2	5	*8*
11:15 AM	0	0	0	1	*1*	0	0	0	0	*0*	0	1	2	1	*4*
11:30 AM	**1**	**0**	**3**	**2**	***6***	**0**	**0**	**0**	**0**	***0***	**0**	**3**	**0**	**4**	*7*
11:45 AM	**1**	**0**	**4**	**1**	***6***	**0**	**0**	**0**	**0**	***0***	**0**	**5**	**0**	**2**	*7*
12:00 PM	**0**	**0**	**2**	**1**	***3***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**1**	**2**	*5*
12:15 PM	**0**	**0**	**2**	**2**	***4***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**1**	**1**	*3*
12:30 PM	0	0	1	3	*4*	0	0	0	0	*0*	0	1	0	2	*3*
12:45 PM	0	0	0	1	*1*	0	0	0	0	*0*	0	5	0	0	*5*
Count Total	2	0	12	12	*26*	0	0	0	0	*0*	0	19	6	17	*42*
Peak Hr	**2**	**0**	**11**	**6**	***19***	**0**	**0**	**0**	**0**	***0***	**0**	**11**	**2**	**9**	***22***

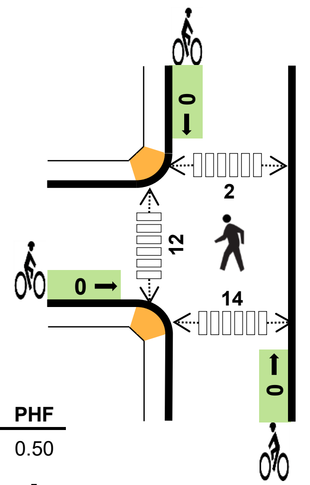
Mark Skaggs: (425) 250-0777 mark.skaggs@idaxdata.com

MONROE AVE NE
DRIVEWAY

Date: Tue, Jan 19, 2016
Count Period: 6:00 AM to 9:00 AM
Peak Hour: 7:15 AM to 8:15 AM



	HV %:	PHF
EB	2.3%	0.50
WB	-	-
NB	3.5%	0.69
SB	1.4%	0.79
TOTAL	2.5%	0.78



Three-Hour Count Summaries

Interval Start	DRIVEWAY				0				MONROE AVE NE				MONROE AVE NE				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:15 AM	0	1	0	1	0	0	0	0	1	13	35	0	0	0	44	14	109	0
7:30 AM	0	4	0	10	0	0	0	0	2	14	36	0	0	0	54	14	134	0
7:45 AM	0	13	0	9	0	0	0	0	2	13	78	0	0	0	42	9	166	0
8:00 AM	0	3	0	3	0	0	0	0	0	9	54	0	0	0	32	6	107	516
Peak Hour	0	21	0	23	0	0	0	0	5	49	203	0	0	0	172	43	516	0

Note: For all three-hour count summary, see next page.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:15 AM	0	0	3	0	*3*	0	0	0	0	*0*	0	1	0	0	*1*
7:30 AM	1	0	2	2	*5*	0	0	0	0	*0*	0	3	0	1	*4*
7:45 AM	0	0	1	0	*1*	0	0	0	0	*0*	0	6	1	7	*14*
8:00 AM	0	0	3	1	*4*	0	0	0	0	*0*	0	2	1	6	*9*
Peak Hour	1	0	9	3	*13*	0	0	0	0	*0*	0	12	2	14	*28*

Three-Hour Count Summaries

Interval Start	DRIVEWAY				0				MONROE AVE NE				MONROE AVE NE				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
6:00 AM	0	1	0	0	0	0	0	0	0	2	32	0	0	0	18	0	53	0
6:15 AM	0	0	0	1	0	0	0	0	0	5	30	0	0	0	27	0	63	0
6:30 AM	0	0	0	3	0	0	0	0	0	12	58	0	0	0	42	3	118	0
6:45 AM	0	1	0	1	0	0	0	0	0	9	50	0	0	0	29	5	95	329
7:00 AM	0	0	0	6	0	0	0	0	0	17	48	0	0	0	31	3	105	381
7:15 AM	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**13**	**35**	**0**	**0**	**0**	**44**	**14**	**109**	427
7:30 AM	**0**	**4**	**0**	**10**	**0**	**0**	**0**	**0**	**2**	**14**	**36**	**0**	**0**	**0**	**54**	**14**	**134**	443
7:45 AM	**0**	**13**	**0**	**9**	**0**	**0**	**0**	**0**	**2**	**13**	**78**	**0**	**0**	**0**	**42**	**9**	**166**	514
8:00 AM	**0**	**3**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**9**	**54**	**0**	**0**	**0**	**32**	**6**	**107**	**516**
8:15 AM	0	2	0	1	0	0	0	0	2	6	44	0	0	0	29	1	85	492
8:30 AM	0	2	0	0	0	0	0	0	0	3	43	0	0	0	26	0	74	432
8:45 AM	0	0	0	4	0	0	0	0	0	4	42	0	0	0	40	2	92	358
Count Total	0	27	0	39	0	0	0	0	7	107	550	0	0	0	414	57	1,201	0
Peak Hour	**0**	**21**	**0**	**23**	**0**	**0**	**0**	**0**	**5**	**49**	**203**	**0**	**0**	**0**	**172**	**43**	**516**	**0**

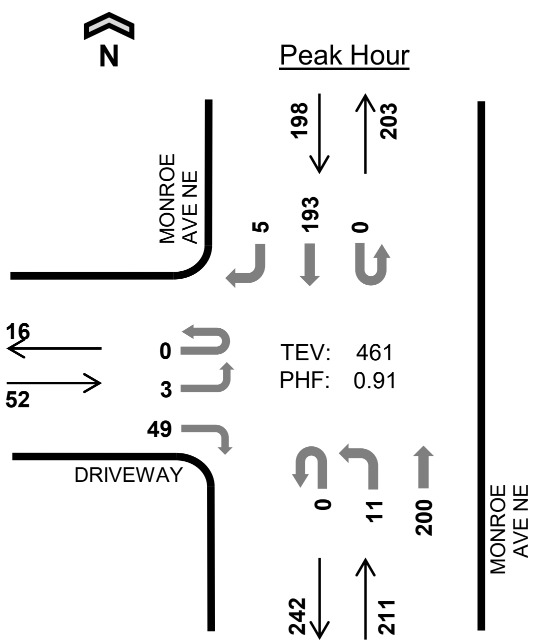
Note: Three-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

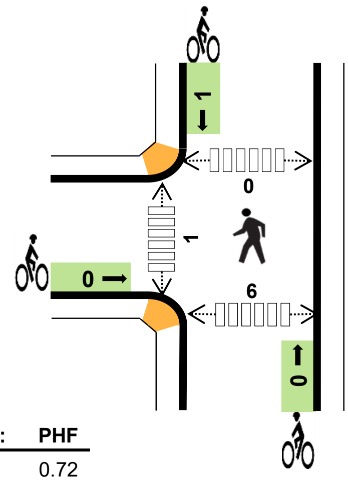
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
6:00 AM	0	0	0	0	*0*	0	0	0	0	*0*	0	1	0	0	*1*
6:15 AM	0	0	2	2	*4*	0	0	0	1	*1*	0	0	0	2	*2*
6:30 AM	0	0	1	0	*1*	0	0	0	0	*0*	0	0	0	0	*0*
6:45 AM	0	0	2	2	*4*	0	0	0	0	*0*	0	1	0	2	*3*
7:00 AM	0	0	3	1	*4*	0	0	0	0	*0*	0	2	0	1	*3*
7:15 AM	**0**	**0**	**3**	**0**	***3***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**0**	*1*
7:30 AM	**1**	**0**	**2**	**2**	***5***	**0**	**0**	**0**	**0**	***0***	**0**	**3**	**0**	**1**	*4*
7:45 AM	**0**	**0**	**1**	**0**	***1***	**0**	**0**	**0**	**0**	***0***	**0**	**6**	**1**	**7**	*14*
8:00 AM	**0**	**0**	**3**	**1**	***4***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**1**	**6**	***9***
8:15 AM	0	0	4	2	*6*	0	0	0	0	*0*	0	0	0	4	*4*
8:30 AM	0	0	0	2	*2*	0	0	0	0	*0*	0	0	0	1	*1*
8:45 AM	0	0	2	0	*2*	0	0	0	0	*0*	0	2	1	2	*5*
Count Total	1	0	23	12	*36*	0	0	0	1	*1*	0	18	3	26	*47*
Peak Hr	**1**	**0**	**9**	**3**	***13***	**0**	**0**	**0**	**0**	***0***	**0**	**12**	**2**	**14**	***28***

MONROE AVE NE
DRIVEWAY

Date: Wed, Jan 20, 2016
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:00 PM to 5:00 PM

Peak Hour





	HV %:	PHF
EB	0.0%	0.72
WB	-	-
NB	0.5%	0.85
SB	1.5%	0.81
TOTAL	0.9%	0.91

Two-Hour Count Summaries

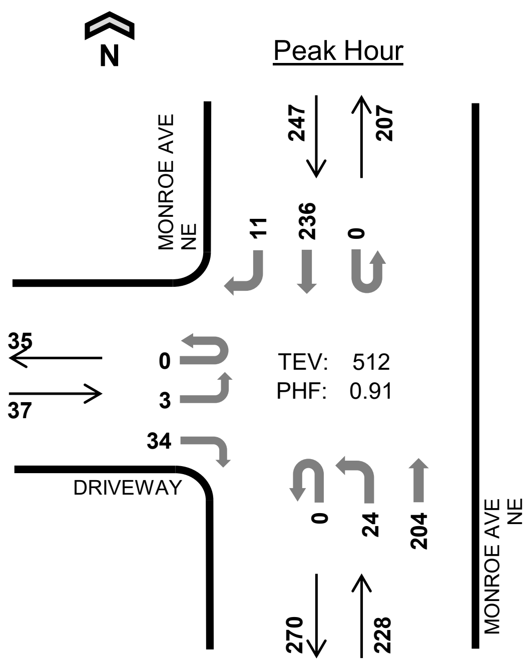
Interval Start	DRIVEWAY Eastbound UT	LT	TH	RT	0 Westbound UT	LT	TH	RT	MONROE AVE NE Northbound UT	LT	TH	RT	MONROE AVE NE Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
4:00 PM	**0**	**1**	**0**	**16**	**0**	**0**	**0**	**0**	**0**	**1**	**46**	**0**	**0**	**0**	**59**	**2**	**125**	0
4:15 PM	**0**	**0**	**0**	**8**	**0**	**0**	**0**	**0**	**0**	**5**	**57**	**0**	**0**	**0**	**37**	**3**	**110**	0
4:30 PM	**0**	**2**	**0**	**16**	**0**	**0**	**0**	**0**	**0**	**3**	**39**	**0**	**0**	**0**	**40**	**0**	**100**	0
4:45 PM	**0**	**0**	**0**	**9**	**0**	**0**	**0**	**0**	**0**	**2**	**58**	**0**	**0**	**0**	**57**	**0**	**126**	**461**
5:00 PM	0	2	0	4	0	0	0	0	0	3	54	0	0	0	46	3	112	448
5:15 PM	0	2	0	8	0	0	0	0	0	2	52	0	0	0	59	0	123	461
5:30 PM	0	0	0	6	0	0	0	0	0	3	41	0	0	0	45	4	99	460
5:45 PM	0	1	0	3	0	0	0	0	0	11	51	0	0	0	40	8	114	448
Count Total	0	8	0	70	0	0	0	0	0	30	398	0	0	0	383	20	909	0
Peak Hour	**0**	**3**	**0**	**49**	**0**	**0**	**0**	**0**	**0**	**11**	**200**	**0**	**0**	**0**	**193**	**5**	**461**	**0**

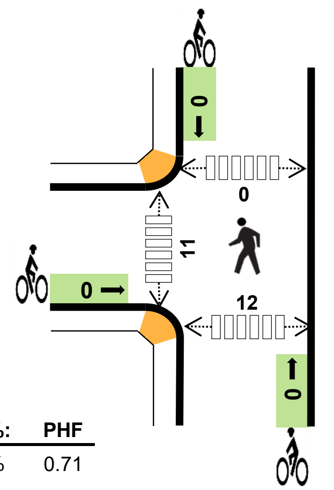
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
4:00 PM	**0**	**0**	**0**	**0**	*0*	**0**	**0**	**0**	**0**	*0*	**0**	**0**	**0**	**1**	*1*
4:15 PM	**0**	**0**	**1**	**1**	*2*	**0**	**0**	**0**	**0**	*0*	**0**	**0**	**0**	**0**	*0*
4:30 PM	**0**	**0**	**0**	**0**	*0*	**0**	**0**	**0**	**0**	*0*	**0**	**1**	**0**	**5**	*6*
4:45 PM	**0**	**0**	**0**	**2**	*2*	**0**	**0**	**0**	**1**	*1*	**0**	**0**	**0**	**0**	*0*
5:00 PM	0	0	1	1	*2*	0	0	0	0	*0*	0	1	0	0	*1*
5:15 PM	0	0	1	1	*2*	0	0	0	0	*0*	0	0	0	1	*1*
5:30 PM	0	0	0	2	*2*	0	0	0	0	*0*	0	1	0	0	*1*
5:45 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	0	0	3	7	*10*	0	0	0	1	*1*	0	3	0	7	*10*
Peak Hr	**0**	**0**	**1**	**3**	*4*	**0**	**0**	**0**	**1**	*1*	**0**	**1**	**0**	**6**	*7*

MONROE AVE NE
DRIVEWAY

Date: Wed, Jan 20, 2016
Count Period: 11:00 AM to 1:00 PM
Peak Hour: 11:15 AM to 12:15 PM





	HV %:	PHF
EB	2.7%	0.71
WB	-	-
NB	3.1%	0.89
SB	3.2%	0.85
TOTAL	3.1%	0.91

Two-Hour Count Summaries

Interval Start	DRIVEWAY Eastbound UT	LT	TH	RT	0 Westbound UT	LT	TH	RT	MONROE AVE NE Northbound UT	LT	TH	RT	MONROE AVE NE Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
11:00 AM	0	3	0	6	0	0	0	0	0	4	47	0	0	0	43	2	105	0
11:15 AM	**0**	**1**	**0**	**8**	**0**	**0**	**0**	**0**	**0**	**7**	**57**	**0**	**0**	**0**	**37**	**4**	**114**	0
11:30 AM	**0**	**0**	**0**	**7**	**0**	**0**	**0**	**0**	**0**	**5**	**56**	**0**	**0**	**0**	**68**	**5**	**141**	0
11:45 AM	**0**	**2**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**8**	**50**	**0**	**0**	**0**	**71**	**1**	**138**	498
12:00 PM	**0**	**0**	**0**	**13**	**0**	**0**	**0**	**0**	**0**	**4**	**41**	**0**	**0**	**0**	**60**	**1**	**119**	**512**
12:15 PM	0	3	0	8	0	0	0	0	0	5	44	0	0	0	36	1	97	495
12:30 PM	0	1	0	11	0	0	0	0	0	6	40	0	0	0	37	1	96	450
12:45 PM	0	2	0	11	0	0	0	0	0	6	33	0	0	0	39	3	94	406
Count Total	0	12	0	70	0	0	0	0	0	45	368	0	0	0	391	18	904	0
Peak Hour	**0**	**3**	**0**	**34**	**0**	**0**	**0**	**0**	**0**	**24**	**204**	**0**	**0**	**0**	**236**	**11**	**512**	**0**

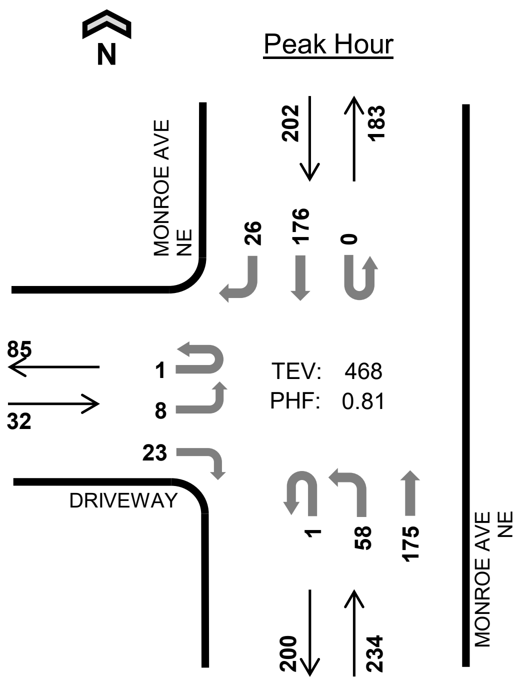
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

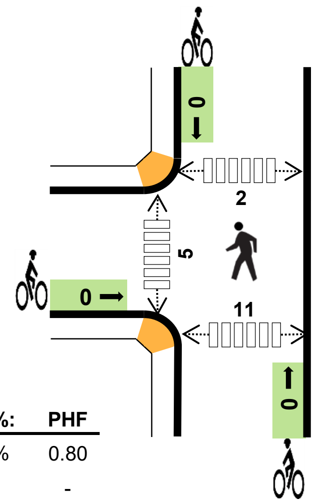
Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
11:00 AM	1	0	3	1	*5*	0	0	0	0	*0*	0	3	0	5	*8*
11:15 AM	**0**	**0**	**3**	**2**	***5***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**3**	*4*
11:30 AM	**0**	**0**	**2**	**2**	***4***	**0**	**0**	**0**	**0**	***0***	**0**	**4**	**0**	**4**	*8*
11:45 AM	**1**	**0**	**1**	**3**	***5***	**0**	**0**	**0**	**0**	***0***	**0**	**3**	**0**	**1**	*4*
12:00 PM	**0**	**0**	**1**	**1**	***2***	**0**	**0**	**0**	**0**	***0***	**0**	**3**	**0**	**4**	*7*
12:15 PM	0	0	2	3	*5*	0	0	0	0	*0*	0	1	3	4	*8*
12:30 PM	1	0	0	2	*3*	0	0	0	0	*0*	0	0	0	2	*2*
12:45 PM	0	0	0	5	*5*	0	0	0	0	*0*	0	0	1	0	*1*
Count Total	3	0	12	19	*34*	0	0	0	0	*0*	0	15	4	23	*42*
Peak Hr	**1**	**0**	**7**	**8**	***16***	**0**	**0**	**0**	**0**	***0***	**0**	**11**	**0**	**12**	***23***

Mark Skaggs: (425) 250-0777 mark.skaggs@idaxdata.com

MONROE AVE NE
DRIVEWAY

Date: Wed, Jan 20, 2016
Count Period: 6:00 AM to 9:00 AM
Peak Hour: 7:15 AM to 8:15 AM





	HV %:	PHF
EB	0.0%	0.80
WB	-	-
NB	3.8%	0.77
SB	0.5%	0.86
TOTAL	2.1%	0.81

Three-Hour Count Summaries

Interval Start	DRIVEWAY Eastbound UT	LT	TH	RT	0 Westbound UT	LT	TH	RT	MONROE AVE NE Northbound UT	LT	TH	RT	MONROE AVE NE Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
7:15 AM	0	0	0	4	0	0	0	0	0	17	32	0	0	0	44	15	112	0
7:30 AM	0	2	0	7	0	0	0	0	1	12	33	0	0	0	53	5	113	0
7:45 AM	1	2	0	7	0	0	0	0	0	20	56	0	0	0	55	4	145	0
8:00 AM	0	4	0	5	0	0	0	0	0	9	54	0	0	0	24	2	98	468
Peak Hour	1	8	0	23	0	0	0	0	1	58	175	0	0	0	176	26	468	0

Note: For all three-hour count summary, see next page.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
7:15 AM	0	0	3	1	*4*	0	0	0	0	*0*	0	2	0	1	*3*
7:30 AM	0	0	2	0	*2*	0	0	0	0	*0*	0	0	0	1	*1*
7:45 AM	0	0	1	0	*1*	0	0	0	0	*0*	0	2	0	5	*7*
8:00 AM	0	0	3	0	*3*	0	0	0	0	*0*	0	1	2	4	*7*
Peak Hour	0	0	9	1	*10*	0	0	0	0	*0*	0	5	2	11	*18*

Three-Hour Count Summaries

Interval Start	DRIVEWAY				0				MONROE AVE NE				MONROE AVE NE				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
6:00 AM	0	0	0	1	0	0	0	0	0	3	26	0	0	0	17	0	47	0
6:15 AM	0	0	0	3	0	0	0	0	0	3	40	0	0	0	25	0	71	0
6:30 AM	0	0	0	3	0	0	0	0	0	11	55	0	0	0	38	3	110	0
6:45 AM	0	0	0	1	0	0	0	0	0	9	56	0	0	0	33	6	105	333
7:00 AM	0	0	0	3	0	0	0	0	1	12	36	0	0	0	29	3	84	370
7:15 AM	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**17**	**32**	**0**	**0**	**0**	**44**	**15**	**112**	411
7:30 AM	**0**	**2**	**0**	**7**	**0**	**0**	**0**	**0**	**1**	**12**	**33**	**0**	**0**	**0**	**53**	**5**	**113**	414
7:45 AM	**1**	**2**	**0**	**7**	**0**	**0**	**0**	**0**	**0**	**20**	**56**	**0**	**0**	**0**	**55**	**4**	**145**	454
8:00 AM	**0**	**4**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**9**	**54**	**0**	**0**	**0**	**24**	**2**	**98**	**468**
8:15 AM	0	1	0	2	0	0	0	0	0	3	36	0	0	0	37	2	81	437
8:30 AM	0	4	0	2	0	0	0	0	0	4	58	0	0	0	33	5	106	430
8:45 AM	0	1	0	1	0	0	0	0	1	7	49	0	0	0	31	1	91	376
Count Total	1	14	0	39	0	0	0	0	3	110	531	0	0	0	419	46	1,163	0
Peak Hour	**1**	**8**	**0**	**23**	**0**	**0**	**0**	**0**	**1**	**58**	**175**	**0**	**0**	**0**	**176**	**26**	**468**	**0**

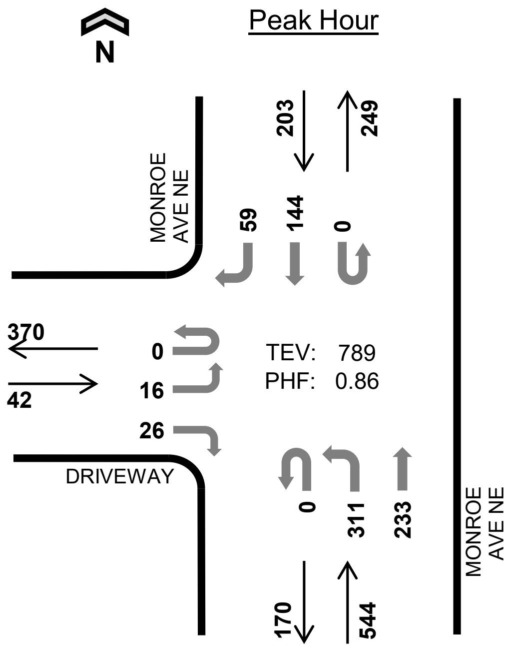
Note: Three-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

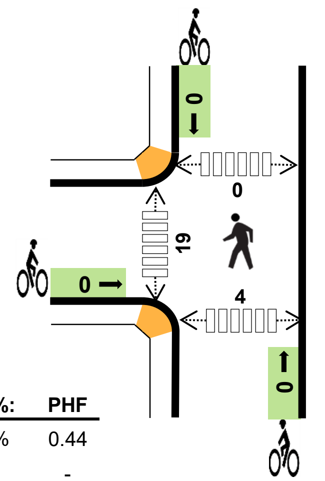
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
6:00 AM	0	0	1	0	*1*	0	0	0	0	*0*	0	0	0	0	*0*
6:15 AM	0	0	1	0	*1*	0	0	0	0	*0*	0	2	0	0	*2*
6:30 AM	0	0	4	1	*5*	0	0	0	0	*0*	0	0	0	1	*1*
6:45 AM	0	0	1	2	*3*	0	0	0	0	*0*	0	1	0	2	*3*
7:00 AM	0	0	3	1	*4*	0	0	0	0	*0*	0	1	0	1	*2*
7:15 AM	**0**	**0**	**3**	**1**	***4***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**0**	**1**	*3*
7:30 AM	**0**	**0**	**2**	**0**	***2***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**1**	*1*
7:45 AM	**0**	**0**	**1**	**0**	***1***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**0**	**5**	*7*
8:00 AM	**0**	**0**	**3**	**0**	***3***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**2**	**4**	*7*
8:15 AM	0	0	0	1	*1*	0	0	0	0	*0*	0	2	0	6	*8*
8:30 AM	0	0	3	2	*5*	0	0	0	0	*0*	0	5	0	0	*5*
8:45 AM	0	0	4	2	*6*	0	0	0	0	*0*	0	0	2	0	*2*
Count Total	0	0	26	10	*36*	0	0	0	0	*0*	0	16	4	21	*41*
Peak Hr	**0**	**0**	**9**	**1**	***10***	**0**	**0**	**0**	**0**	***0***	**0**	**5**	**2**	**11**	*18*

MONROE AVE NE
DRIVEWAY

Date: Tue, Jan 19, 2016
Count Period: 6:00 AM to 9:00 AM
Peak Hour: 7:00 AM to 8:00 AM

Peak Hour





	HV %:	PHF
EB	0.0%	0.44
WB	-	-
NB	1.8%	0.87
SB	2.0%	0.81
TOTAL	1.8%	0.86

Three-Hour Count Summaries

Interval Start	DRIVEWAY				0				MONROE AVE NE				MONROE AVE NE				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	1	0	2	0	0	0	0	0	57	59	0	0	0	30	7	156	0
7:15 AM	0	1	0	5	0	0	0	0	0	105	42	0	0	0	35	15	203	0
7:30 AM	0	4	0	5	0	0	0	0	0	107	50	0	0	0	40	23	229	0
7:45 AM	0	10	0	14	0	0	0	0	0	42	82	0	0	0	39	14	201	789
Peak Hour	0	16	0	26	0	0	0	0	0	311	233	0	0	0	144	59	789	0

Note: For all three-hour count summary, see next page.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	0	0	3	1	*4*	0	0	0	0	*0*	0	2	0	0	*2*
7:15 AM	0	0	3	0	*3*	0	0	0	0	*0*	0	2	0	0	*2*
7:30 AM	0	0	3	3	*6*	0	0	0	0	*0*	0	8	0	0	*8*
7:45 AM	0	0	1	0	*1*	0	0	0	0	*0*	0	7	0	4	*11*
Peak Hour	0	0	10	4	*14*	0	0	0	0	*0*	0	19	0	4	*23*

Three-Hour Count Summaries

Interval Start	DRIVEWAY				0				MONROE AVE NE				MONROE AVE NE				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
6:00 AM	0	0	0	0	0	0	0	0	0	6	34	0	0	0	20	0	60	0
6:15 AM	0	0	0	1	0	0	0	0	0	17	36	0	0	0	29	1	84	0
6:30 AM	0	0	0	2	0	0	0	0	0	27	71	0	0	0	43	4	147	0
6:45 AM	0	0	0	3	0	0	0	0	0	44	62	0	0	0	29	5	143	434
7:00 AM	**0**	**1**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**57**	**59**	**0**	**0**	**0**	**30**	**7**	**156**	530
7:15 AM	**0**	**1**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**105**	**42**	**0**	**0**	**0**	**35**	**15**	**203**	649
7:30 AM	**0**	**4**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**107**	**50**	**0**	**0**	**0**	**40**	**23**	**229**	731
7:45 AM	**0**	**10**	**0**	**14**	**0**	**0**	**0**	**0**	**0**	**42**	**82**	**0**	**0**	**0**	**39**	**14**	**201**	**789**
8:00 AM	0	4	0	6	0	0	0	0	0	14	62	0	0	0	35	1	122	755
8:15 AM	0	3	0	1	0	0	0	0	0	7	50	0	0	0	30	3	94	646
8:30 AM	0	1	0	0	0	0	0	0	0	6	44	0	0	0	29	2	82	499
8:45 AM	0	1	0	1	0	0	0	0	0	7	44	0	0	0	44	0	97	395
Count Total	0	25	0	40	0	0	0	0	0	439	636	0	0	0	403	75	1,618	0
Peak Hour	**0**	**16**	**0**	**26**	**0**	**0**	**0**	**0**	**0**	**311**	**233**	**0**	**0**	**0**	**144**	**59**	**789**	**0**

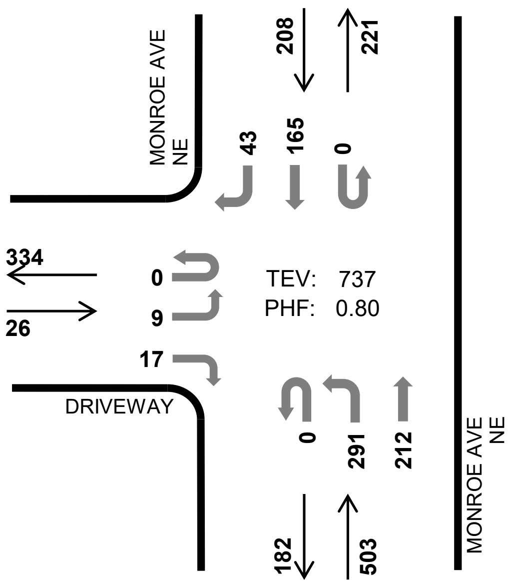
Note: Three-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

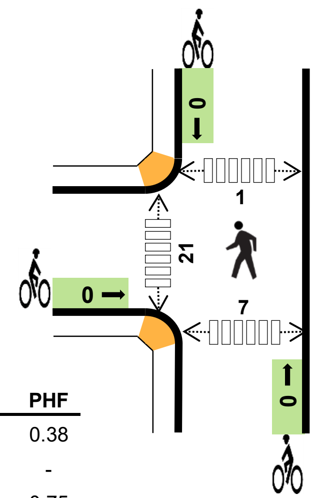
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
6:00 AM	0	0	1	0	*1*	0	0	0	0	*0*	0	1	0	1	*2*
6:15 AM	0	0	2	2	*4*	0	0	0	0	*0*	0	0	0	0	*0*
6:30 AM	0	0	1	0	*1*	0	0	0	0	*0*	0	2	0	0	*2*
6:45 AM	0	0	2	2	*4*	0	0	0	0	*0*	0	2	0	0	*2*
7:00 AM	**0**	**0**	**3**	**1**	***4***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**0**	**0**	*2*
7:15 AM	**0**	**0**	**3**	**0**	***3***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**0**	**0**	*2*
7:30 AM	**0**	**0**	**3**	**3**	***6***	**0**	**0**	**0**	**0**	***0***	**0**	**8**	**0**	**0**	*8*
7:45 AM	**0**	**0**	**1**	**0**	***1***	**0**	**0**	**0**	**0**	***0***	**0**	**7**	**0**	**4**	***11***
8:00 AM	0	0	3	1	*4*	0	0	0	0	*0*	0	4	3	4	*11*
8:15 AM	0	0	3	2	*5*	0	0	0	0	*0*	0	2	0	4	*6*
8:30 AM	0	0	0	2	*2*	0	0	0	0	*0*	0	1	0	0	*1*
8:45 AM	0	0	3	0	*3*	0	0	0	0	*0*	0	4	1	0	*5*
Count Total	0	0	25	13	*38*	0	0	0	0	*0*	0	35	4	13	*52*
Peak Hr	**0**	**0**	**10**	**4**	***14***	**0**	**0**	**0**	**0**	***0***	**0**	**19**	**0**	**4**	***23***

MONROE AVE NE
DRIVEWAY

Peak Hour

Date: Wed, Jan 20, 2016
Count Period: 6:00 AM to 9:00 AM
Peak Hour: 7:00 AM to 8:00 AM





	HV %:	PHF
EB	0.0%	0.38
WB	-	-
NB	1.8%	0.75
SB	1.0%	0.84
TOTAL	1.5%	0.80

Three-Hour Count Summaries

Interval Start	DRIVEWAY				0				MONROE AVE NE				MONROE AVE NE				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	55	48	0	0	0	24	8	135	0
7:15 AM	0	1	0	7	0	0	0	0	0	90	47	0	0	0	43	10	198	0
7:30 AM	0	0	0	1	0	0	0	0	0	121	47	0	0	0	48	14	231	0
7:45 AM	0	8	0	9	0	0	0	0	0	25	70	0	0	0	50	11	173	737
Peak Hour	0	9	0	17	0	0	0	0	0	291	212	0	0	0	165	43	737	0

Note: For all three-hour count summary, see next page.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	0	0	3	1	*4*	0	0	0	0	*0*	0	1	0	0	*1*
7:15 AM	0	0	3	1	*4*	0	0	0	0	*0*	0	3	0	0	*3*
7:30 AM	0	0	2	0	*2*	0	0	0	0	*0*	0	6	0	3	*9*
7:45 AM	0	0	1	0	*1*	0	0	0	0	*0*	0	11	1	4	*16*
Peak Hour	0	0	9	2	*11*	0	0	0	0	*0*	0	21	1	7	*29*

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Three-Hour Count Summaries

Interval Start	DRIVEWAY Eastbound UT	LT	TH	RT	0 Westbound UT	LT	TH	RT	MONROE AVE NE Northbound UT	LT	TH	RT	MONROE AVE NE Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
6:00 AM	0	0	0	0	0	0	0	0	0	8	31	0	0	0	18	0	57	0
6:15 AM	0	0	0	1	0	0	0	0	0	19	40	0	0	0	29	0	89	0
6:30 AM	0	0	0	2	0	0	0	0	0	23	62	0	0	0	38	5	130	0
6:45 AM	0	0	0	2	0	0	0	0	0	36	58	0	0	0	34	3	133	409
7:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**55**	**48**	**0**	**0**	**0**	**24**	**8**	**135**	487
7:15 AM	**0**	**1**	**0**	**7**	**0**	**0**	**0**	**0**	**0**	**90**	**47**	**0**	**0**	**0**	**43**	**10**	**198**	596
7:30 AM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**121**	**47**	**0**	**0**	**0**	**48**	**14**	**231**	697
7:45 AM	**0**	**8**	**0**	**9**	**0**	**0**	**0**	**0**	**0**	**25**	**70**	**0**	**0**	**0**	**50**	**11**	**173**	**737**
8:00 AM	0	2	0	4	0	0	0	0	0	14	62	0	0	0	26	2	110	712
8:15 AM	0	0	0	1	0	0	0	0	0	9	34	0	0	0	39	2	85	599
8:30 AM	0	6	0	2	0	0	0	0	0	9	51	0	0	0	29	1	98	466
8:45 AM	0	4	0	3	0	0	0	0	0	12	52	0	0	0	31	2	104	397
Count Total	0	21	0	32	0	0	0	0	0	421	602	0	0	0	409	58	1,543	0
Peak Hour	**0**	**9**	**0**	**17**	**0**	**0**	**0**	**0**	**0**	**291**	**212**	**0**	**0**	**0**	**165**	**43**	**737**	**0**

Note: Three-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
6:00 AM	0	0	1	0	*1*	0	0	0	0	*0*	0	0	0	0	*0*
6:15 AM	0	0	1	0	*1*	0	0	0	0	*0*	0	1	0	1	*2*
6:30 AM	0	0	4	1	*5*	0	0	0	0	*0*	0	1	0	0	*1*
6:45 AM	0	0	1	2	*3*	0	0	0	0	*0*	0	2	0	1	*3*
7:00 AM	**0**	**0**	**3**	**1**	***4***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**0**	*1*
7:15 AM	**0**	**0**	**3**	**1**	***4***	**0**	**0**	**0**	**0**	***0***	**0**	**3**	**0**	**0**	*3*
7:30 AM	**0**	**0**	**2**	**0**	***2***	**0**	**0**	**0**	**0**	***0***	**0**	**6**	**0**	**3**	*9*
7:45 AM	**0**	**0**	**1**	**0**	***1***	**0**	**0**	**0**	**0**	***0***	**0**	**11**	**1**	**4**	***16***
8:00 AM	0	0	3	0	*3*	0	0	0	0	*0*	0	0	1	0	*1*
8:15 AM	0	0	0	1	*1*	0	0	0	0	*0*	0	4	0	2	*6*
8:30 AM	0	0	3	2	*5*	0	0	0	0	*0*	0	7	0	0	*7*
8:45 AM	1	0	5	2	*8*	0	0	0	0	*0*	0	2	1	0	*3*
Count Total	1	0	27	10	*38*	0	0	0	0	*0*	0	38	3	11	*52*
Peak Hr	**0**	**0**	**9**	**2**	***11***	**0**	**0**	**0**	**0**	***0***	**0**	**21**	**1**	**7**	***29***

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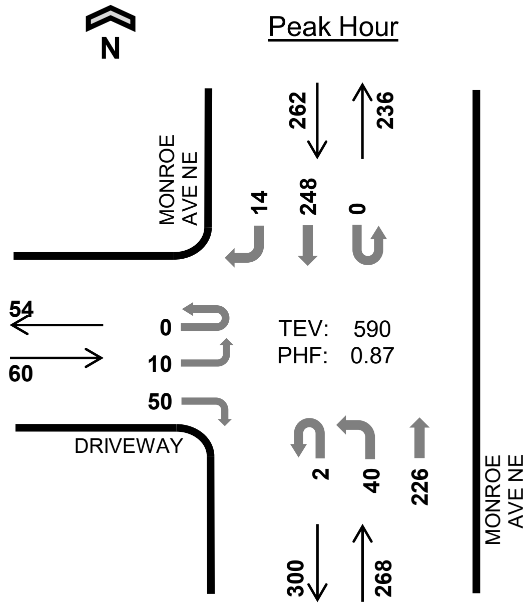
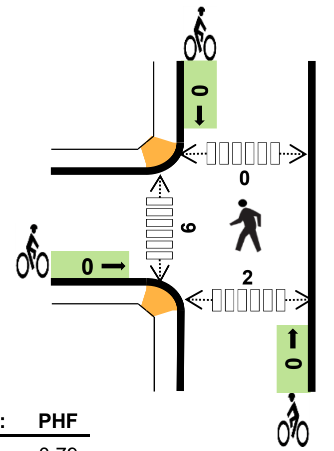
MONROE AVE NE
DRIVEWAY

Date: Tue, Jan 19, 2016
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:00 PM to 5:00 PM





	HV %:	PHF
EB	0.0%	0.79
WB	-	-
NB	0.7%	0.88
SB	1.9%	0.87
TOTAL	1.2%	0.87

Two-Hour Count Summaries

Interval Start	DRIVEWAY				0				MONROE AVE NE				MONROE AVE NE				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	**0**	**1**	**0**	**18**	**0**	**0**	**0**	**0**	**0**	**9**	**67**	**0**	**0**	**0**	**71**	**4**	**170**	0
4:15 PM	**0**	**4**	**0**	**13**	**0**	**0**	**0**	**0**	**0**	**8**	**59**	**0**	**0**	**0**	**60**	**1**	**145**	0
4:30 PM	**0**	**1**	**0**	**13**	**0**	**0**	**0**	**0**	**1**	**8**	**45**	**0**	**0**	**0**	**63**	**3**	**134**	0
4:45 PM	**0**	**4**	**0**	**6**	**0**	**0**	**0**	**0**	**1**	**15**	**55**	**0**	**0**	**0**	**54**	**6**	**141**	**590**
5:00 PM	0	1	0	9	0	0	0	0	0	7	62	0	0	0	55	0	134	554
5:15 PM	0	1	0	16	0	0	0	0	0	19	43	0	0	0	56	1	136	545
5:30 PM	0	3	0	14	0	0	0	0	1	17	43	0	0	0	35	4	117	528
5:45 PM	0	2	0	12	0	0	0	0	0	36	58	0	0	0	38	14	160	547
Count Total	0	17	0	101	0	0	0	0	3	119	432	0	0	0	432	33	1,137	0
Peak Hour	**0**	**10**	**0**	**50**	**0**	**0**	**0**	**0**	**2**	**40**	**226**	**0**	**0**	**0**	**248**	**14**	**590**	**0**

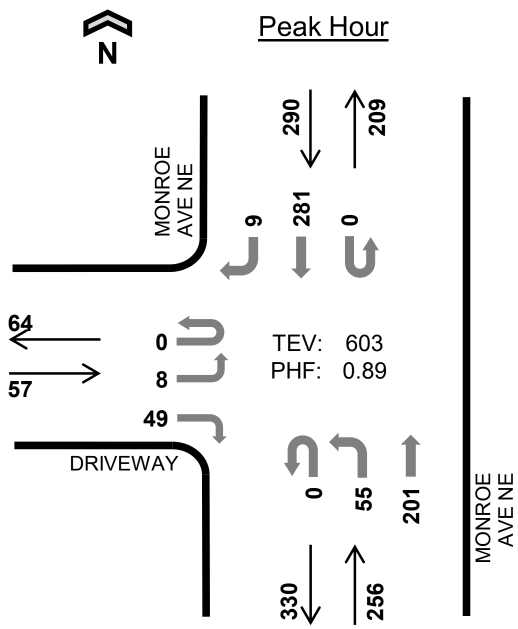
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

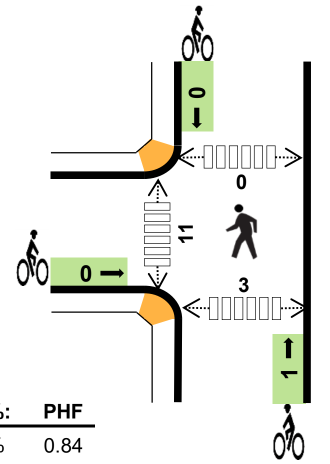
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	**0**	**0**	**1**	**3**	***4***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**0**	**1**	*3*
4:15 PM	**0**	**0**	**1**	**0**	***1***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**0**	**0**	*2*
4:30 PM	**0**	**0**	**0**	**1**	***1***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
4:45 PM	**0**	**0**	**0**	**1**	***1***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**0**	**1**	*3*
5:00 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	2	0	0	*2*
5:15 PM	0	0	1	0	*1*	0	0	0	0	*0*	0	0	0	0	*0*
5:30 PM	0	0	0	1	*1*	0	0	0	0	*0*	0	1	0	0	*1*
5:45 PM	1	0	0	1	*2*	0	0	0	0	*0*	0	5	0	0	*5*
Count Total	1	0	3	7	*11*	0	0	0	0	*0*	0	14	0	2	*16*
Peak Hr	**0**	**0**	**2**	**5**	***7***	**0**	**0**	**0**	**0**	***0***	**0**	**6**	**0**	**2**	*8*

MONROE AVE NE
DRIVEWAY

Date: Tue, Jan 19, 2016
Count Period: 11:00 AM to 1:00 PM
Peak Hour: 11:30 AM to 12:30 PM

Peak Hour





	HV %:	PHF
EB	1.8%	0.84
WB	-	-
NB	5.9%	0.88
SB	3.1%	0.86
TOTAL	4.1%	0.89

Two-Hour Count Summaries

Interval Start	DRIVEWAY Eastbound UT	LT	TH	RT	0 Westbound UT	LT	TH	RT	MONROE AVE NE Northbound UT	LT	TH	RT	MONROE AVE NE Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
11:00 AM	0	2	0	21	0	0	0	0	0	18	39	0	0	0	48	1	129	0
11:15 AM	0	3	0	13	0	0	0	0	0	22	45	0	0	0	39	3	125	0
11:30 AM	**0**	**2**	**0**	**11**	**0**	**0**	**0**	**0**	**0**	**15**	**57**	**0**	**0**	**0**	**81**	**3**	**169**	0
11:45 AM	**0**	**2**	**0**	**13**	**0**	**0**	**0**	**0**	**0**	**16**	**57**	**0**	**0**	**0**	**63**	**2**	**153**	576
12:00 PM	**0**	**1**	**0**	**11**	**0**	**0**	**0**	**0**	**0**	**9**	**43**	**0**	**0**	**0**	**71**	**1**	**136**	583
12:15 PM	**0**	**3**	**0**	**14**	**0**	**0**	**0**	**0**	**0**	**15**	**44**	**0**	**0**	**0**	**66**	**3**	**145**	**603**
12:30 PM	0	2	0	27	0	0	0	0	0	14	44	0	0	0	67	1	155	589
12:45 PM	0	2	0	15	0	0	0	0	1	14	48	0	0	0	54	4	138	574
Count Total	0	17	0	125	0	0	0	0	1	123	377	0	0	0	489	18	1,150	0
Peak Hour	**0**	**8**	**0**	**49**	**0**	**0**	**0**	**0**	**0**	**55**	**201**	**0**	**0**	**0**	**281**	**9**	**603**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

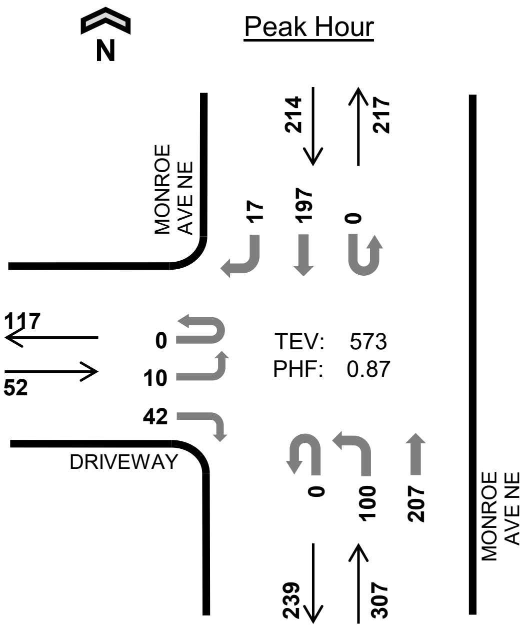
Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
11:00 AM	0	0	0	1	*1*	0	0	0	0	*0*	0	7	1	8	*16*
11:15 AM	0	0	0	1	*1*	0	0	0	0	*0*	0	7	0	0	*7*
11:30 AM	**0**	**0**	**4**	**3**	***7***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**0**	**0**	*2*
11:45 AM	**0**	**0**	**6**	**3**	***9***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**1**	*2*
12:00 PM	**1**	**0**	**2**	**1**	***4***	**0**	**0**	**1**	**0**	***1***	**0**	**4**	**0**	**2**	*6*
12:15 PM	**0**	**0**	**3**	**2**	***5***	**0**	**0**	**0**	**0**	***0***	**0**	**4**	**0**	**0**	*4*
12:30 PM	0	0	1	3	*4*	0	0	0	0	*0*	0	13	0	0	*13*
12:45 PM	0	0	0	1	*1*	0	0	0	0	*0*	0	10	0	1	*11*
Count Total	1	0	16	15	*32*	0	0	1	0	*1*	0	48	1	12	*61*
Peak Hr	**1**	**0**	**15**	**9**	***25***	**0**	**0**	**1**	**0**	***1***	**0**	**11**	**0**	**3**	***14***

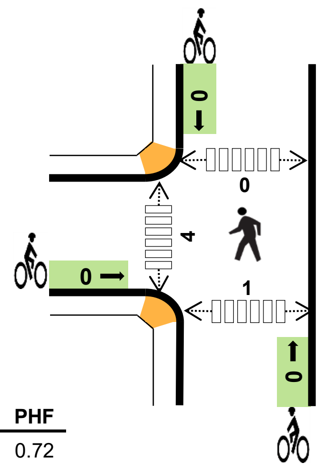
Mark Skaggs: (425) 250-0777 mark.skaggs@idaxdata.com

MONROE AVE NE
DRIVEWAY

Date: Wed, Jan 20, 2016
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 5:00 PM to 6:00 PM

Peak Hour





	HV %:	PHF
EB	0.0%	0.72
WB	-	-
NB	0.7%	0.74
SB	1.4%	0.79
TOTAL	0.9%	0.87

Two-Hour Count Summaries

Interval Start	DRIVEWAY Eastbound UT	LT	TH	RT	0 Westbound UT	LT	TH	RT	MONROE AVE NE Northbound UT	LT	TH	RT	MONROE AVE NE Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
4:00 PM	0	5	0	9	0	0	0	0	0	2	42	0	0	0	78	0	136	0
4:15 PM	0	2	0	12	0	0	0	0	0	4	62	0	1	0	45	0	126	0
4:30 PM	0	0	0	6	0	0	0	0	0	7	45	0	0	0	55	1	114	0
4:45 PM	0	0	0	6	0	0	0	0	0	6	61	0	0	0	66	0	139	515
5:00 PM	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**19**	**54**	**0**	**0**	**0**	**49**	**2**	**128**	507
5:15 PM	**0**	**4**	**0**	**14**	**0**	**0**	**0**	**0**	**0**	**13**	**51**	**0**	**0**	**0**	**65**	**3**	**150**	531
5:30 PM	**0**	**3**	**0**	**9**	**0**	**0**	**0**	**0**	**0**	**24**	**42**	**0**	**0**	**0**	**49**	**3**	**130**	547
5:45 PM	**0**	**3**	**0**	**15**	**0**	**0**	**0**	**0**	**0**	**44**	**60**	**0**	**0**	**0**	**34**	**9**	**165**	**573**
Count Total	0	17	0	75	0	0	0	0	0	119	417	0	1	0	441	18	1,088	0
Peak Hour	**0**	**10**	**0**	**42**	**0**	**0**	**0**	**0**	**0**	**100**	**207**	**0**	**0**	**0**	**197**	**17**	**573**	**0**

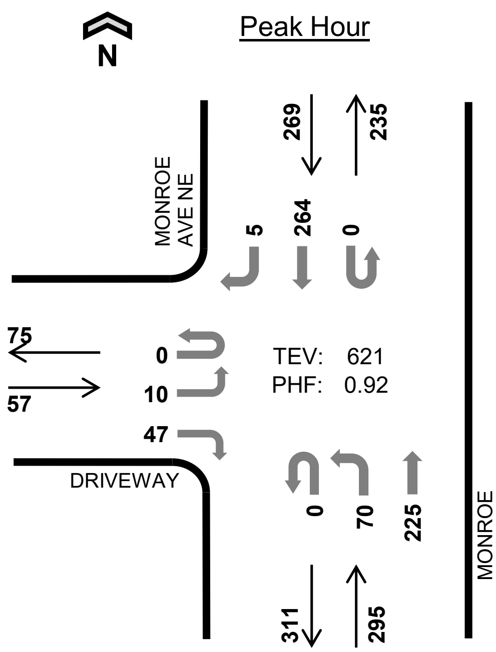
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

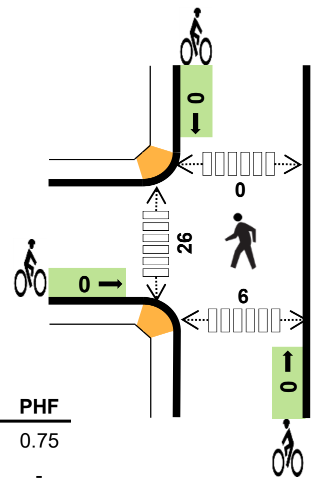
Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
4:00 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	4	0	0	*4*
4:15 PM	0	0	1	2	*3*	0	0	0	0	*0*	0	2	0	3	*5*
4:30 PM	0	0	1	0	*1*	0	0	0	0	*0*	0	1	0	0	*1*
4:45 PM	0	0	0	2	*2*	0	0	0	1	*1*	0	1	0	0	*1*
5:00 PM	**0**	**0**	**1**	**0**	*1*	**0**	**0**	**0**	**0**	*0*	**0**	**1**	**0**	**0**	*1*
5:15 PM	**0**	**0**	**1**	**1**	*2*	**0**	**0**	**0**	**0**	*0*	**0**	**1**	**0**	**0**	*1*
5:30 PM	**0**	**0**	**0**	**2**	*2*	**0**	**0**	**0**	**0**	*0*	**0**	**2**	**0**	**1**	*3*
5:45 PM	**0**	**0**	**0**	**0**	*0*	**0**	**0**	**0**	**0**	*0*	**0**	**0**	**0**	**0**	*0*
Count Total	0	0	4	7	*11*	0	0	0	1	*1*	0	12	0	4	*16*
Peak Hr	**0**	**0**	**2**	**3**	*5*	**0**	**0**	**0**	**0**	*0*	**0**	**4**	**0**	**1**	*5*

MONROE AVE NE
DRIVEWAY

Date: Wed, Jan 20, 2016
Count Period: 11:00 AM to 1:00 PM
Peak Hour: 11:15 AM to 12:15 PM

Peak Hour





	HV %:	PHF
EB	0.0%	0.75
WB	-	-
NB	2.4%	0.83
SB	2.6%	0.87
TOTAL	2.3%	0.92

Two-Hour Count Summaries

Interval Start	DRIVEWAY				0				MONROE AVE NE				MONROE AVE NE				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
11:00 AM	0	4	0	23	0	0	0	0	0	8	44	0	0	0	51	2	132	0
11:15 AM	**0**	**0**	**0**	**9**	**0**	**0**	**0**	**0**	**0**	**24**	**65**	**0**	**0**	**0**	**46**	**1**	**145**	0
11:30 AM	**0**	**5**	**0**	**11**	**0**	**0**	**0**	**0**	**0**	**21**	**58**	**0**	**0**	**0**	**70**	**4**	**169**	0
11:45 AM	**0**	**2**	**0**	**17**	**0**	**0**	**0**	**0**	**0**	**11**	**58**	**0**	**0**	**0**	**71**	**0**	**159**	605
12:00 PM	**0**	**3**	**0**	**10**	**0**	**0**	**0**	**0**	**0**	**14**	**44**	**0**	**0**	**0**	**77**	**0**	**148**	**621**
12:15 PM	0	4	0	13	0	0	0	0	0	14	45	0	0	0	42	2	120	596
12:30 PM	0	3	0	20	0	0	0	0	0	9	44	0	0	0	50	0	126	553
12:45 PM	0	0	0	14	0	0	0	0	0	14	43	0	0	0	50	1	122	516
Count Total	0	21	0	117	0	0	0	0	0	115	401	0	0	0	457	10	1,121	0
Peak Hour	**0**	**10**	**0**	**47**	**0**	**0**	**0**	**0**	**0**	**70**	**225**	**0**	**0**	**0**	**264**	**5**	**621**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
11:00 AM	0	0	3	2	*5*	0	0	0	0	*0*	0	3	2	2	*7*
11:15 AM	**0**	**0**	**2**	**2**	***4***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
11:30 AM	**0**	**0**	**2**	**2**	***4***	**0**	**0**	**0**	**0**	***0***	**0**	**7**	**0**	**3**	*10*
11:45 AM	**0**	**0**	**2**	**3**	***5***	**0**	**0**	**0**	**0**	***0***	**0**	**8**	**0**	**2**	*10*
12:00 PM	**0**	**0**	**1**	**0**	***1***	**0**	**0**	**0**	**0**	***0***	**0**	**11**	**0**	**1**	***12***
12:15 PM	0	0	2	3	*5*	0	0	0	0	*0*	0	7	2	6	*15*
12:30 PM	1	0	0	2	*3*	0	0	0	0	*0*	0	4	0	0	*4*
12:45 PM	0	0	0	5	*5*	0	0	0	0	*0*	0	5	0	1	*6*
Count Total	1	0	12	19	*32*	0	0	0	0	*0*	0	45	4	15	*64*
Peak Hr	**0**	**0**	**7**	**7**	***14***	**0**	**0**	**0**	**0**	***0***	**0**	**26**	**0**	**6**	***32***

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ATTACHMENT B

Peak Parking Occupancy Counts

RTC Campus Parking Supply Summary

Parking lot	regular spaces	ADA spaces	Column1
P1	82	4	86
P2	309	8	317
P3	33	4	37
P4	40	2	42
P5	7	0	7
P6	75	0	75
P7	49	6	55
P8	24	2	26
P9	53	0	53
P10	112	5	117
P11	9	1	10
P12	87	2	89
East L	23	0	23
P13	41	1	42
Behind J	11	7	18
Annex	65	3	68
Street Monroe	51	0	51
Street Kirkland	20	0	20
Total	**850**	**43**	906

			Total
Main Campus	955	42	997
Annex	65	3	68
Subtotal Off-Street	**1020**	**45**	**1065**
On-Street	71	0	71

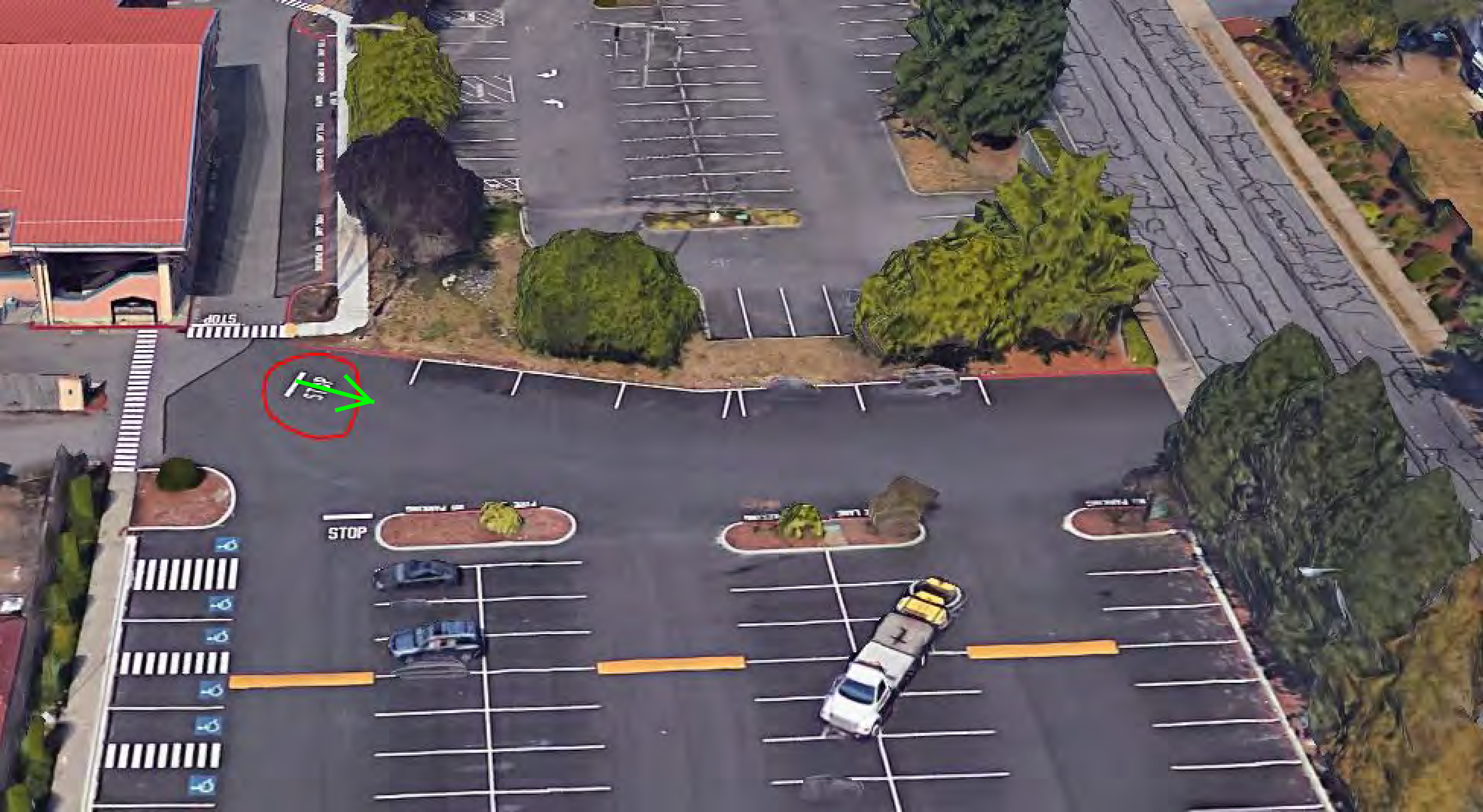
ATTACHMENT C

Allied Health Site Pedestrian Connection


Allied Health Parcel
Google earth
© 2016 Google
N
400 ft

ATTACHMENT D

Interior Campus Circulation Recommendation At Building H


STOP

Fast Facts 2014-2015

STUDENT RIGHT TO KNOW

- Fall to Fall Retention Rate - 69% compared to 60% for comparable colleges
- Graduation Rate - 61% compared to 22% for comparable colleges
- Transfer-Out Rate - 9%
- Estimated Placement Rate - 78%
  (9 months after completion for the 2012-2013 academic year)

Retention, graduation, and transfer-out rates are reported as part of the Integrated Post-Secondary Education Data System (IPEDS) for first-time, full-time, degree-seeking students. For more information about RTC, please visit the IPEDS website here.

STUDENT PROFILE

GENDER
- Male - 60%
- Female - 40%

MEDIAN AGE
- 31

RACE/ETHNICITY
- Asian/Hawaiian/Pacific Islander - 19.1%
- African/African-American - 15.7%
- Hispanic/Latino - 16.8%
- Native American - 1.1%
- Other/Multiracial - 6.8%
- White - 40.5%

PURPOSE FOR ATTENDING
- Career Training (Certificates/Degrees) - 21.9%
- Basic Studies (ABE/GED/ESL) - 30.7%
- Academic/Transfer - 10.8%
- Apprenticeships/Journeymen - 36.6%
- Other - .02%

STUDENTS WE SERVE
- Immigrants/Refugees - 916
- First-Generation Students - 893
- Pell Grant Recipients - 1,229
- Veterans - 169
- Single-Parents - 984
- Working Students - 3,287

RTC PROFILE

TUITION COSTS*
- Quarterly and yearly (15 credits): $1,387 or $4,161

*This is an estimate for base tuition only. For more detailed information on tuition and fees, see the notes at the end of this document.

PROGRAMS
- RTC offers 52 career training programs with 90 certificate options, 37 Associate in Applied Science degree options, 16 Associate in Applied Science Transfer degree options, 1 Bachelor of Applied Science degree, 27 Apprenticeships, and 3 Direct Transfer Agreements.

FACULTY/STAFF
- Full-Time Faculty - 93
- Adjunct Faculty - 157
- Administrators - 33
- Professional-Technical Staff - 48
- Classified Staff - 122

STUDENT/FACULTY RATIO
- 17:1

HEADCOUNT
- 10,160

FULL-TIME EQUIVALENT - STUDENT (FTE-S)
- 4,141

COMPLETIONS
- Certificate - 816
- AAS - 200
- AAS-T - 89
- HSD/GED - 130
- Direct Transfer Agreement (DTA) - 5
- Apprenticeship - 186

RTC FOUNDATION
- The RTC Foundation awarded over $50,000 in scholarships.

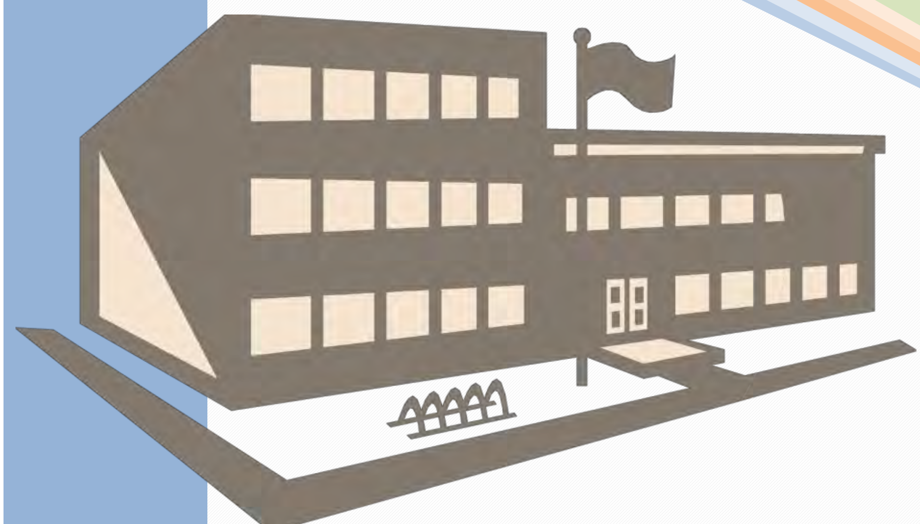
SERVICE AREA
- Renton, Kent, Auburn, Tahoma, Enumclaw, and Issaquah school districts.
- Central and south portions of the Seattle school district

Fast Facts 2014-2015

Notes

- **Certificate:** Students who want to obtain expertise in a field without earning a college degree may earn a certificate. Depending on the subject, students can complete most college certificate programs in a few weeks or up to 18 months because these programs focus on one discipline and do not include general education courses.
- **Associate in Applied Science:** The Associate of Applied Science (AAS) degree is a two-year undergraduate degree. The AAS degree is designed for students who intend to enter the workforce immediately following graduation from their program.
- **Associate in Applied Science Transfer:** The Associate of Applied Science Transfer (AAS-T) degree is built upon the technical courses required for job preparation but also includes a college-level general education component. The distinguishing characteristic of the AAS-T is a minimum of 20 credits of general education courses. AAS-T courses are designed for the dual purpose of immediate employment and as preparation for the junior year in a bachelor's degree commonly described as the bachelor of applied science (BAS).
- **Bachelor of Applied Science:** The Bachelor of Applied Science (BAS) degree is an interdisciplinary degree designed for students who have completed a technical Associate of Applied Science (AAS) degree. The BAS degree builds upon the AAS degree to complete the equivalent of a 4 year undergraduate degree.
- **Apprenticeship:** Apprentices work full time in their field and attend related schooling part-time, a few weeks/year or evenings/week. In several programs, apprentices have the option of earning an Associate of Applied Science (AAS) degree in addition to their journey-level certificate.
- **Direct Transfer Agreement:** The Direct Transfer Agreement (DTA) Associate Degree, sometimes called the Associate in Arts or Associate in Arts and Sciences**,** is the community college degree designed to transfer to most bachelors of arts degrees at all Washington four-year institutions.

2015 FACILITY CONDITION SURVEY



Renton Technical College

SURVEY CONDUCTED BY:
Steve Lewandowski
State Board for Community
and Technical Colleges

Olympia, Washington

TABLE OF CONTENTS

ACKNOWLEDGMENTS

The following individuals are acknowledged for their participation in and contribution to the Renton Technical College Facility Condition Survey.

State of Washington

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Steve Lewandowski, Chief Architect

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3000 Ne 4Th St, Renton 98056

Melinda Merrell

Barry Baker

NARRATIVE SUMMARY

Section 1

IN THIS SECTION:

- Introduction
- Executive Summary
  - College Overview
  - Deficiency Survey Update Summary
  - Capital Repair Requirement Deficiency Overview
  - Additional Deficiency Concerns
  - Major Infrastructure Overview
  - Consistency of Repair Requests with Facility Master Plan
  - Building Condition Rating Overview
  - Maintenance Management Concerns
  - Facility Condition Survey Report Format
- Facility Replacement and Renovation
  - Facility Replacement Priority Overview
  - Facility Renovation Priority Overview
- Facility Maintenance Management
  - Maintenance Staffing and Expenditure Overview
  - Maintenance Staffing
  - Maintenance Expenditures
  - Work Management Overview

- Preventive Maintenance Overview
- Maintenance Philosophy

- Survey Methodology
  - Survey Process
  - Repair/Maintenance Standards
  - Deficiency Documentation
  - Survey Data Management and Reporting

INTRODUCTION

The facility condition survey is conducted by the State Board for Community and Technical Colleges (SBCTC) every two years. In 1989 the SBCTC directed that a facility condition survey be performed on all community college facilities owned by the state. The intent of the survey was to provide a determination of the physical condition of state-owned community college facilities, and to identify capital repair project candidates for funding consideration for the bi-annual state budget cycle. Starting in 1991, the five technical colleges and Seattle Vocational Institute were also included in this process.

The current survey continues the process begun in 1989 as a method of identifying and budgeting capital repair needs by applying a uniform process to all colleges system-wide. The capital repair candidate validation process uses a condition evaluation protocol and deficiency prioritization methodology applied in a consistent manner across all of the colleges. The process was initiated with a detailed baseline condition survey conducted at each college in 1989, followed by updates conducted every two years. In 1995 a detailed baseline survey was conducted once again. Updates have been conducted every two years since 1995.

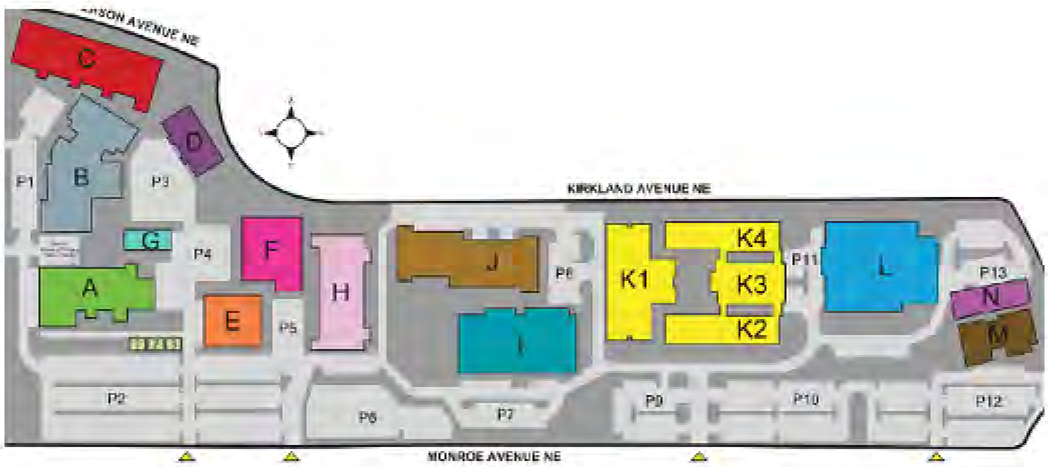
In 2001 the survey was augmented by a facility condition rating process whereby the overall condition of each college facility is rated by evaluating the condition of 20 separate technical adequacy characteristics. A score is calculated for each facility based on this evaluation. The condition rating process continues to be an integral part of the condition survey update process.

The focus of the 2015 survey update includes:

- Reviewing deficiencies documented in the previous survey that have either not been funded or only partially funded for the current biennium, and evaluating the current condition of those deficiencies;
- Updating the relative severity/priority of those deficiencies to result in a deficiency score to be used as a guide for repair request prioritizing and timing;
- Modifying the recommended corrective action for unfunded deficiencies if necessary, and updating the estimate of repair costs for capital repair project requests;
- Reviewing, validating, prioritizing, and estimating corrective costs for “emerging” deficiencies identified by the college as potentially requiring capital repairs;
- Updating the building and site condition ratings.

This survey is intended to assist the SBCTC in establishing the relative severity of each capital repair deficiency to allow system-wide prioritizing of each college repair request. The SBCTC will also be able to estimate the cost of the projects to be requested for its 2017-2019 capital budget.

The scope of the condition survey update, as determined by the SBCTC, includes major building systems, utility distribution systems, and some site elements. It does not include dormitories, parking lots, asbestos hazard identification, ADA compliance, new construction, construction currently under warranty, or facilities recently purchased.


KIRKLAND AVENUE NE
MONROE AVENUE NE
C
D
B
P1
P3
G
P4
F
H
J
P6
K1
K4
K3
K2
P11
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P13
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P5
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P2
P8
P7
P9
P10
P12

EXECUTIVE SUMMARY

The campus visit and validation assessment for this facility condition survey update for Renton Technical College was conducted in 2015. The report will be used to help develop the 2017-2019 capital budget request.

This report includes two main focus areas. One focus area is the identification and evaluation of facility deficiencies that require capital funding. The deficiencies are scored and ranked to determine which projects will be proposed in the capital budget. The other focus is the evaluation of campus sites and buildings to determine the asset conditions. The buildings are scored using consistent criteria. These scores can be used by colleges that submit a major project request for consideration in the 2017-2019 capital budget.

Campus areas and facilities not owned by the State are not evaluated during the survey since they do not qualify for State capital appropriations. Also, dormitories, parking lots and other enterprise activities are not included because they have their own revenue source.

College Overview

Renton Technical College serves the greater Renton area, as well as other communities in central and south King County. The main campus, located in the city of Renton, has been in operation since 1941, when it came into existence as a war production school. It became part of the Washington community and technical college system in 1991. The college also owns and operates a satellite facility in downtown Renton.

The main campus is located on a 30-acre site that houses fourteen permanent facilities. The permanent facilities range in size from 3,240 GSF to 61,963 GSF. Eleven of the permanent facilities are considered instructional/academic facilities, one is an administrative and student support facility, and two are maintenance facilities.

The Courthouse Building, a facility of approximately 8,800 GSF, is located off-campus on a 2-acre site about one mile south of the main campus. The building was constructed in 1984 and acquired by the college in 2004.

Deficiency Survey Update Summary

Previous Survey

Several deficiencies were identified in the previous facility condition survey for the Renton Technical College. Typically, the survey data for all college deficiencies are included in a single list and prioritized by severity. The prioritized list is then pared down to the most severe deficiencies based on the total dollar amount identified in the State Board's capital budget request for Minor Works Preservation projects.

The portion of the funding request related to an individual campus is determined by adding up all of the projects that are included in the pared down list for each campus. After the list is correctly sized, colleges are given the opportunity to make modifications to their preliminary list of projects, but are constrained by the pre-determined budget amount for their college. The State Board then uses the modified project data to help develop the final capital budget Minor Works Preservation request.

To address the worst deficiencies identified in the previous survey, the State Board submitted the following deficiencies as Minor Works Preservation projects in the 2015-2017 capital budget request (some of these have been combined into sub-projects in the budget request or subsequent allocations):

Deficiency F1: Replace fire sprinkler pipe in the Al Odem building. Project cost estimate = $44,000

Deficiency F4: Repair cooling tower in the Central Heating building. Project cost estimate = $51,000

Deficiency F5: Replace fire alarm in the Business Technology building. Project cost estimate = $102,000

Deficiency F8: Replace fire alarm in the Chuck Demoss building. Project cost estimate = $102,000

Deficiency F9: Replace chiller and dry cooler in the Health Occupations building. Project cost estimate = $165,000

Deficiency R1: Replace roofing in the Chuck DeMoss building. Project cost estimate = $730,000

Survey Update

This condition survey update validated additional repair deficiencies and recommendations for funding. Many of the deficiencies have been recommended for funding in the 2017-2019 capital budget, however, any deferrable deficiencies should also be included in the budget in order of severity as funds allow.

The following table summarizes by funding category the number of deficiencies, average severity score, and estimated repair cost. Projects not recommended for funding are not included.

Category	Campus	Deficiencies	Average Deficiency Score	Total Repair Cost Estimate
Facility	Main Campus (270A)	6	56	$1,236,000
Roof	Main Campus (270A)	1	66	$766,000
College Total		7	58	$2,002,000

Capital Repair Requirement Deficiency Overview

All of the deficiencies identified during this survey are summarized below:

<u>Deficiency F01</u>
Main Campus (270A)
Location: Campus Center (270-I)
Severity Score: 29
Construction Cost Estimate: $200,000

The existing 95 ton chiller has had several significant recent repairs and parts and experienced technicians are difficult to find. The college recommends replacing the existing chiller with a new 95 ton air cooled chiller with dual independent refrigerant circuits to allow the chiller to continue to operate in the event of the compressor or condenser failure. The chiller currently functions well and should continue to be monitored for future replacement.

<u>Deficiency F02</u>
Main Campus (270A)
Location: Health Occupations (270-B)
Severity Score: 62

Construction Cost Estimate: $52,000

The VAV terminal unit controllers and main boiler controller in Building B have exceeded their expected useful life and have been malfunctioning causing the terminal units to be inoperable. The controllers serving the VAV terminal units (roughly 32) and the main controller which sequences the boilers should be replaced.

Deficiency F03
Main Campus (270A)
Location: Campus Center (270-I)
Severity Score: 60
Construction Cost Estimate: $60,000

The Dish room of the Food Service area is susceptible to water damage due to failing interior finishes and poor design. Floors do not slope to drains, causing puddles as a constant impediment. Water frequently seeps into walls, causing damage and mold growth. The floor tile and wall cladding should be replaced. The adjacent walls should be repaired. The floors should be sloped to drains and to waterproof walls.

Deficiency F04
Main Campus (270A)
Location: Mccormick (270-A)
Severity Score: 72
Construction Cost Estimate: $66,000

Electrical Panels in south end and a sub panel in the middle section shops are outdated and beyond their useful life. Lighting contactors will no longer work on the panels because they are viewed as unsafe. The electrical panels should be replaced.

Deficiency F05
Main Campus (270A)
Location: Multiple (270A)
Severity Score: 68
Construction Cost Estimate: $240,000

Fire Alarm Panels throughout campus are at the end of their useful life and in need of upgrade. These systems are of the same generation. Two of the largest buildings on campus have had upgrades already but upgrading is needed in Bldgs. A, B, D, E, F, G, I, L, and O. The worst third of these buildings fire alarm systems should be replaced. The removed systems should be retained and used for spare parts for the remaining existing equipment. The remaining equipment should be replaced in phases over the next 6 years.

Deficiency F06

Main Campus (270A)
Location: Mccormick (270-A)
Severity Score: 46
Construction Cost Estimate: $250,000

The HVAC system serving the welding program contains an exhaust fan, heat exchanger, natural gas heating section, filters and a supply fan. The college is concerned that the unit is near the end of its useful life and has become corroded. This unit still functions, but is less efficient than when in the original condition. The unit should be replaced.

Deficiency R01

Main Campus (270A)
Location: Chuck Demoss Building (270-J)
Severity Score: 66
Construction Cost Estimate: $538,000

The cement tile roofing has allowed multiple leaks to develop. This is partly due to age and the underlayment, but mostly because of the low slope roof. Water is infiltrating the building envelope. Other buildings with this type of roof have had roofs replaced using standing seam metal roofing. The roofing should be replaced with metal roofing.

The following table summarizes the average severity score and estimated repair cost. The data is sorted by facility.

Campus & Location	Deficiencies	Average Score	Estimated Total Cost	Current Replacement Value	Facility Condition Index
Main Campus (270A)					
Campus Center (270-I)	2	44	$371,000	$33,441,696	1.1%
Health Occupations (270-B)	1	62	$75,000	$15,555,725	0.5%
Mccormick (270-A)	2	59	$450,000	$17,542,610	2.6%
Multiple (270A)	1	68	$342,000	N/A	N/A
Chuck Demoss Building (270-J)	1	66	$766,000	$20,757,605	3.7%
College Total	7	58	$2,002,000		

Facility Condition Index (FCI) = Project Cost / Current Replacement Value

A building in poor condition will have a higher FCI

The following table summarizes the number of deficiencies, average severity score and estimated repair cost. The data is sorted by probable deficiency cause.

Campus & Location	Deficiencies	Average Score	Estimated Total Cost
Main Campus (270A)			
Age/Wear	6	57	$1,917,000
Design	1	60	$86,000
College Total	7	58	$2,002,000

Since capital funding is derived largely from long-term State bond indebtedness, the investment of capital repair dollars in a facility should likewise result in a long-term benefit, a minimum of thirteen years according to OFM guidelines. This means that facilities for which capital repair dollars are being requested should have a reasonable remaining life expectancy to recover the repair dollar investment. Therefore, capital repair requests for facilities that a college has identified as a high priority for renovation or replacement are carefully scrutinized to determine whether the requests should instead be incorporated into any renovation or replacement proposal that is submitted. Typically, capital repair requirements identified in a facility that is being considered for renovation or replacement are backlogged pending receipt of renovation or replacement funding.

Major Infrastructure Overview

The current campus master plan update for the main campus, was informally updated in-house in 2008, discusses the water distribution, sanitary sewer, storm and surface water, and power elements of the infrastructure system.

The water distribution system consists of 10-inch water mains located on two streets fronting the campus. There is also an easement for a water booster station located on campus at the southeast corner. Available pressure is at least 100-psi and is projected to be adequate for future development. System age and condition are not addressed.

Sanitary sewer service is via 8-inch mains in all the primary roadways surrounding the campus, with the exception of one street. There are also 8-inch and 10-inch lines in an easement crossing the campus directly south of Building L. The campus is adequately served for current as well as future development. System condition is not addressed.

Storm water is collected from surface drainage and conveyed by underground pipe to city storm mains. There are no on-site water detention systems. Catch basins in the parking lots provide minimal oil/water separation, and there is no water quality pre-treatment on campus. Storm water detention and water quality treatment will be required for any new proposed development on campus. This will have to be via underground vaults or chamber systems.

The campus primary power distribution system consists of medium voltage transformers, switchgear, manholes and underground wiring, all of which has been modified over time. In 2004, a project was executed which corrected a number of code deficiencies. This included replacement of the 30-year old medium voltage distribution wiring and non-compliant transformers serving the south portion of the campus. Any new development can be fed off the existing primary power distribution, but will require new transformers.

Consistency of Repair Requests with Facility Master Planning

One of the criteria used for the capital repair request validation process is to review the college's master or facilities plan to determine what the medium and long-term planning and programming objectives of the college are with respect to the facilities for which capital repair dollars are being considered. The primary focus is to determine what the college considers the remaining life of these facilities to be, which will determine whether or not the proposed capital repair projects have economic merit.

The deficiencies that have been identified in this condition survey are located in buildings and campus grounds that will likely be utilized for at least the next fifteen years or are in buildings that are slated for renovation or replacement, but require minor repairs to continue basic use of the space. a

Building Condition Rating Overview

The condition rating of the facilities at Renton Technical College that are included in this condition survey update ranges from "436" to "170", and varies significantly, as shown in the following table. The rating scores presented in this summary were generated by the condition analysis conducted as part of the 2015 condition survey update.

In some cases, larger buildings are broken into smaller sections to be scored independently. These newly defined building sections are identified in this report by the "- Partial" label included at the end of the building name. A description of the newly identified building section is provided in the "Building Condition Rating" section.

Building Name	Building Number	Size (SF)	Previous Score	Updated Score
Al Odem Building (270-L)	270L	31,035	244	261
Anderson (270-F)	270F	18,465	274	274
Basic Studies Center (270-D)	270D	9,810	238	242
Business Technology (270-H)	270H	50,200	194	194
Campus Center (270-I)	270I	50,364	222	194
Central Heating (270-G)	270G	3,240	262	254
Chuck Demoss Building (270-J)	270J	61,963	258	206
Courthouse Annex (270-O)	270O	9,948	308	327
Facilities/Ece (270-N)	270N	11,088	182	194
Health Occupations (270-B)	270B	46,435	444	432
Houser (270-E)	270E	13,334	308	315
Mccormick (270-A)	270A	26,183	366	375
Paul Greco Building (270-K)	270K	58,007	436	436
Technology Resource Cntr (270-C)	270C	46,597	170	170

Grand Total Area (SF)	436,669
Weighted Average Score	278

146 To 175 = Superior

176 To 275 = Adequate

276 To 350 = Needs Improvement/Additional Maintenance

351 To 475 = Needs Improvement/Renovation

476 To 730 = Replace or Renovate

The rating scores for permanent college facilities that were rated range from a low of 170 to a high of 436, with a lower score indicating a better overall condition rating. (See the Site/Building Condition Scoring Overview and Ratings section for a breakdown of the rating scores.) In general, the better scores were received by the newer facilities and by facilities that have undergone remodels in recent years.

Furthermore, buildings in the construction phase of a major renovation at the time of the survey were rated based on the anticipated condition of the facility after the project is completed. This concept was also applied to major system renovations. Partial renovations and additions were rated based on the average condition of the existing and renovated components of the facility.

In some cases a portion of a larger building was given an independent score. This can be used to request a major project using the defined smaller portion of the building. The overall score for a split building is also shown and includes the total area in the building.

The weighted average score for all rated facilities is 278 for this survey. Based on this score, the overall average condition of the college = “Needs Improvement/Additional Maintenance”. Independent building scores indicate that 9 of the 14 college facilities are rated as either Superior or Adequate. The State Board goal is to bring all building conditions up to the “Adequate” rating or better by 2020. The survey data over the last 10 years suggests that this goal is attainable if capital funding levels remain constant.

Maintenance Management Concerns

Previous State of Washington capital and operating budgets were significantly impacted by the recent recession. The impact of the recession directly affected the level of funding appropriated to the community and technical colleges. As a result, facility maintenance budgets were reduced accordingly. Some college maintenance staffing levels have not returned to their pre-recession level.

One symptom of a reduced maintenance staffing level of is an increase in deferred maintenance. Another result of the temporarily reduced funding level is the trend to approach maintenance with a “repair by replacement” strategy, which is a more expensive approach to maintaining a facility and merely replaces the operating costs with higher capital costs.

Custodial and maintenance personnel are being asked to do more. The amount of square feet maintained per full-time custodian increased by 16 percent; the amount of square feet maintained per full-time maintenance worker increased by 13 percent from the study completed in 2007.

Troubleshooting equipment and taking the time to effect repairs may not be seen as a priority when funding is tight. However, the resulting long-term costs are far higher than following a prudent policy of balancing reasonable and cost-effective repairs and justifiable replacement.

Many facilities have older large equipment, especially HVAC equipment such as air handlers. This equipment, when manufactured, was very well constructed, often to industrial standards, as compared to commercial equipment manufactured today, which is very often much less robust. Much of this older equipment can be cost-effectively repaired. Fans, motor, dampers, heating/cooling coils, shafts and bearings in air handlers can all be replaced as they fail, without the added expense of replacing the case, which often requires expensive structural work because of size and location. Why throw away a chiller, when only the compressors are bad, and when they can often be rebuilt? A lot of smaller unitized equipment can similarly be repaired instead of simply replaced.

This tendency toward replacement rather than repair also too often extends to roofs. Many times the problems that occur with roof membranes can be satisfactorily resolved with repairs or partial replacement instead of wholesale replacement of the entire membrane. This will require more rigorous investigation to determine the extent of problems, often by employing thermal scanning and/or core sampling to determine the extent of leaks or membrane condition as well as condition of underlying insulation. This does cost some money, but if it can save $175,000 to $275,000 for the average replacement cost of a roof, or if repairs can extend the life of the membrane for five to ten more years, it is certainly money well spent.

Roof membranes with a low initial investment often win out over alternatives that may have a higher initial cost, but a lower life-cycle cost. The use of single-ply PCV or TPO membranes seems to be a preferred design option for new buildings and for membrane replacements. These may be a low cost option, but not a good choice for many applications. On a building with a lot of rooftop equipment and penetrations, single-ply membranes have a short life due to the abuse they sustain by people constantly walking and working around equipment on the roof. Such roofs almost always fare better with a torch-down membrane with a mineral-surfaced cap sheet, which are somewhat more costly initially, but typically last much longer and have lower life-cycle maintenance costs.

If the expertise to troubleshoot and to really analyze the condition of building systems does not exist within the maintenance organization, the organization must make sure that the consultants it hires have the experience and expertise to provide effective troubleshooting and diagnosis, and that they can provide reasonable alternative solutions to a problem. Having design expertise is simply not enough. The same is true of contractors. A contractor should not be allowed to take the easy way out and simply recommend replacement when there could be cost-effective repair alternatives. The emphasis should be on contractors and consultants who can provide more than one solution to a maintenance problem, and insure that those solutions are reasonable and cost-effective.

Another increasing concern is DDC control systems. There appears to be a built-in obsolescence factor in these systems, such that manufacturers seem to be recommending replacement about every twelve years. Over the last two to three biennia the survey team has found that colleges are being told that their systems are “obsolete” and will no longer be supported, that replacement parts will no longer be manufactured and that the college needs to upgrade to the latest system, often at very high cost. Attempting to determine the truth of these claims from manufacturers and their distributors has proved very difficult. To test these claims the survey consultant, starting in 2009, asked colleges that requested DDC replacements to have the manufacturer and distributor provide written, signed confirmation that a system would no longer be supported as of a given date, that replacement parts would no longer be available as of a given date, and that there was no third party source of replacement parts. To date no such documentation has been forthcoming from either manufacturers or distributors.

The trend of college maintenance organizations is to make do with less for the foreseeable future. This being the case, they need to make sure that their available maintenance funds are allocated in the most cost-effective manner possible. In practice this will mean giving a lot more thought to what should and can reasonably be rebuilt or repaired rather than simply replaced. It will also mean starting to apply the principles of life-cycle cost analysis and alternatives analysis to repair and replacement decisions.

Facility Condition Survey Report Format

This facility condition survey report is divided into two major sections that present the survey data in varying degrees of detail. Section I is titled *"Narrative Summary"* and includes four subsections. Section II is titled *"Summary/Detail Reports"* and includes three subsections.

Section I - Narrative Summary

The *"Introduction and Executive Summary"* is the first subsection. It includes an overview of the survey objectives; an overview of the college; a summary update of deficiencies funded from the previous survey; an overview of capital repair requests being submitted for the 2017-2019 biennium; a discussion of major infrastructure issues; significant maintenance/repair issues identified by the college maintenance organization, which the survey team determined could not be addressed through the capital repair process; a discussion of the consistency of repair requests with facility master planning; and a building condition rating overview.

The second subsection is titled *"Facility Replacement and Renovation Proposals"* and discusses facilities that are viewed by the college as prime candidates for replacement and major renovation.

The third subsection is titled "*Facility Maintenance Management Overview."*   It presents an overview and discussion of maintenance staffing and funding; and an overview and discussion of facility maintenance management issues.

The fourth subsection is titled *"Survey Methodology"* and discusses the methodology of the condition survey, including the survey process; deficiency documentation; deficiency severity scoring; cost estimating; and data management and reporting.

Section II - Summary/Detail Reports

The *"Summary/Detail Reports"* section of the report presents both summary and detail deficiency data. The first subsection is titled *"Repair Programming Summary"* and provides a summary deficiency cost estimate by building and by the criticality or deferability assigned to each deficiency, and a facility repair programming summary report. The repair programming summary report provides both descriptive and cost deficiency data for each facility, categorized by the criticality or deferability assigned to each deficiency.

The second subsection is titled *"Detailed Deficiency Data"* and contains the detailed deficiency data for each facility wherein deficiencies were identified. Each individual deficiency report page provides detailed information on a single deficiency.

The third subsection is titled *"Site/Building Condition Scoring Overview and Ratings"* and contains a discussion of the facility and site rating process; an overview of facility and site condition; the site rating sheet for the main campus and any satellite campuses; and the building condition rating sheets for each facility.

The report also contains three appendices. *Appendix A* provides a detailed overview of the deficiency severity scoring methodology employed by the survey team. *Appendix B* provides an overview of the building/site condition analysis process, including the evaluation standards and forms used in the analysis. *Appendix C* contains the capital repair request validation criteria that were first developed for the 2001 survey process to insure a consistent approach in identifying candidates for capital repair funding.

FACILITY DEVELOPMENT HISTORY

Development of the main campus of Renton Technical College has taken place over a forty-five year period, starting in 1966 with the construction of the McCormick building and the Central Heating building. Five additional facilities were constructed in the 1970s and four facilities were constructed during the 1980s. Since 1988 only three new facilities have been constructed. The Facilities/ECE building is the newest facility, constructed in 2005.

The Courthouse Building, located off-campus about one mile south of the main campus, was constructed in 1984 and acquired by the college in 2004.

Facility planning

The date of the most recent master plan(s) for the college campuses is shown below. During the survey, the college was asked to identify the top four priorities for facility renovation, replacement and demolition based on the master plan(s). This information was used to better understand the future needs of the college, but also to further evaluate the need for repair work. A deficiency located within a building planned for renovation, replacement or demolition was typically not considered for funding if the work was not absolutely required to maintain program functions until the larger project could be funded. It is difficult to justify spending capital funds on an asset that will likely be removed or replaced within a short period of time. The following table summarizes the college planning priories.

Master Plan

Campus	Most recent full plan	Most recent update
Courthouse Annex (270B)	2001	N/A
Main Campus (270A)	2006	N/A

Renovation Priorities

Building	Largest program deficiency or need
None	-

Replacement Priorities

Building	Largest program deficiency or need
Health Occupations (270-B)	Poor condition - Several major systems failing
Basic Studies Center (270-D)	Poor condition - Several major systems failing

Demolition Priorities

Building	Planned demolition year
None	-

FACILITY MAINTENANCE MANAGEMENT

A questionnaire was sent to each college soliciting input from the college maintenance organization on maintenance staffing, the status of the PM program, annual workload, how work is managed, and annual maintenance expenditures. The responses from Renton Technical College have been analyzed and are discussed below. The data is used to generate an overview of facility maintenance management effectiveness at the college, and is also used to compare all colleges statewide.

The maintenance questionnaire provides data to evaluate and compare maintenance staffing levels and maintenance expenditures. College responses are compared with benchmarking data available from national organizations to help identify variances.

Maintenance Staffing and Expenditure Overview

The benchmarking data for maintenance staffing and expenditures used in previous condition survey updates has come primarily from the International Facility Management Association (IFMA). This organization periodically collects and publishes comparative data gathered through in-depth surveys of a wide variety of maintenance organizations. IFMA completed the last major facility operations and maintenance survey in 2008. That data was reported in a publication titled "Operations and Maintenance Benchmarks – Research Report #32," published in mid-2009.

Similar comparative data was found to be available from an annual maintenance and operations cost study for colleges conducted through a national survey by American School & University (ASU) magazine. The most recent data from this source is their 38th annual study published in April of 2009.

Maintenance Staffing

The Renton Technical College facility encompasses approximately 436,669 GSF, not including leased facilities. The campus maintenance staff has the following composition:

Maintenance Staff (DOP Classification)	Maint. Hrs Per Wk	Estimated Staff Cost (Salary + Benefits)
Plant Manager 1	40	$67,140
Facilities Operations Maintenance Specialist	40	$67,140
Facilities Operations Maintenance Specialist	40	$67,140

Facilities Operations Maintenance Specialist	40	$67,140
Painter	40	$57,920
Maintenance Mechanic 1	40	$57,920

Many colleges supplement the maintenance staff effort by hiring outside contractors to complete some of the maintenance activities. A comparative analysis of total maintenance effort at the colleges requires that the outside contractor data be included in the total maintenance effort. See the "Overall Maintenance Comparison" section below for the comparative analysis.

IFMA Survey Comparison

For comparison with the community colleges, the size range of 250,000 to 500,000 GSF was selected from the IFMA data as representative of the average size of a state campus. The average total maintenance staffing reported by IFMA in 2009 for this size of plant was **8.7** FTEs. Dividing the upper end of the selected range (500,000 GSF) by the FTE staffing provides the number of GSF maintained per FTE -- **57,471 GSF**.

In its 2009 report, IFMA also provided comparative data for the average number of maintenance staff by specific categories of maintenance personnel (e.g. electricians, painters, etc.), using the same ranges of physical plant size as for total staffing. This data, which is presented below, could be useful for evaluating the college's existing staffing in terms of specific trades/capabilities and staffing numbers.

Staff position	Average number of staff
Supervisor (incl. Foremen)	1.75
Administrative Support (incl. Help Desk)	2.38
Electricians	1.28
Plumbers	1.13
Controls Techs.	0.94
HVAC and Central Plant	1.93

Painters	1.25
Carpenters	1.28
General Workers	3.22
Locksmiths	0.96

ASU Survey Comparison

The American School & University (ASU) magazine cost study provides data on the average number of maintenance employees and the average GSF of physical plant maintained per employee. However, unlike the IFMA data, this data is not broken down by size ranges of physical plant. The average number of maintenance employees in the 37th annual study was reported as **eight** FTEs per college or university. The corresponding data was not available in the most recent, 38th annual study. The average number of GSF maintained per FTE was reported as **79,293** in the 38th annual study. Using the average number of FTE's identified in the 37th study and the average GSF per FTE identified in the 38th Study, it can be determined that the average campus included roughly 635,000 square feet of buildings.

Maintenance Expenditures

The total cost of maintenance is the sum of the total cost of college maintenance staff, outside maintenance contracts and maintenance material. Based on this assumption, the total maintenance cost per gross square foot is calculated and shown in the table below. It was critical to include outside contract data since there was significantly different levels of outside contracts for each college.

Some data was not tracked by the colleges, making it difficult to compare the college with benchmark data. As colleges move to more sophisticated tracking software, this data should become more accurate.

Total Estimated Maintenance Staff Cost	Total Cost of Outside Contracts	Cost of Maintenance Material	Total Maintenance Cost per GSF
$384,401	$138,500	$110,000	$1.45

Staff costs were calculated using current Department of Personnel job classification salary data and estimated benefits costs (salary x 1.36 = total cost). If the college did not have the ability to track or did not provide outside maintenance contract expenses, this cost data may be roughly 10% to 30% below actual total maintenance costs. Staff repair efforts related to capital projects (likely funded by Capital Budget bill appropriations) is included in this calculation and varies by college, but this data was difficult to isolate at the time of this survey.

OVERALL MAINTENANCE COMPARISON

The following table compares the college maintenance staff FTEs and area per FTE (GSF/FTE) to other colleges and to the IFMA and ASU averages. Since some colleges spent maintenance funds on outside contracts to supplement their staff efforts, an estimated contract FTE number was generated based on the average annual total contracted amount. If the college did not have the ability to accurately track or did not provide outside maintenance contract expenses, the "Equivalent Contract FTE" data is inaccurate (zero FTEs). This "Equivalent Contract FTE" calculation assumes that the external contracts were primarily labor only. The "Combined Total FTEs" data attempts to reflect the combined in-house and contracted maintenance effort. This analytical approach allows data comparisons between facilities that complete all work with internal staff to facilities that contract out some of their work.

	No. of College Maintenance FTEs	Est. No. of Equivalent Contract FTEs**	Combined Total FTEs	GSF / Combined Total FTEs	Maintenance Cost / GSF
College (RTC)	6.0	2.1	8.1	54,018	$1.45
Average College (weighted)			7.8	86,337	$0.84
IFMA			8.7	57,471	
ASU			8.0	69,873	

** Estimated by dividing the average total fiscal year cost of contracted maintenance work by the statewide average cost of college maintenance FTEs

This data will likely include some level of inaccuracy because of inconsistent data recording methods implemented at each college. It is also difficult to compare college data to the IFMA and ASU data because of similar reasons. The college comparison should become more accurate as the statewide maintenance tracking system is implemented.

Maintenance Philosophy

During the survey process the college maintenance organization was asked to self-rate the level of maintenance at the college based on responses to questions developed by the APPA in the form of a matrix. The APPA matrix identifies five maintenance levels and asks the organization to determine which level applies to his/her institution for each of eleven different measures of maintenance performance, and as a whole. The five maintenance levels are:

1) Showpiece Institution;
2) Comprehensive Stewardship;
3) Managed Care;

4) Reactive Management;

5) Crisis Response.

It is felt that this rating, which measures a very comprehensive set of maintenance performance indicators, reflects to a great extent the overall maintenance philosophy that exists at each college. This is viewed as a useful metric for comparing maintenance effectiveness among the community and technical colleges.

The Renton Technical College maintenance organization has rated the college as a Comprehensive Stewardship institution in response to this query. The elements that define this rating can be viewed on the following page.

MAINTENANCE LEVEL MATRIX (Based on APPA Guidelines)

Level	1	2	3	4	5
Description	**Showpiece Institution**	**Comp. Stewardship**	**Managed Care**	**Reactive Management**	**Crisis Response**
Customer Service/ Response Time	Able to respond to virtually any type of service; immediate response	Average response time for most service needs, including limited non-maintenance activities is one week or less	Services available only by reducing maintenance, with average response times of two weeks or less	Services available only by reducing maintenance, with average response times of one month or less	Service not available unless directed from administration; none provided except for emergencies
Customer Satisfaction	Proud of facilities; high level of trust for the facilities organization	Satisfied with facilities related services; usually complementary of facilities staff	Accustomed to basic level of facilities care. Generally able to perform mission duties but lack pride in physical environment	Generally critical of cost, respon and quality of services	Consistent customer ridicule and mistrust of facilities services
Preventive Maintenance v Corrective Maintenance Ratio	100% PM	75-100% PM 0-25% Corrective	50-75% PM 25-50% Corrective	25-50% PM 50-75% Corrective	0% PM
Maintenance Mix	All recommended PM scheduled and performed on time. Reactive maintenance minimized to things that are unavoidable or minimal. Emergencies are very infrequent and handled efficiently	Well-developed PM program with most PM done at a frequency on slightly less than defined schedu Reactive maintenance required only due to premature system wear out. Only occasional emergency work required	Reactive maintenance predomina due to system failing to perform, especially during harsh seasona peaks. Effort still made to do PM Priority to schedule as staff and time permit. High number of emergencies is routine.	Worn-out systems require staff be scheduled to react to poorly performing systems. Significant time spent procuring parts and services due to high number of emergencies. PM is done inconsistently and only for simple tasks.	No PM performed due to more pressing problems. Reactive maintenance predominates due to worn out systems that fail frequently. Good emergency response due to extreme frequency of occurrences.
Interior Aesthetics	Like-new finishes	Clean/crisp finishes	Average finishes	Dingy finishes	Neglected finishes
Exterior Aesthetics	Windows, doors, trim and exterio walls are like new	Watertight and clean. Good exterior appearance	Minor leaks and blemishes Average appearance	Somewhat drafty and leaky. Rou looking exterior. Extra painting routinely necessary	Inoperable, leaky windows unpainted surfaces, significant air and water penetration poor overall appearance
Lighting Aesthetics	Bright, clean attractive lighting	Bright, clean attractive lighting	Small percentage of lights are routinely out, but generally well l and clean	Numerous lights generally out, some missing diffusers; seconda areas are dark	dark, lots of shadows, bulbs and diffusers missing, damaged and missing hardware

Service Efficiency	Maintenance activities highly organized and focused. Typical equipment/building components fully functional and in excellent operating condition. Service and maintenance calls responded to immediately. Buildings and equipment routinely upgraded to keep current w ith modern standards and usage	Maintenance activities organized w ith direction. Equipment and bldg. components usually functio and in operating condition. Servic and maintenance calls responde to in timely manner. Buildings and equipment regularly upgraded to keep current w ith modern standards/usage	Maintenance activities somew ha organized, but remain people dependent. Equipment/building components mostly functional but suffer occasional breakdow Service and maintenance call response times are variable and sporadic, w ithout apparent caus Buildings/equipment periodically upgraded but no enough to contr effects of normal usage and deterioration.	Maintenance activities are chaot and people dependent. Equipmer and building components are frequently broken and inoperativ service and maintenance calls a typically not responded to in a timely manner. Normal usage and deterioration is unabated, making buildings and equipment inadequate to meet needs.	Maintenance activities are chaoti and w ithout direction. Equipment and building components are routinely broken and inoperative. Service and maintenance calls a never responded to in a timely manner. Normal usage and deterioration is unabated, making building and equipment inadequate to meet needs.
Building System Reliability	Breakdow n maintenance is rare and limited to vandalism and abuse repairs.	Breakdow n maintenance is limited to system components short of mean time betw een failure (MTBF)	Building and system components periodically or often fail.	Many systems are unreliable. Constant need for repair. Repair backlog exceeds resources.	Many systems are non-functiona Repairs are only instituted for life safety issues.
Facility Maintenance Operating Budget as a % of Current Replacement Value	>4%	3.5-4.0%	3.0-3.5%	2.5-3.0%	<2.5%

SURVEY METHODOLOGY

One of the primary objectives of the 2015-2017 facility condition survey is to identify building and site deficiencies. This process includes two primary focus areas. The first focus area is to re-evaluate deficiencies that were identified in the previous survey, but were not included or were only partially funded in the current capital budget. The second focus area is to incorporate emergent deficiencies identified by the college that qualify as capital repair needs into this update. All college deficiencies identified during this survey were prioritized using a scoring algorithm to derive a deficiency score for each deficiency. The resulting prioritized list was used to help determine the minor works preservation portion of the agency's capital budget request.

Survey Process

The facility condition survey itself was conducted as a five-part process. First, a listing of facilities for each campus was obtained in order to verify the currency and accuracy of facility identification numbers and names, including the new assigned State ID numbers and facility GSF.

Second, a proposed field visit schedule was developed and transmitted to the facility maintenance directors at each college. Once any feedback as to schedule suitability was received, the schedule was finalized.

Third, the field visit to each colleges consisted on an in-brief, an evaluation and validation of the capital repair deficiencies proposed by the college, a building condition rating update, and a debrief. The in-brief consisted of a meeting with college maintenance personnel to review the funded and unfunded 2013-2015 deficiencies, discuss the emergent capital repair deficiency candidates to be validated and evaluated, and arrange for escorts and space access. The survey was conducted by the SBCTC chief architect. During the survey process the chief architect interacted with college maintenance personnel to clarify questions, obtain input as to equipment operating and maintenance histories, and discuss suspected non-observable problems with hidden systems and/or components.

In addition to the condition survey update, a building condition rating update was also conducted. The objective of this update is to provide an overall comparative assessment of each building at a college, as well as a comparison of facility condition among colleges. Each facility is rated on the overall condition of 20 separate building system and technical characteristics. A total rating score is generated for each facility to serve as a baseline of overall condition that is used to measure improvements as well as deterioration in facility condition over time.

A site condition analysis was also conducted of each separate site at a college. The site analysis rates eight separate site characteristics to provide an overall adequacy and needs evaluation of each college site. **The rating and scoring processes for both analyses are discussed in *Appendix B*.**

Upon conclusion of the field evaluations, an exit debriefing was held with college maintenance personnel to discuss the deficiencies that would be included in the condition survey update by the chief architect and to answer any final questions.

The fourth part of the process consisted of developing or updating MACC costs for each deficiency and preparing the deficiency data for entry into the database management system.

The last step in the process involved the preparation of the final deficiency reports represented by this document.

The condition survey methodology used is comprised of four basic elements:

1) A set of repair and maintenance standards intended to provide a baseline against which to conduct the condition assessment process;
2) A deficiency scoring methodology designed to allow consistent scoring of capital repair deficiencies for prioritization decisions for funding allocation;
3) A "conservative" cost estimating process;
4) A database management system designed to generate a set of standardized detail and summary reports from the deficiency data.

Repair/Maintenance Standards

Repair and maintenance standards originally developed for the 1995 baseline survey continue to be used by the survey teams as a reference baseline for conducting the condition survey. The standards were designed as a tool to assist facility condition assessment personnel by identifying minimum acceptable standards for building system condition. The standards provide a series of benchmarks that focus on:

- Maintaining a facility in a weather tight condition;
- Providing an adequate level of health and safety for occupants;
- Safeguarding capital investment in facilities;
- Helping meet or exceed the projected design life of key facility systems;
- Providing a baseline for maintenance planning.

Deficiency Documentation

Documentation of emerging capital repair deficiencies was accomplished using a field data collection protocol. The deficiency data collection protocol includes five elements:

1) Campus/building identification information and deficiency designation;
2) Capital repair category and component identification;
3) Deficiency description, location, and associated quantity information;
4) Deficiency prioritization scoring choices;
5) Alternative repair information, if applicable and a MACC cost estimate.

Deficiency Scoring

To assist in the process of allocating capital repair funding, each deficiency receives a score that reflects its relative severity or priority compared to other deficiencies. The scoring system is designed to maximize the objectivity of the surveyor.

A two-step scoring process has been developed for this purpose. First, a deficiency is designated as immediate, deferrable or future, based on the following definitions:

Immediate - A deficiency that immediately impacts facility systems or programs and should be corrected as soon as possible. This type of deficiency is recommended to be included in the 2017-2019 proposed capital budget.

Deferrable - A deficiency that does not immediately impact facility systems or programs where repairs or replacement can be deferred. This type of deficiency is recommended to be included in the capital budget immediately following the 2017-2019 biennium.

Future - A deficiency that does not immediately impact facility systems or programs where repairs or replacement can be deferred beyond the next two biennia.

Second, a priority is assigned to the deficiency by selecting either one or two potential levels of impact in descending order of relative importance:

- Health/Safety
- Building Function Use
- System Use
- Increased Repair/Replacement Cost
- Increased Operating Cost
- Quality of Use

Each impact choice is relatively less important than the one preceding it, and is assigned a percentage. If two priorities are chosen, they must total 100%.

A score is calculated for each deficiency by multiplying the deficiency category score by the priority score.

A detailed discussion of the deficiency severity scoring methodology is provided in *Appendix A*.

Cost Estimates

The Maximum Allowable Construction Cost (MACC) cost estimates that have been provided for each deficiency represent the total labor and material cost for correcting the deficiency, including sub-contractor overhead and profit. The estimates are based either on the R.S. Means series of construction and repair and remodeling cost guides, data from campus consultants provided to the SBCTC by the college, or from the facility maintenance staff. In some cases cost estimates were obtained directly from vendors or construction specialists.

The cost estimates provided have been developed to be "conservative" in terms of total cost. However, since the condition survey is based on a visual assessment, there are often aspects of a deficiency that cannot be ascertained as they are hidden from view and a clear picture of the extent of deterioration cannot be determined until such time as a repair is actually undertaken.

In some cases, if it is strongly suspected or evident that an unobservable condition exists, the cost estimate is increased to include this contingency. However, assumptions about underlying conditions are often difficult to make and, unless there is compelling evidence, such as a detailed engineering or architectural assessment, the estimate will not reflect non-observable or non-ascertainable conditions. Similarly, the extent of many structural deficiencies that may be behind walls, above ceilings, or below floors is not visible and there are often no apparent signs of additional damage beyond what is apparent on the surface. In such situations the cost estimate only includes the observable deficiency unless documentation to the contrary is provided. This can, and has in many instances, resulted in what may be termed "latent conditions," where the actual repair cost once work is undertaken is higher than the original MACC estimate. Typically a contingency amount is added into the MACC estimate. However, even this may not be enough in some cases to cover some unforeseen costs.

Alternatively, "scope creep" sometimes occurs due to college decisions to change the scope of the repair after funding is received compared to what the deficiency write-up envisioned. Such modifications may occur for a variety of reasons. However, since the survey consultant is not performing a design when developing the deficiency write-up, changes in scope once a deficiency is finalized may result in inadequate funding for that repair.

In some cases the SBCTC may also request that the college retain an architectural or engineering consultant to conduct a more detailed analysis of the problem and develop an appropriate corrective recommendation and associated cost estimate for submittal to the SBCTC. This may be appropriate for more complex projects involving multiple trades.

Survey Data Management and Reporting

The deficiency data identified and documented during the survey process was entered into a computerized database management system. The DBMS is currently built with Microsoft's Excel software. This data resource is used to identify capital repair needs as well as maintenance planning and programming.

h. 2014 academic plan information

Program Demand Research

Colleen Murphy
Associate Consultant

Kathryn Karford
Associate Vice President

The strategic enrollment growth strategy matrix provides a useful framework for identifying and categorizing strategies

	Existing Programs	New Programs
Existing Market	Market Penetration	Program Development
New Market	Market Development	Diversification

Prioritizing academic programs and services

Criteria (pp.71-81)

“Before an institution seriously considers undergoing a comprehensive prioritization of academic programs, an old-fashioned ‘gut check’ is necessary.” (p.30)

- History, development, and expectations
- **External demand**
- Internal demand
- Quality of program inputs and processes
- Quality of program outcomes
- Size, scope, and productivity
- Revenue and other resources generated
- Costs and other expenses
- Impact, justification, and overall essentiality
- Opportunity analysis

Dickeson, R.C. *Prioritizing Academic Programs and Services*, rev. San Francisco: Jossey-Bass, 2010.

Agenda

1. Demand research project overview
2. Prospective student research
3. Employer research
4. Key findings recap and discussion

1 Overview

Research Elements

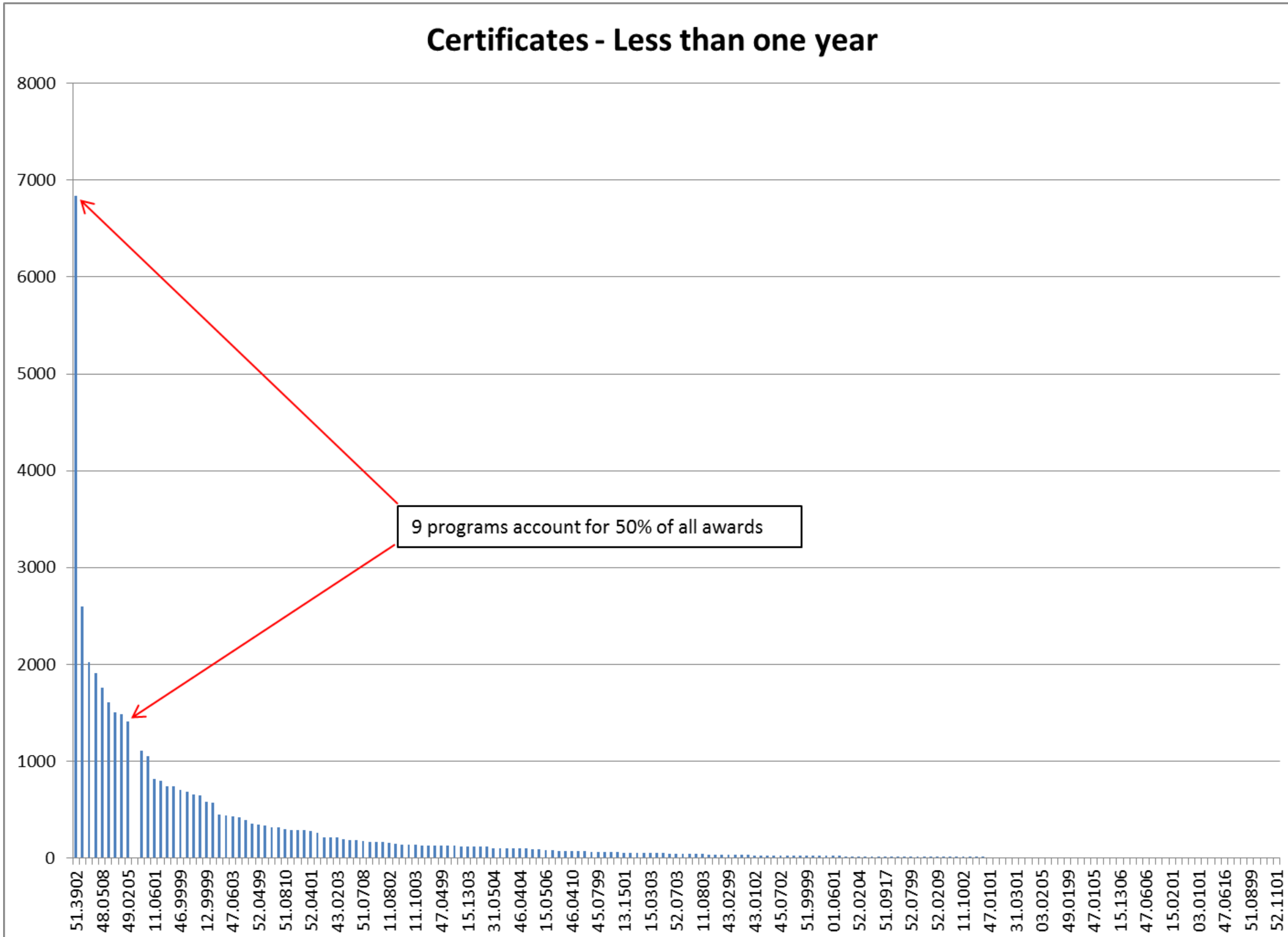
Phase one: secondary research

- IPEDS historical degree share analysis
- Occupational data
- RTC Funnel Data

Phase two: primary research

- Survey of prospective students
- Survey of employers; supplemented with employer job listing resource

Reminder: From IPEDs data base - few programs account for large majority of awards



Phase one: considerations

RTC high demand and low or no share to consider testing

Award level 1 - 2 and Certificate: LPN Nursing, Accounting Technology/technician and Bookkeeping

Award level 3 - 4 and Associate: Registered Nurse, Business, Physical Science, Culinary Arts, Medical Radiology, Interior Design, Fire Science, Mental Social Health Services

Considerations (continued)

RTC medium demand and low or no share to consider testing

Award level 1 - 2 and Certificate: Truck and Bus Driving, General Office, Data Entry, Web and Digital, Drafting and Engineering CAD/CADD, Substance Abuse/Addictions Counseling, Automotive, Legal Assistant/Paralegal, Data Modeling/Warehousing/Database Administration, Computer Programming, Auto body/Collision and Repair

Award level 3 - 4 and Associate: Web Page/Digital Media, Business Administration and Management, Dental Hygiene, Legal Assistant/Paralegal, HVAC, Computer Graphics, Computer Programming, Marketing, Criminal Justice, Air Traffic Controller, Electrician, Diesel Mechanics, CIS Security, CIS Support, Carpentry, Vehicle Maintenance/Repair Technology, Respiratory Care, Vet Tech/Assistant, Medical Secretary, Auto body/Collision and Repair Technology, Baking and Pastry Arts, Physical Therapy Assistant, Machine Tool Technology, Ag Mechanization, AV Technology

Phase one: several academic program development possibilities

- Computer Specialties (Web, Support, Cybersecurity, CIS, Computer Graphics…)
- Paralegal, legal assistant
- Marketing
- Dental hygiene, dental assistant
- Phlebotomy
- Massage therapy
- Electrician
- Solar tech…

See next section for final list tested.

2 Prospective Student Demand

Prospective student survey

- Adults aged 18-50
- 475 on-line interviews
- Geography: ZIP Codes in Renton's service area

Certificates tested

- Accounting, Bookkeeping
- Office Systems, Clerical
- Legal Assistant or Paralegal
- Web page/Digital media
- Computer Information Systems
- Cybersecurity and Networking
- Computer Programming, Software Design
- Computer Graphics
- Data Modeling/Warehousing and Database Administration

Certificates tested (continued 2/2)

- Health Unit Coordinator
- Phlebotomy Technician
- Dental Assisting, Assistant
- Medical Transcription
- Massage Therapy
- Reflexology
- Medical Office Assistant
- Youth Services Administration
- Solar Technician
- Electrician

Certificates tested (continued 3/3)

- Building Property Maintenance
- Diesel Mechanics
- Auto Technician
- Track and Bus Driver/Commercial Vehicle
- Child Development and Early Education
- Child Care Center Teacher
- Restaurant, Culinary, and Catering management
- Chef Training

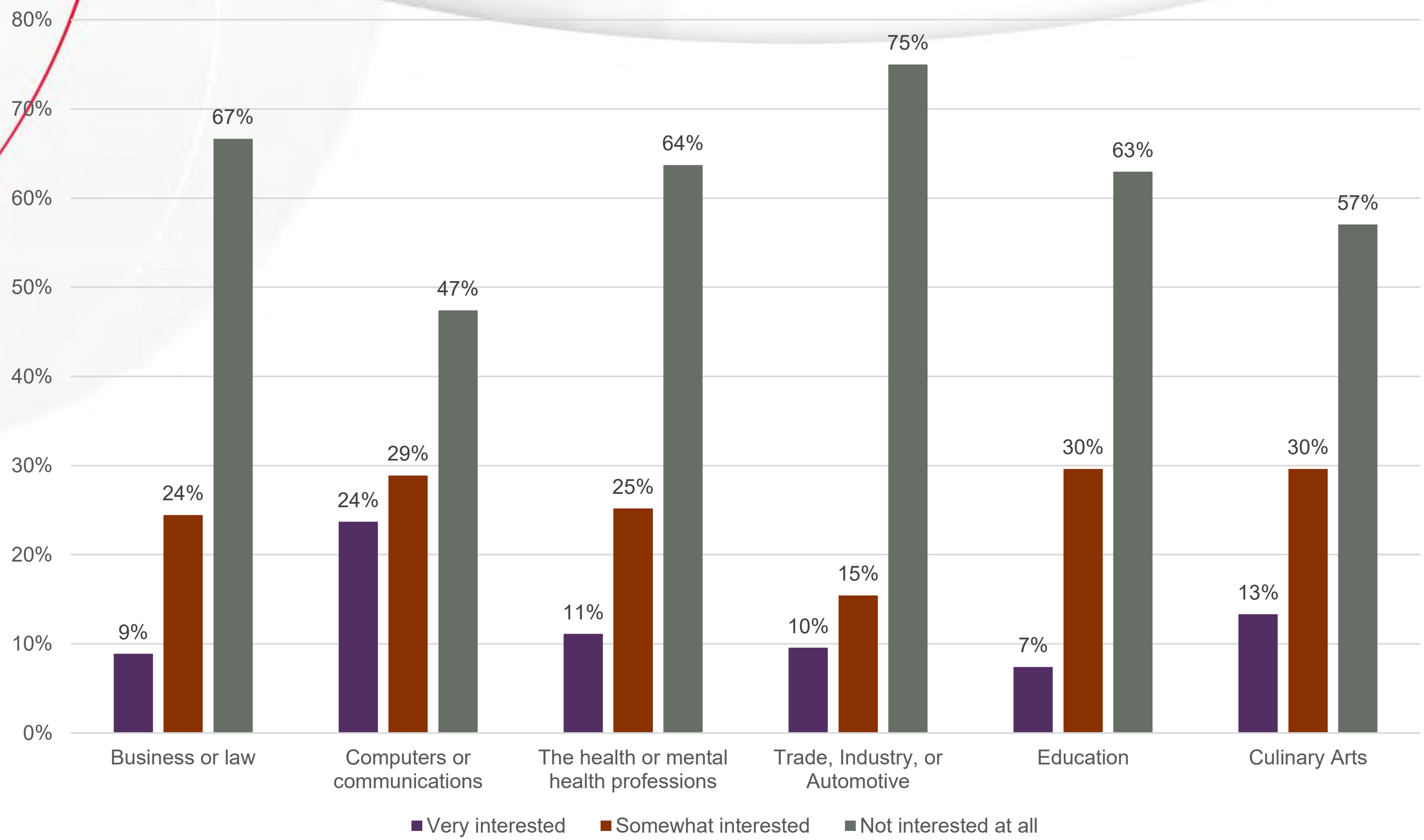
Associate degrees tested

- Accounting
- Paralegal
- Web page/Digital Media
- Computer Information Systems Security
- Cybersecurity and Networking
- Computer Programming, Software Design
- Computer Graphics
- Data Modeling/Warehousing and Database Administration
- Registered Nurse
- Medical Radiology
- Dental Assisting/Assistant
- Dental Hygienist
- Respiratory Care
- Physical Therapy Assistant

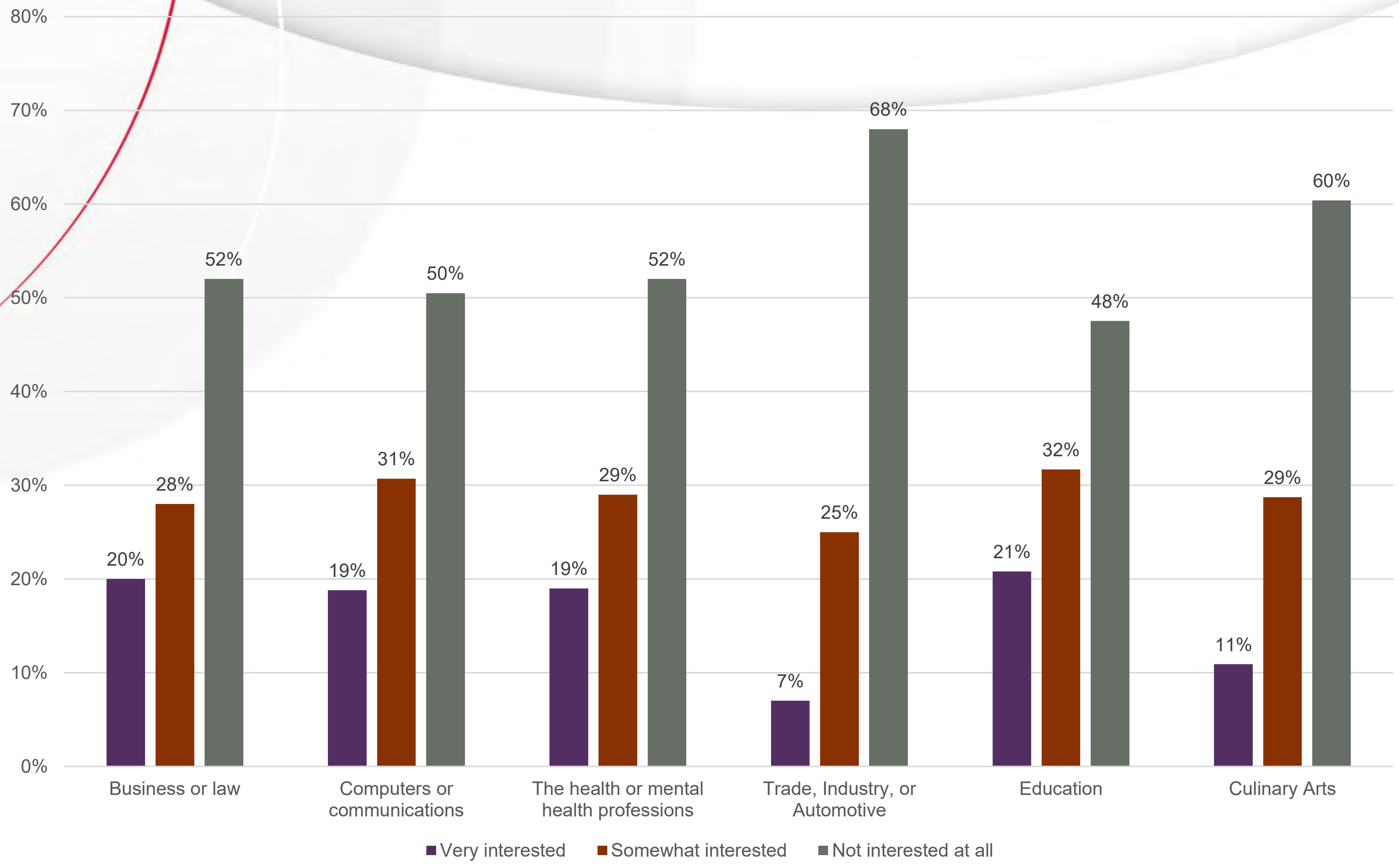
Associate degrees tested (continued)

- Occupational Therapy Assistant
- Acupuncture
- Mental/Social Health Services
- Solar Technician
- Electrician
- Carpentry
- Transportation Logistics, materials & Supply Chain Management
- Mechatronics
- Child Development and Early Education
- Child Care Center Teacher
- Restaurant, Culinary, and Catering Management
- Chef Training

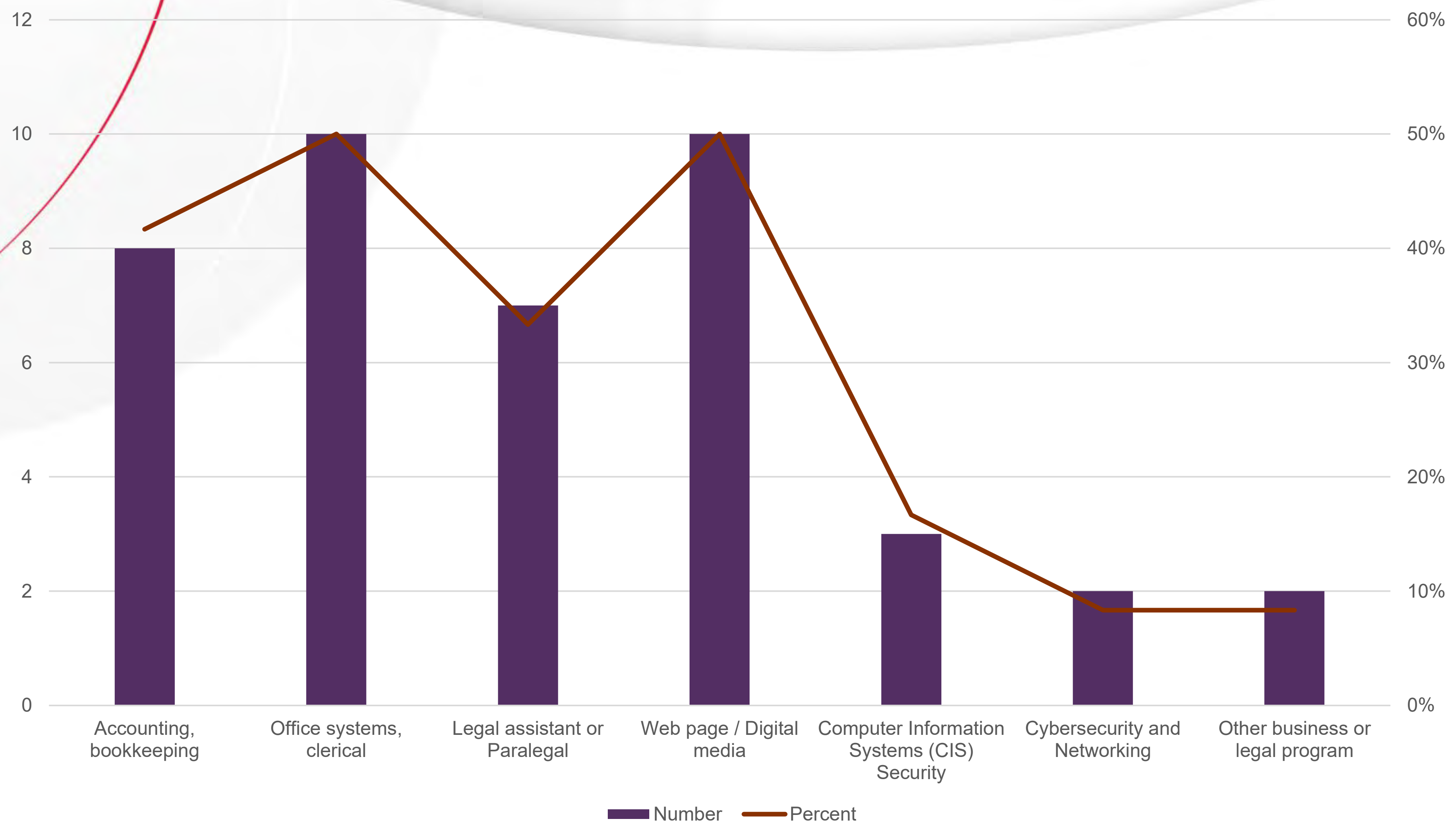
Certificate Areas of Interest



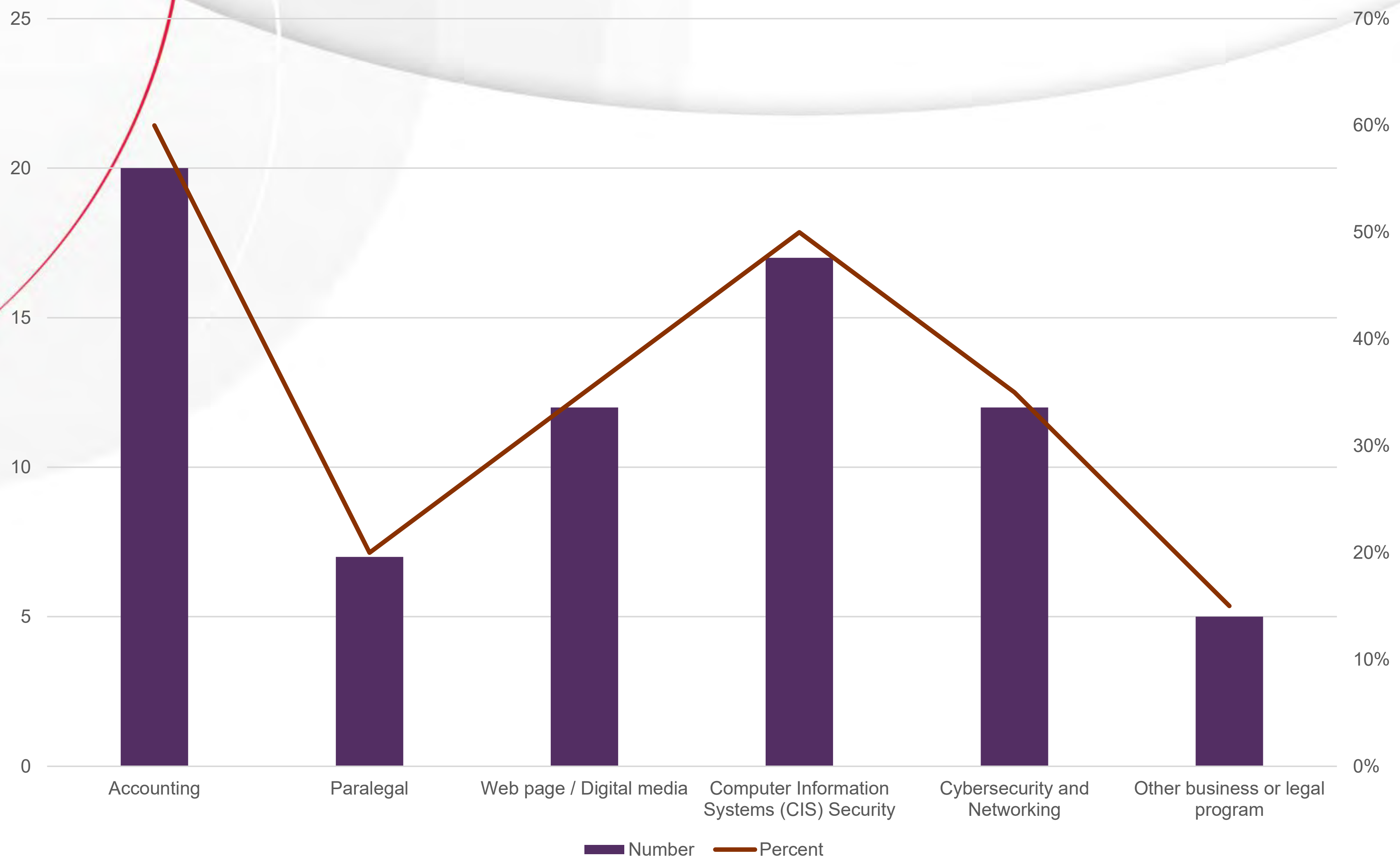
Associate Degree Areas of Interest



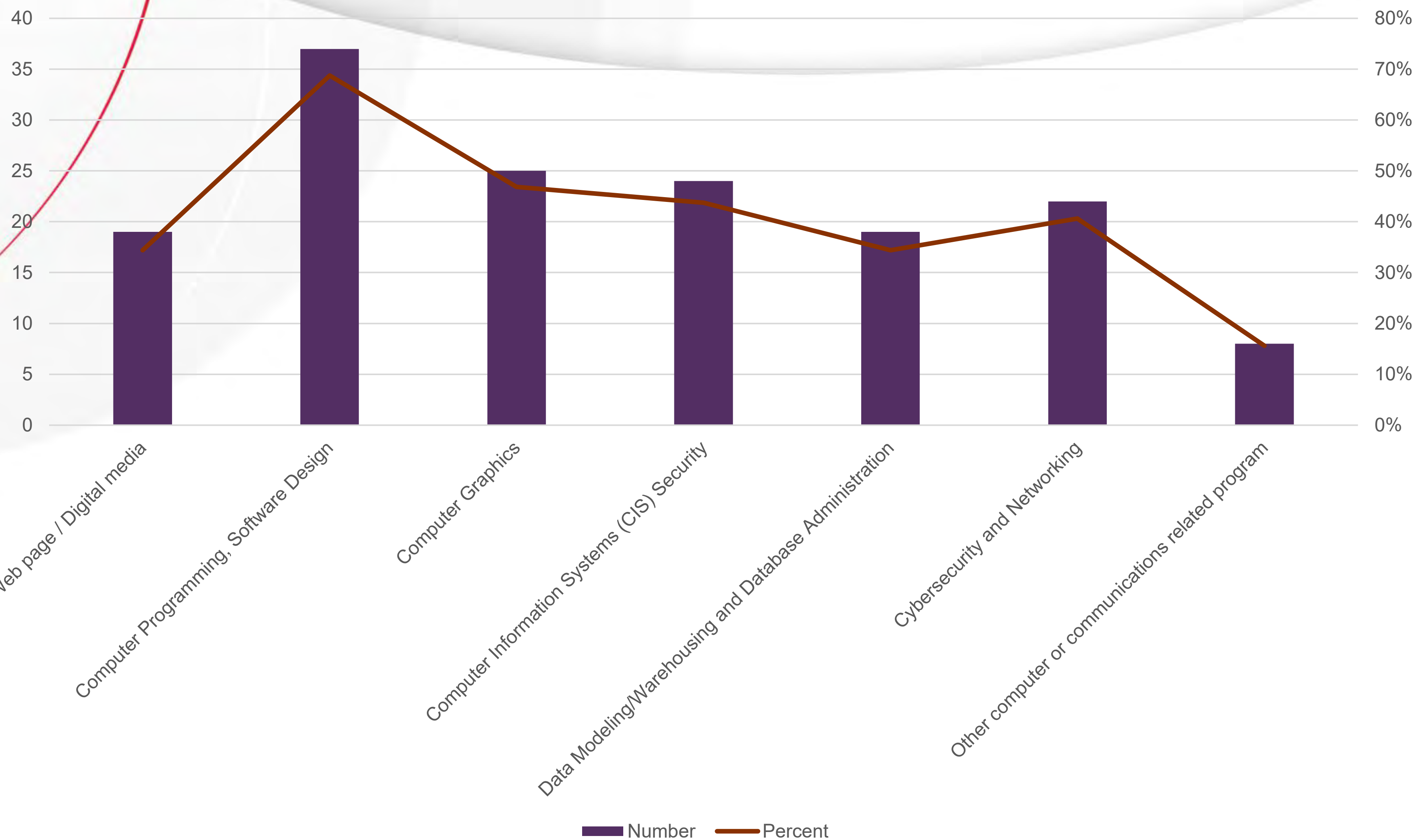
Number "very interested" in certificates in business or law



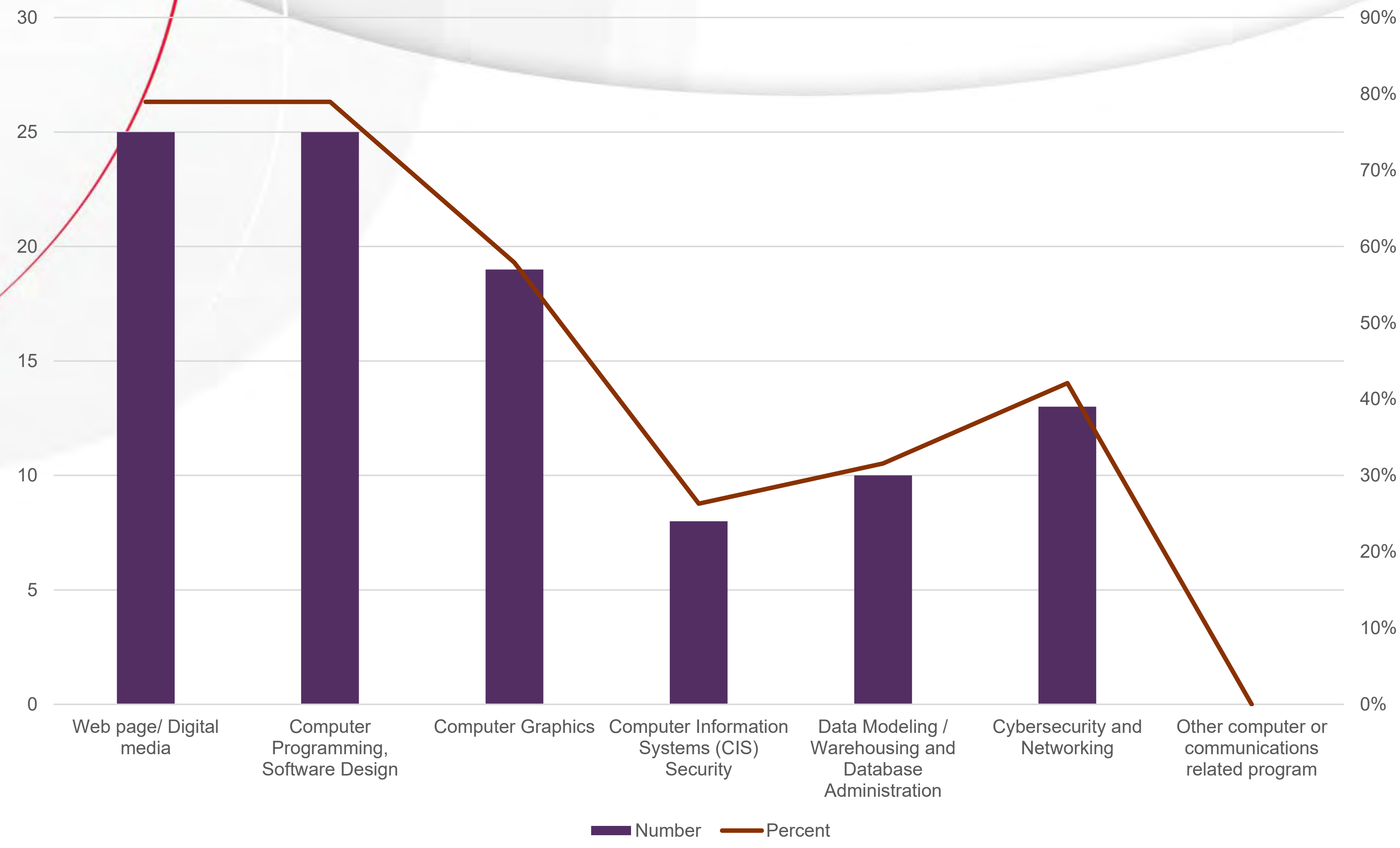
Associates in Business or Law



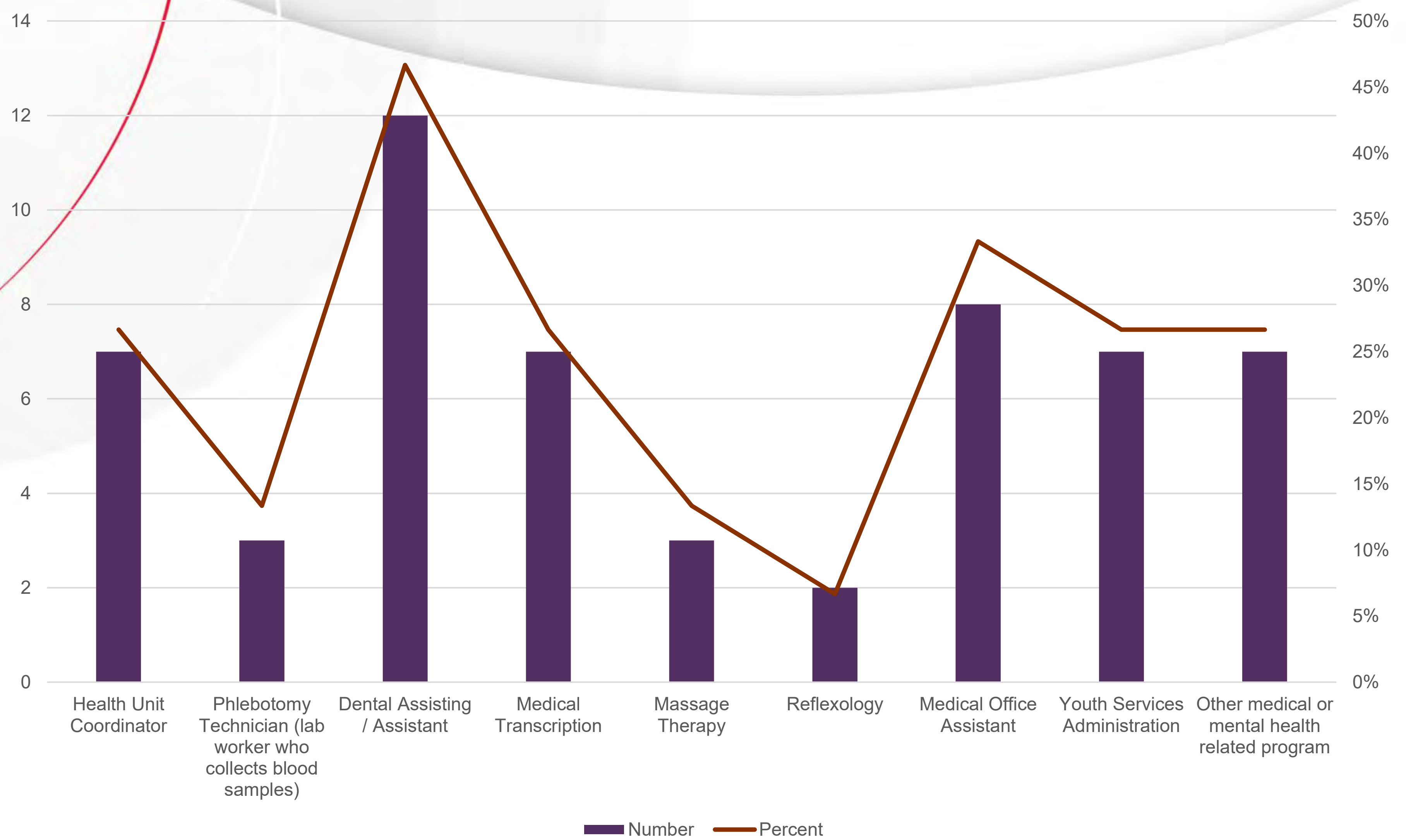
Certificates in Computers or Communications



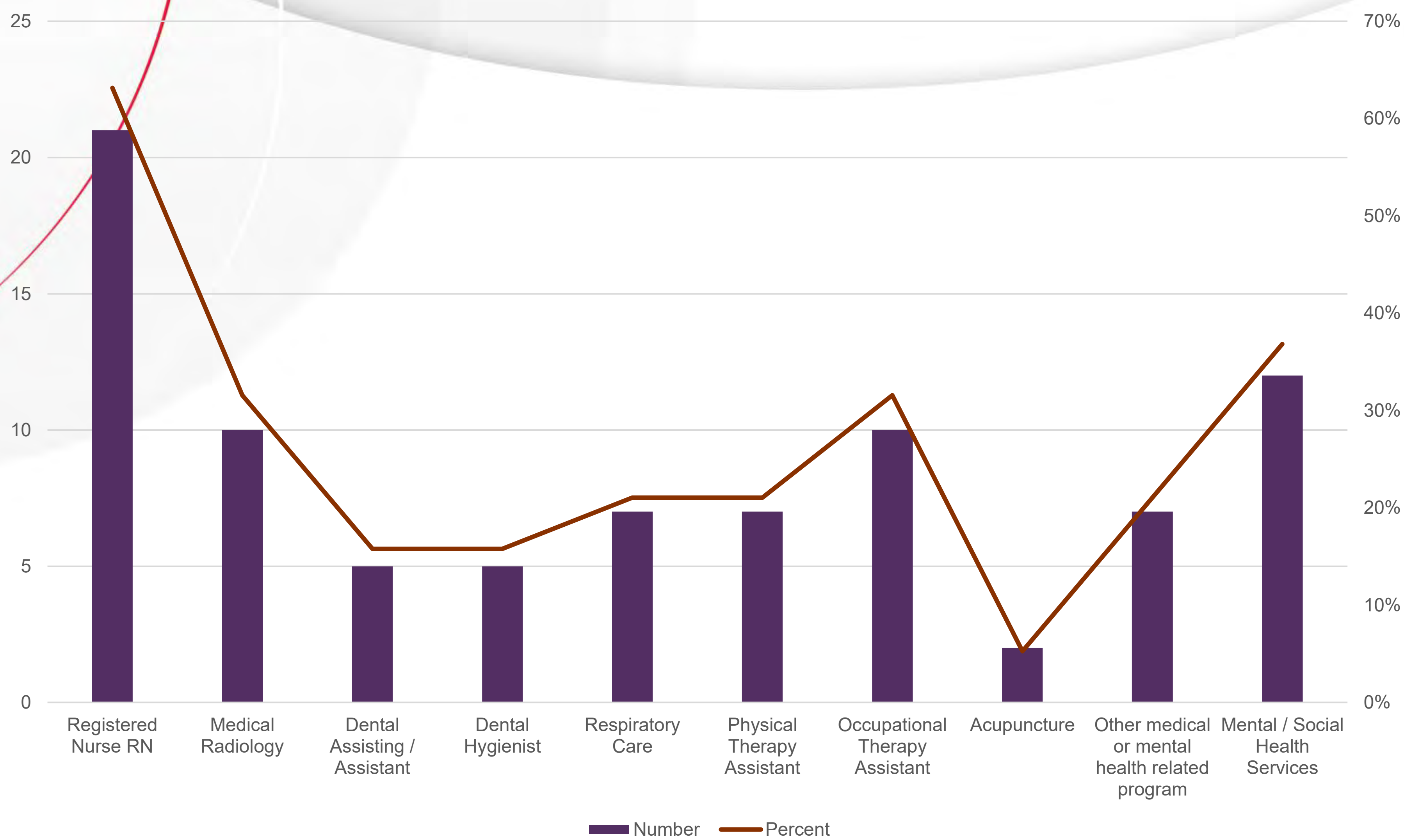
Associates in Computers or Communications



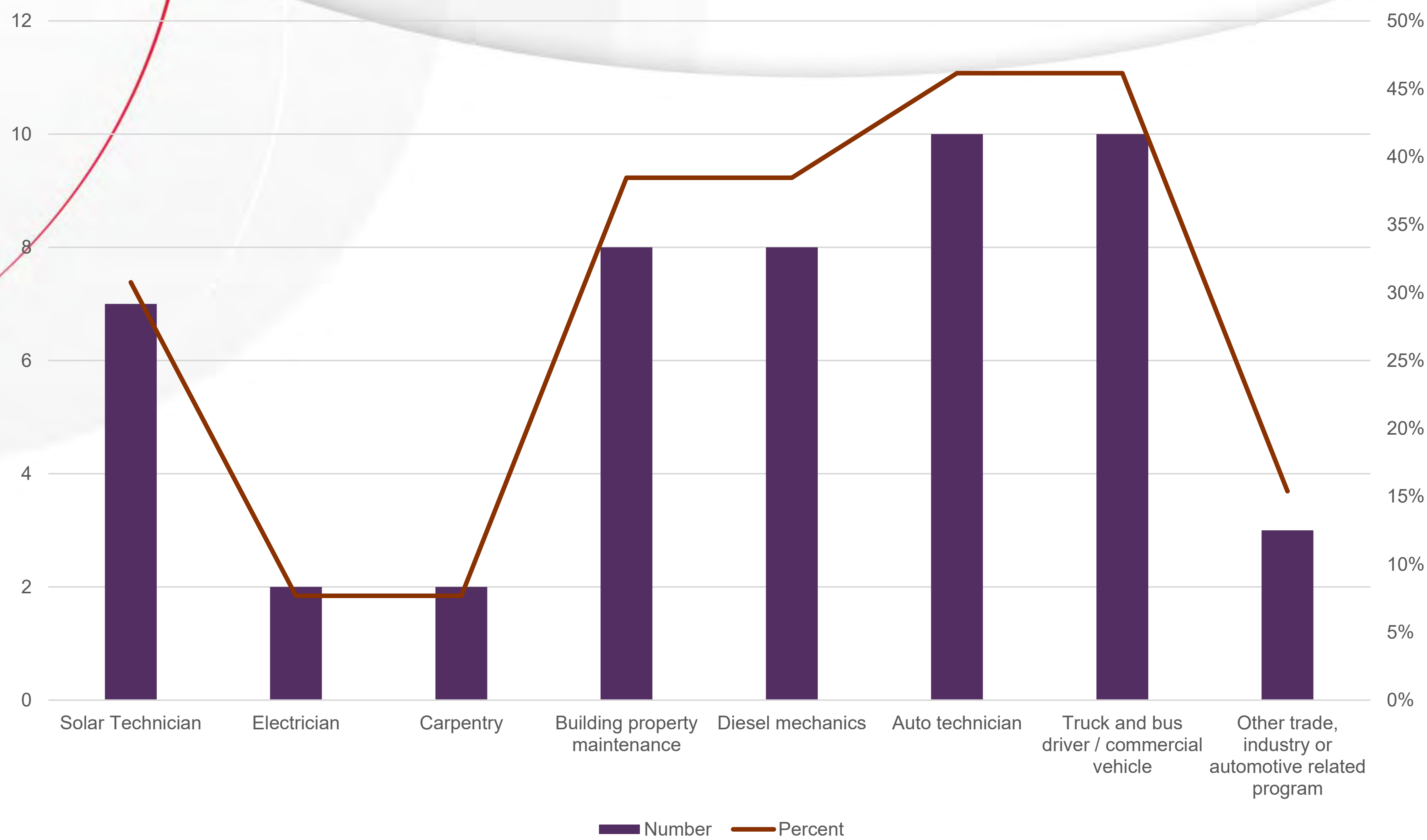
Certificates in Health or Mental Health



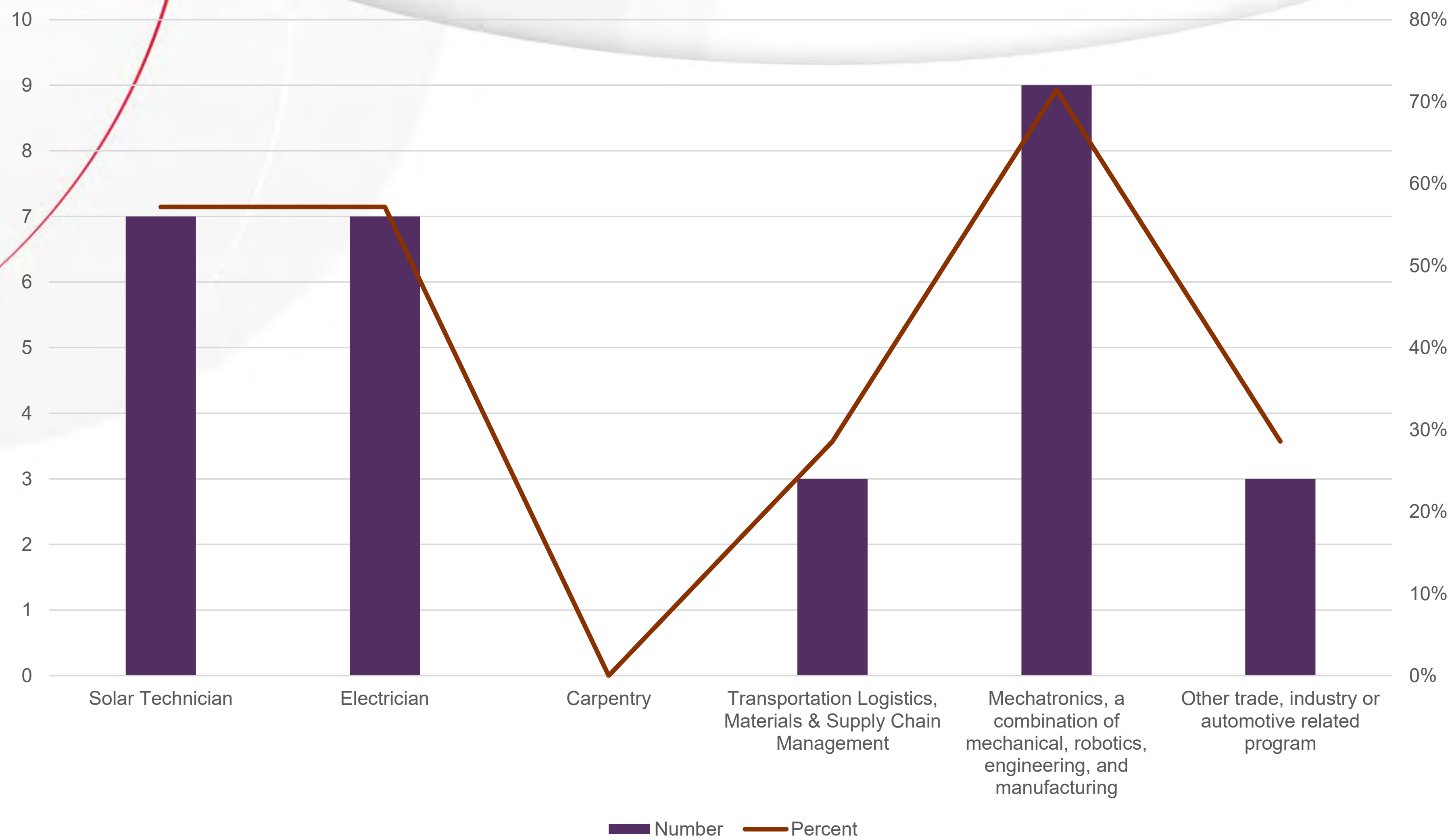
Associates in Health or Mental Health



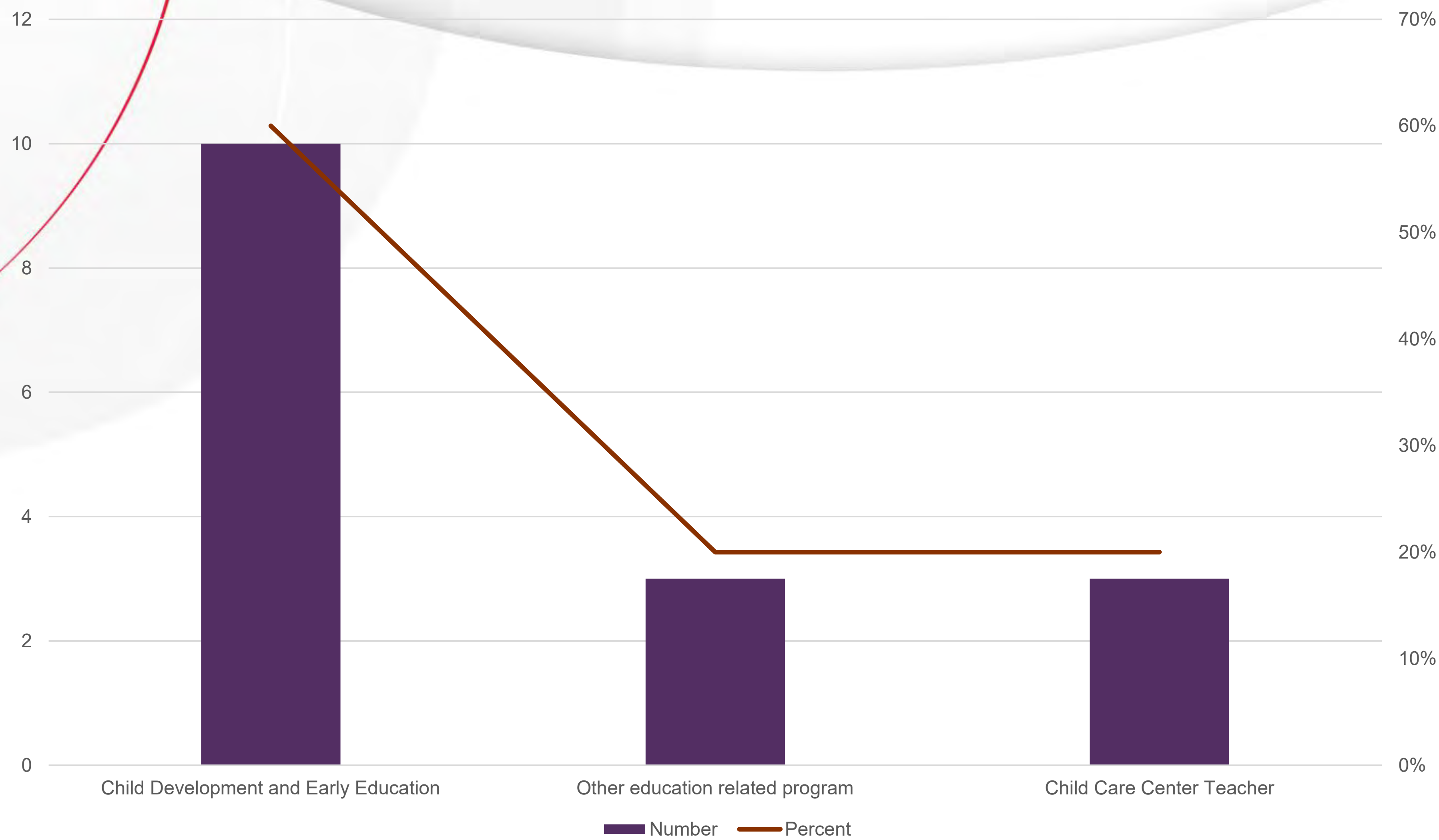
Certificates in Trade, Industry or Automotive



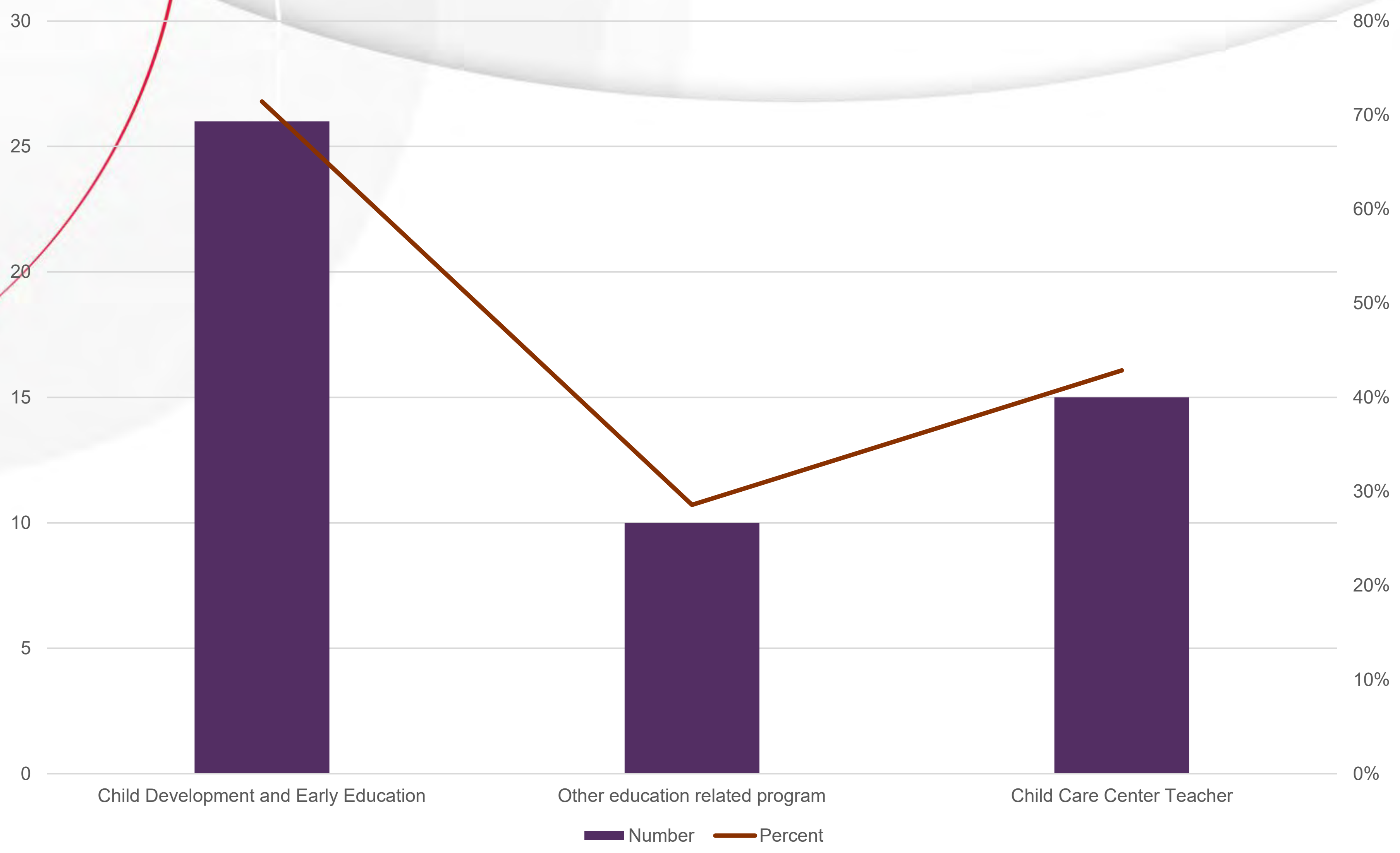
Associates in Trade, Industry or Automotive



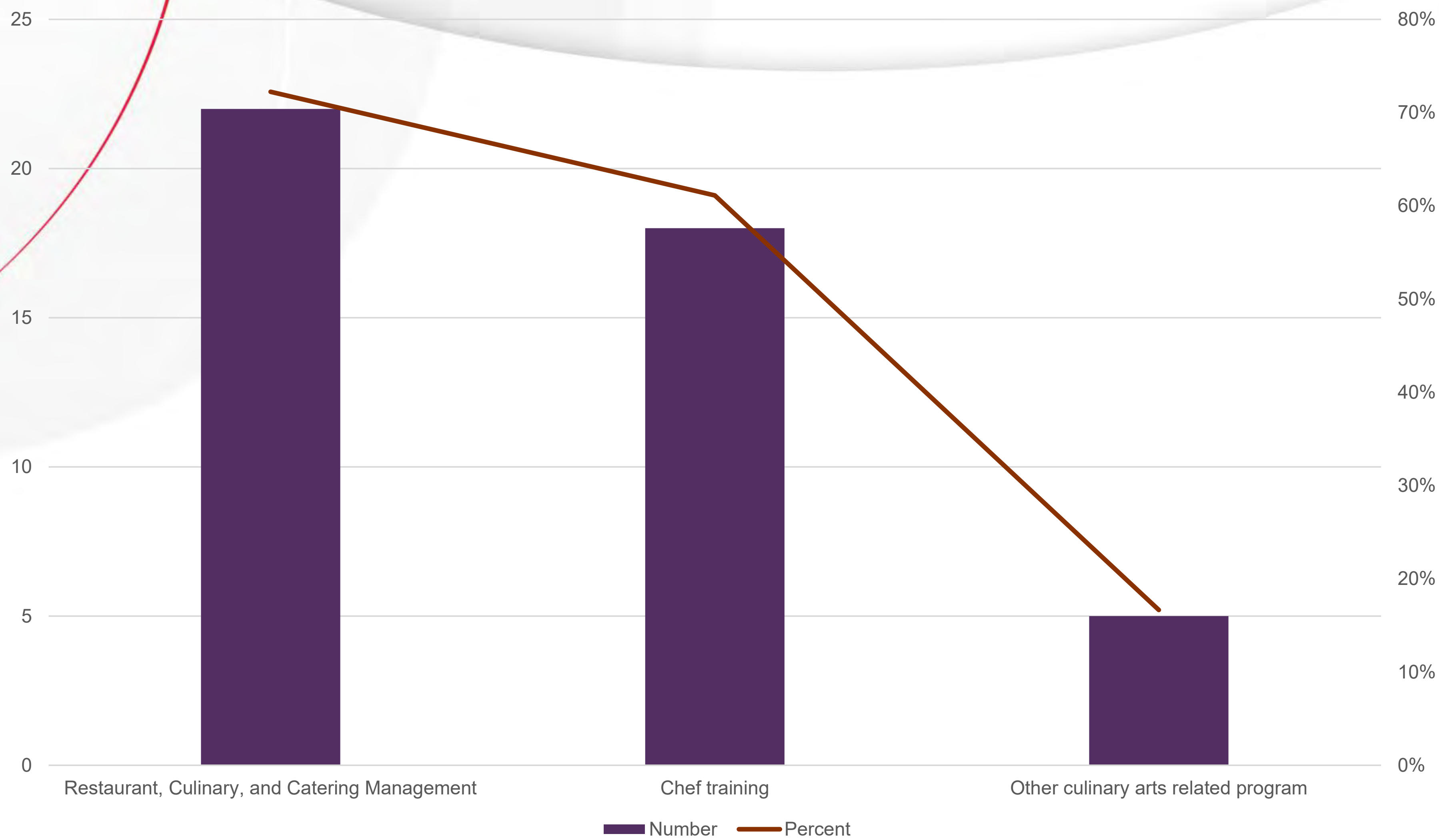
Certificates in Education



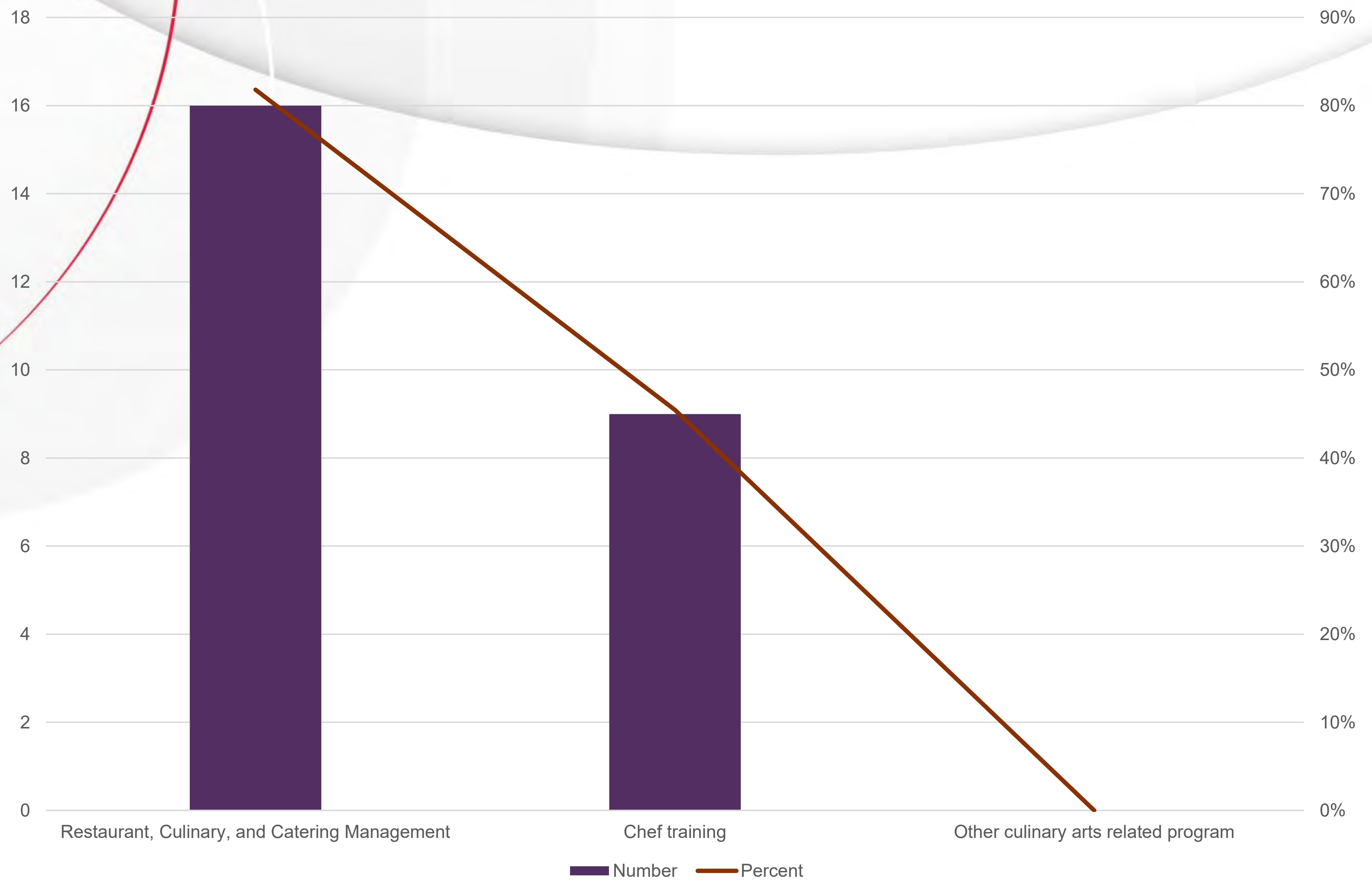
Associates in Education



Certificates in Culinary Arts



Associates in Culinary Arts



If you had to choose today, which one of these programs would you be most likely to study?

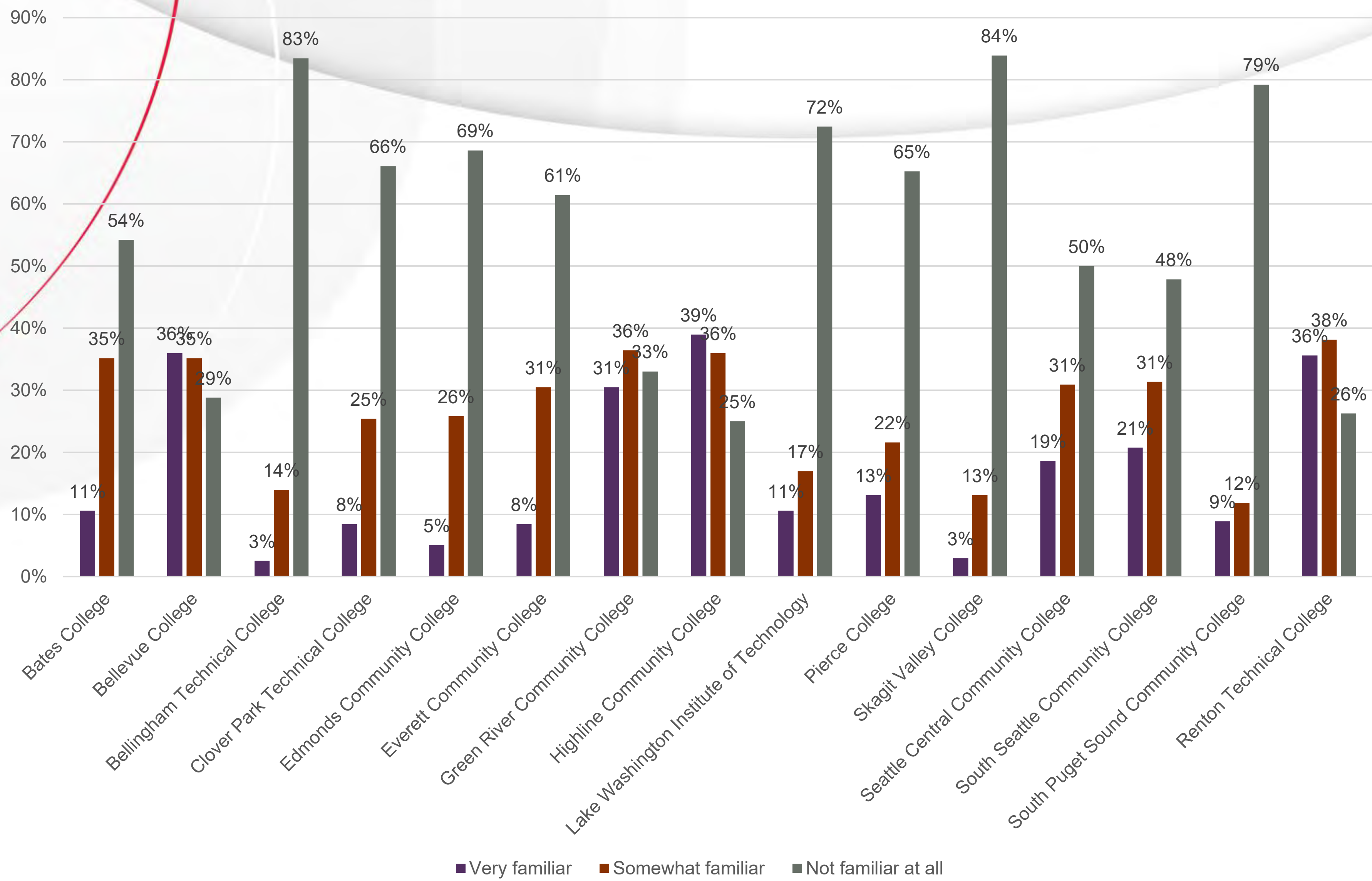
Top choice certificates

Web page / Digital Media (7%)
Chef Training (4%)
Computer Graphics (3%)
(CIS) Security (3%)
Data Modeling / Warehousing (3%)
Restaurant, Culinary, and Catering Mgt (3%)
Accounting / Bookkeeping (2%)
Computer Progr./ Software Design (2%)
Legal Assistant or Paralegal (2%)
Child Development and Early Education (2%)
Cybersecurity and Networking (2%)
Dental Assisting / Assistant (2%)
Diesel Mechanics (2%)
Medical Office Assistant (2%)

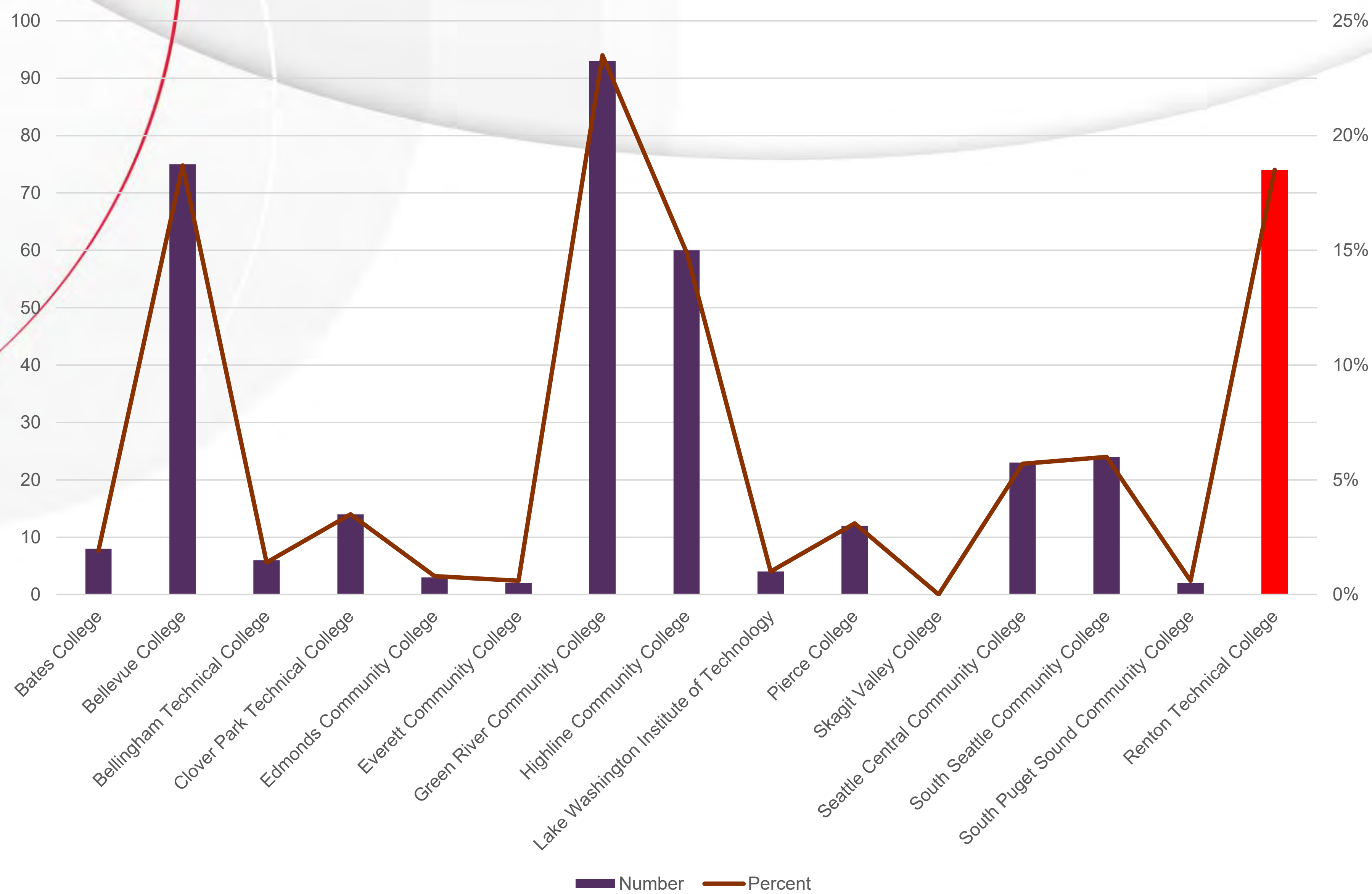
Top choice associates

Registered Nurse (RN) (8%)
Accounting (7%)
Restaurant, Culinary, and Catering Mgt. (7%)
Web page / Digital Media (7%)
Computer Programming, Software Design (6%)
Computer Graphics (6%)
Mental / Social Health Services (5%)
Child Development and Early Education (4%)
(CIS) Security (3%)
Cybersecurity and Networking (3%)
Chef Training (2%)
Child Care Center Teacher (2%)
Data Modeling / Warehousing (2%)
Paralegal (2%)
Solar Technician (2%)

Familiarity with Colleges



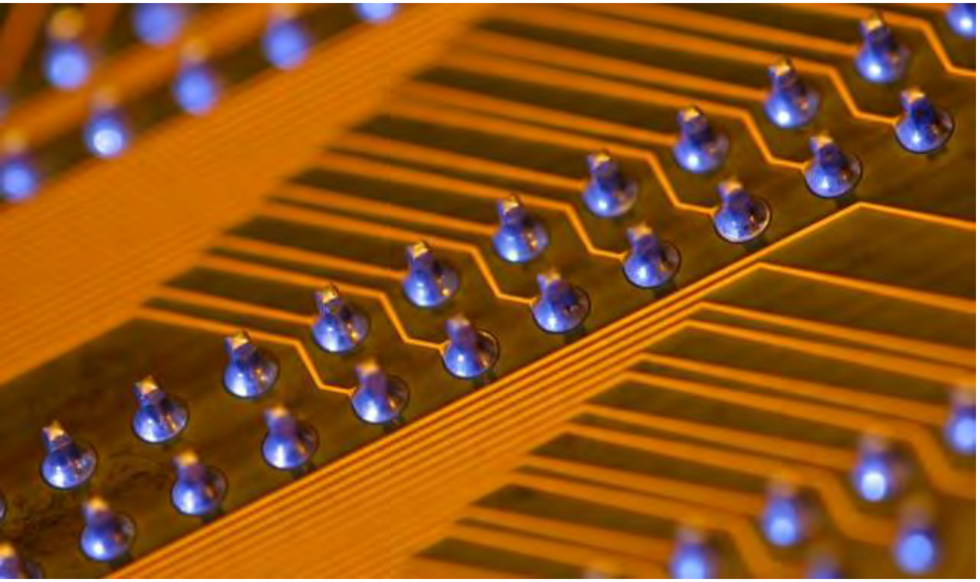
First Choice Institution



Marketing programs

Regardless of market the single biggest “barrier” is lack of awareness

Enrollment estimates



- U.S. Census data total population
- Incidence for certificate or associate's
- Survey data choice of program <u>and</u> RTC
- Estimate of conversion

RTC Certificate Estimates

PROGRAM	Percent of all prospective students choosing this program	Estimated number of students interested in program	Share of students who would consider RTC	Estimated number of students who would consider RTC	Estimated number to enroll at RTC in a given year
Web page / Digital Media	7.1%	3,492	19%	663	66
Chef Training	4.0%	984	19%	187	19
Computer Graphics	3.0%	1,033	19%	196	20
Computer Information Systems (CIS) Security	2.9%	1,009	19%	192	19
Data Modeling / Warehousing and Database Administration	3.0%	738	19%	140	14
Restaurant, Culinary, and Catering Management	3.0%	738	19%	140	14
Accounting / Bookkeeping	1.9%	640	19%	122	12
Computer Programming, Software Design	2.0%	492	19%	93	9
Legal Assistant or Paralegal	2.0%	492	19%	93	9
Child Development and Early Education	1.8%	861	19%	164	16

RTC Certificate Estimates (cont'd.)

PROGRAM	Percent of all prospective students choosing this program	Estimated number of students interested in program	Share of students who would consider RTC	Estimated number of students who would consider RTC	Estimated number to enroll at RTC in a given year
Cybersecurity and Networking	1.9%	664	19%	126	13
Dental Assisting / Assistant	1.5%	1,107	19%	210	21
Diesel Mechanics	1.7%	418	19%	79	8
Medical Office Assistant	1.8%	1,292	19%	245	25
Medical Transcription	1.2%	914	19%	174	17
Solar Technician	1.8%	620	19%	118	12
Building Property Management	1.0%	344	19%	65	7
Health Unit Coordinator	1.0%	246	19%	47	5
Massage Therapy	0.6%	457	19%	87	9
Reflexology	0.6%	457	19%	87	9
Youth Services Administration	1.0%	492	19%	93	9

RTC Associate Estimates

PROGRAM	Percent of all prospective students choosing this program	Estimated number of students interested in program	Share of students who would consider RTC	Estimated number of students who would consider RTC	Estimated number to enroll at RTC in a given year
Registered Nurse (RN)	8.0%	3,100	19%	589	59
Accounting	6.5%	1,266	19%	241	24
Restaurant, Culinary, and Catering Management	6.5%	844	19%	160	16
Web page / Digital Media	7.3%	1,416	19%	269	27
Computer Programming, Software Design	6.0%	1,163	19%	221	22
Computer Graphics	5.0%	969	19%	184	18
Mental / Social Health Services	4.5%	581	19%	110	11
Child Development and Early Education	3.8%	484	19%	92	9
Computer Information Systems (CIS) Security	3.3%	633	19%	120	12

RTC Associate Estimates (Cont'd.)

PROGRAM	Percent of all prospective students choosing this program	Estimated number of students interested in program	Share of students who would consider RTC	Estimated number of students who would consider RTC	Estimated number to enroll at RTC in a given year
Cybersecurity and Networking	3.0%	388	19%	74	7
Chef Training	2.0%	258	19%	49	5
Child Care Center Teacher	1.6%	310	19%	59	6
Data Modeling / Warehousing and Database Administration	2.0%	388	19%	74	7
Paralegal	2.0%	258	19%	49	5
Solar Technician	2.0%	258	19.0%	49	5
Acupuncture	1.1%	142	19.0%	27	3
Dental Hygienist	1.4%	543	19.0%	103	10
Electrician	1.0%	129	19.0%	25	3
Mechatronics, a combination of mechanical, robotics, engineering, and manufacturing	1.0%	258	19.0%	49	5

Preferred Day or Time of Week

Select time of day / week:		
Answer	Number	Percent
Morning classes	**110**	**28%**
Afternoon classes	**40**	**10%**
Weekday Evenings	**143**	**36%**
Weekend daytime	**34**	**8%**
Anytime / no preference	**73**	**18%**
Total	**400**	**100%**

Few wanted classroom only study

Preferred Format
- Combined online and/or classroom (36%)
- Online only (21%)

Length of Time

Certificate Level

- Short certificate (intensive single skill based study for 6 months or less) (42%)
- Traditional certificate (complete skills approximately 1 year of study) (58%)

Associate Level

- Short associates (intensive single skill based study less than 2 years) (38%)
- Traditional associates (completion at 2 years of study) (62%)

3 Employer Data

Qualitative Employer Survey

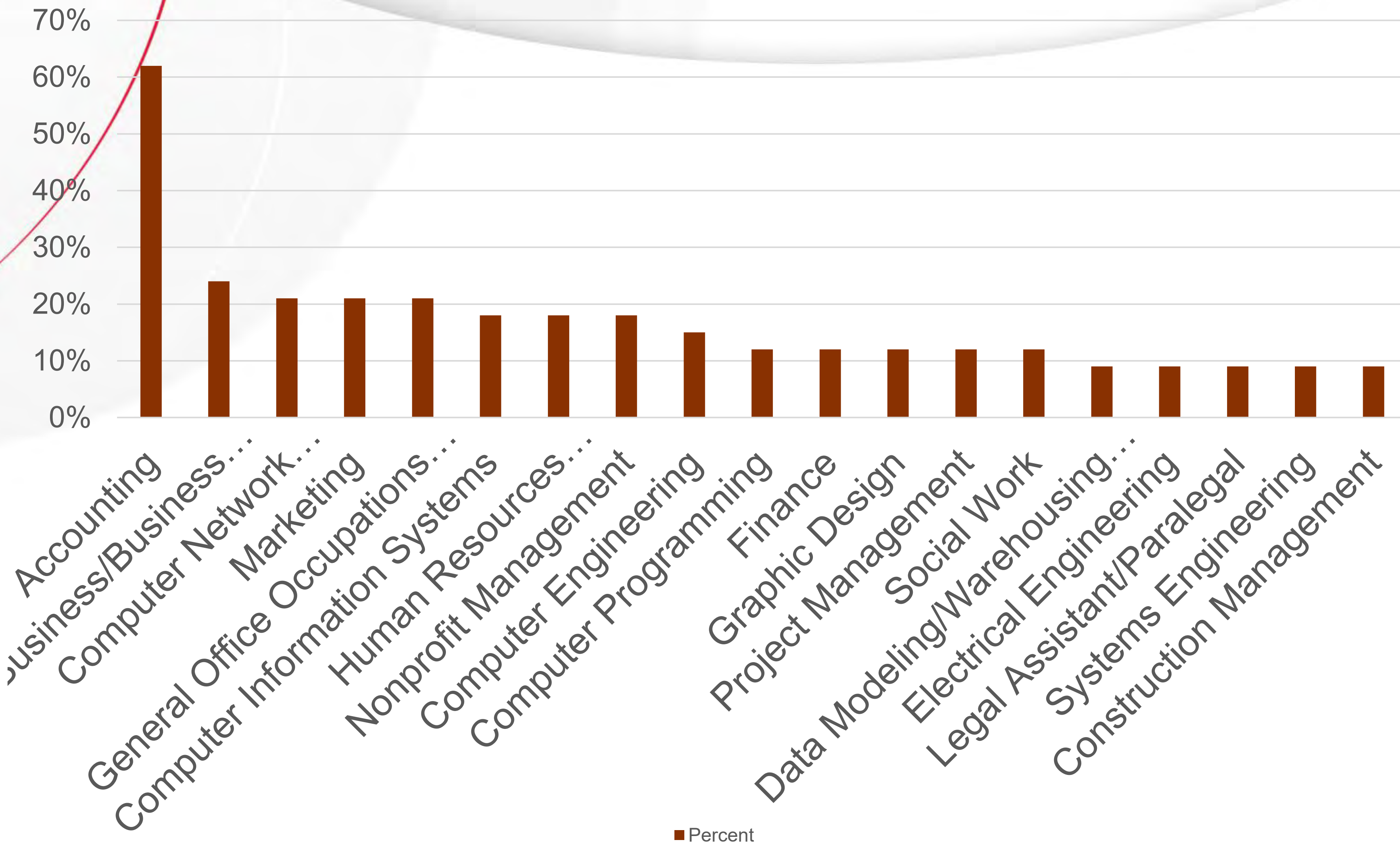
- Contacted 1,000 employers
- Only 28 responses; normal response 10%
- Geography: King, Renton Kent, Auburn, Tahoma, Enumclaw counties as well as southern zip codes in Seattle County.

Smaller companies represented

About how many people does your company or organization employ full-time?

Answer	Number	Percent
Under 25	3	11%
26-100	15	54%
101-500	8	29%
501-1000	1	4%
1001 or more	1	4%

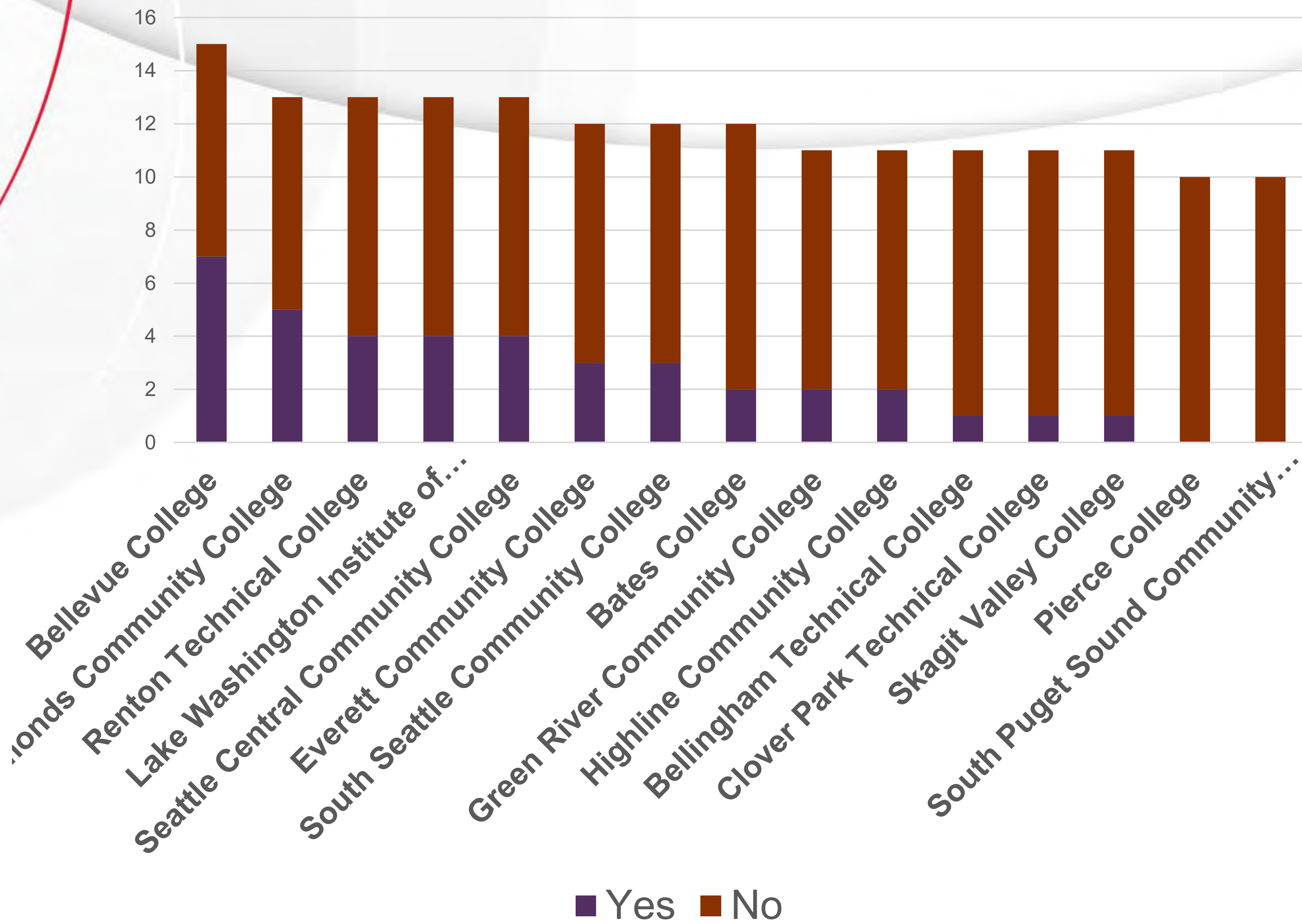
Hiring at certificate or associate level



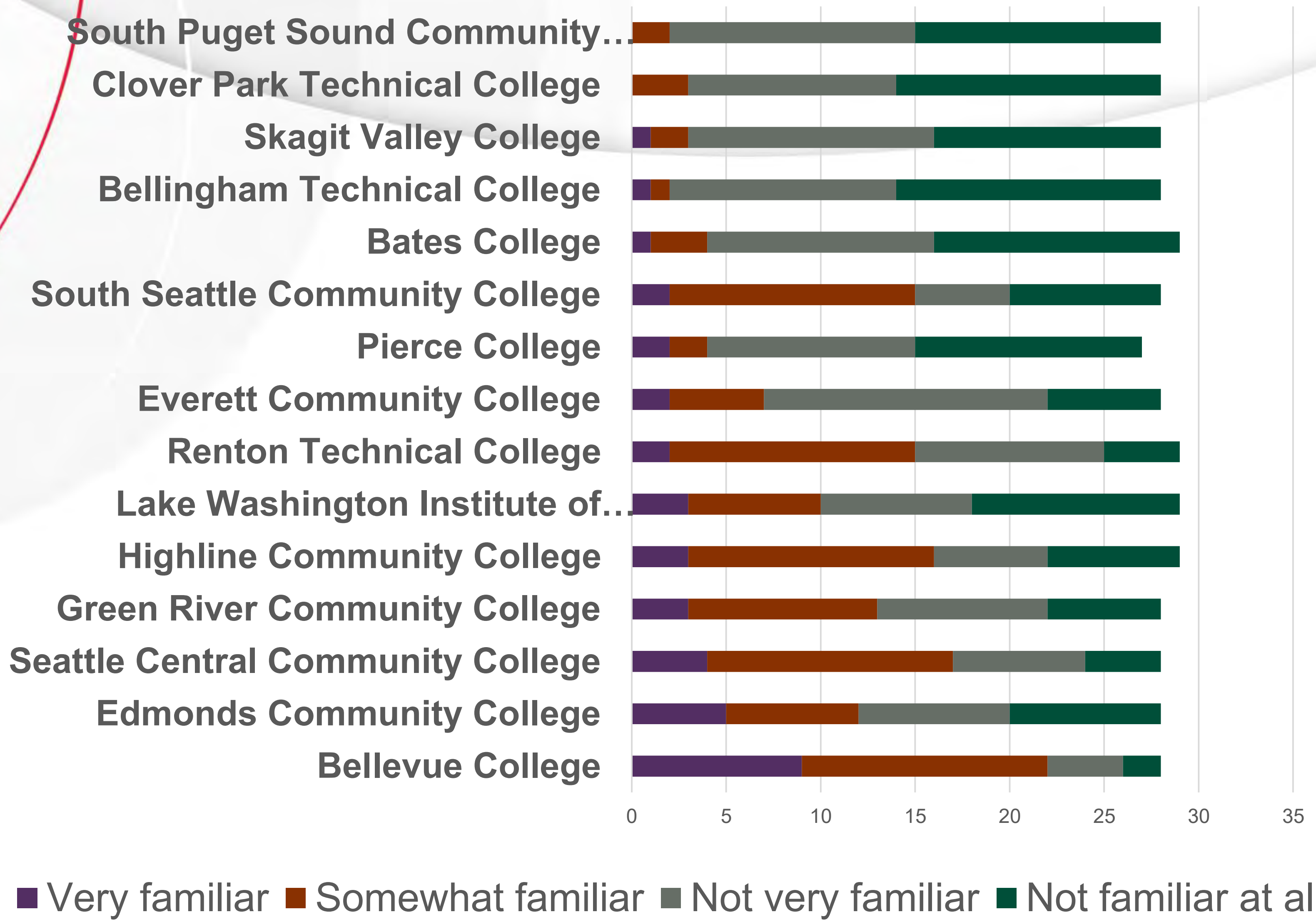
Level of Certification or Degree

Program	1-2 Courses	Certificate	Assoc.	Other	Total
Accounting	0	3	15	4	22
General Office Occupations and Clerical Services	2	3	3	2	10
Business/Business Administration	0	1	5	2	8
Computer Network Administration	0	1	5	2	8
Marketing	0	0	5	2	7
Computer Information Systems	0	1	3	2	6
Human Resources Management	0	1	2	3	6
Nonprofit Management	0	0	2	4	6
Computer Engineering	0	0	3	1	4
Graphic Design	0	0	2	2	4
Social Work	0	0	2	2	4
Computer Programming	0	0	3	0	3
Construction Management	0	1	2	0	3
Electrical Engineering	0	0	0	3	3
Finance	0	0	2	1	3
Legal Assistant/Paralegal	0	0	1	2	3
Project Management	0	0	1	2	3
Systems Engineering	0	1	2	0	3
Teacher Assistant	0	1	2	0	3
Chef Training	0	1	1	0	2
Data Modeling/Warehousing and Database Administration	1	0	0	1	2
Drafting CAD/CADD	0	0	2	0	2

Colleges where we hire



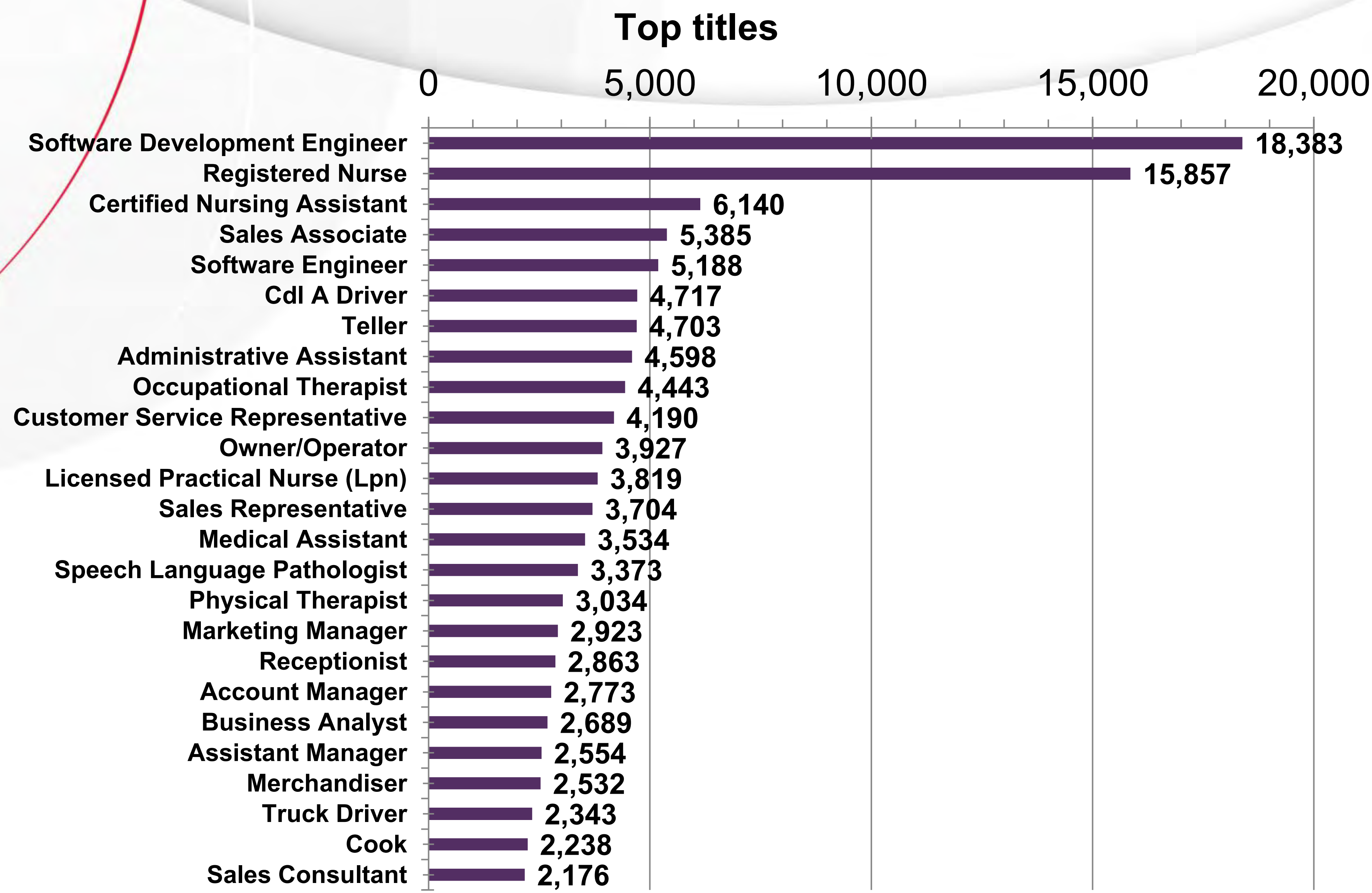
Awareness Levels of Employers



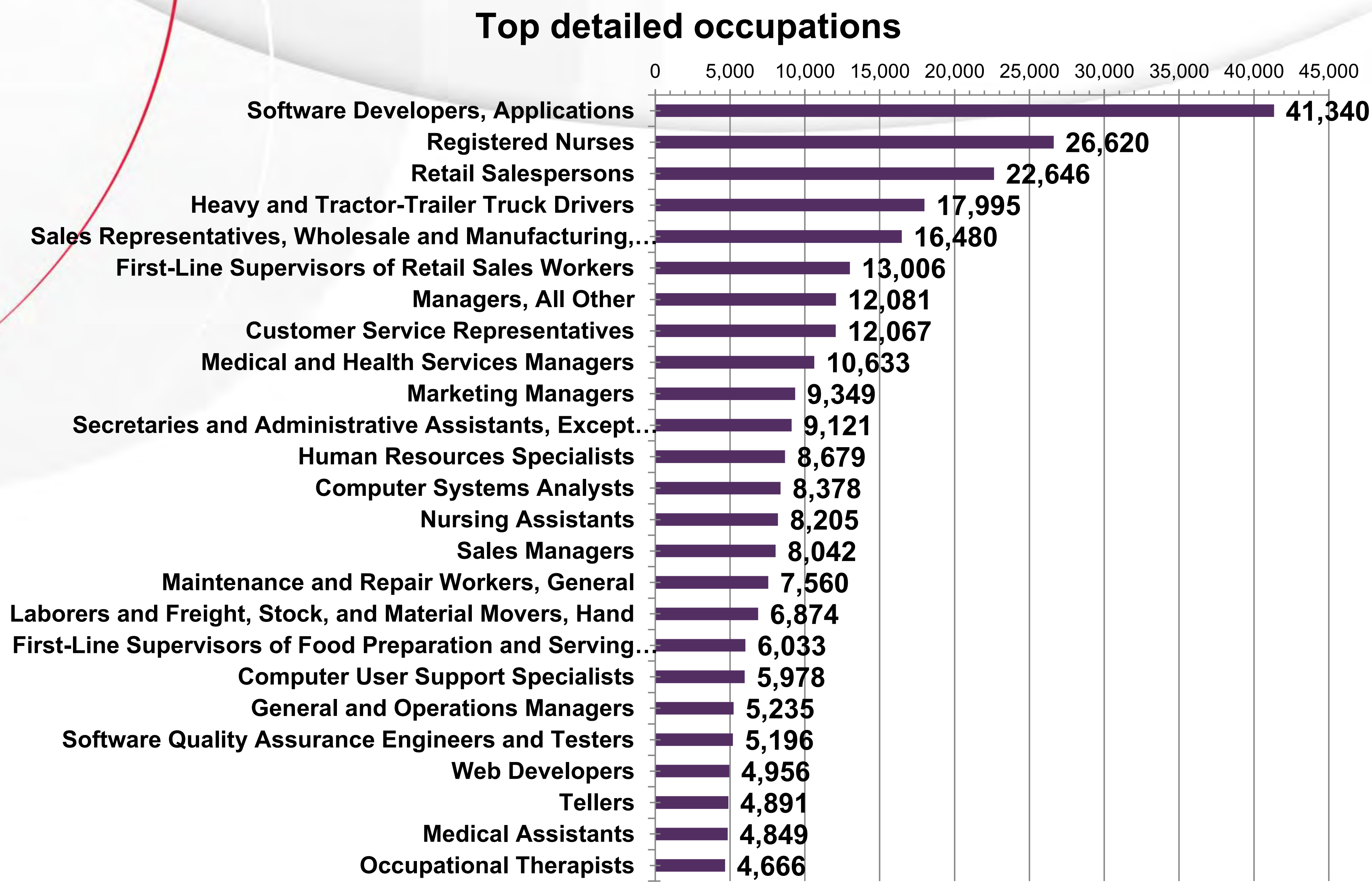
Employer Job Posting Data

- One year of postings from a variety of sources, June 2013 to June 2014
- Total of 687,000 postings in the state of Washington
- Note: a large portion do not have education requirements or levels listed so we use all data (all degrees, no degree)

Job titles: software, healthcare, commercial drivers

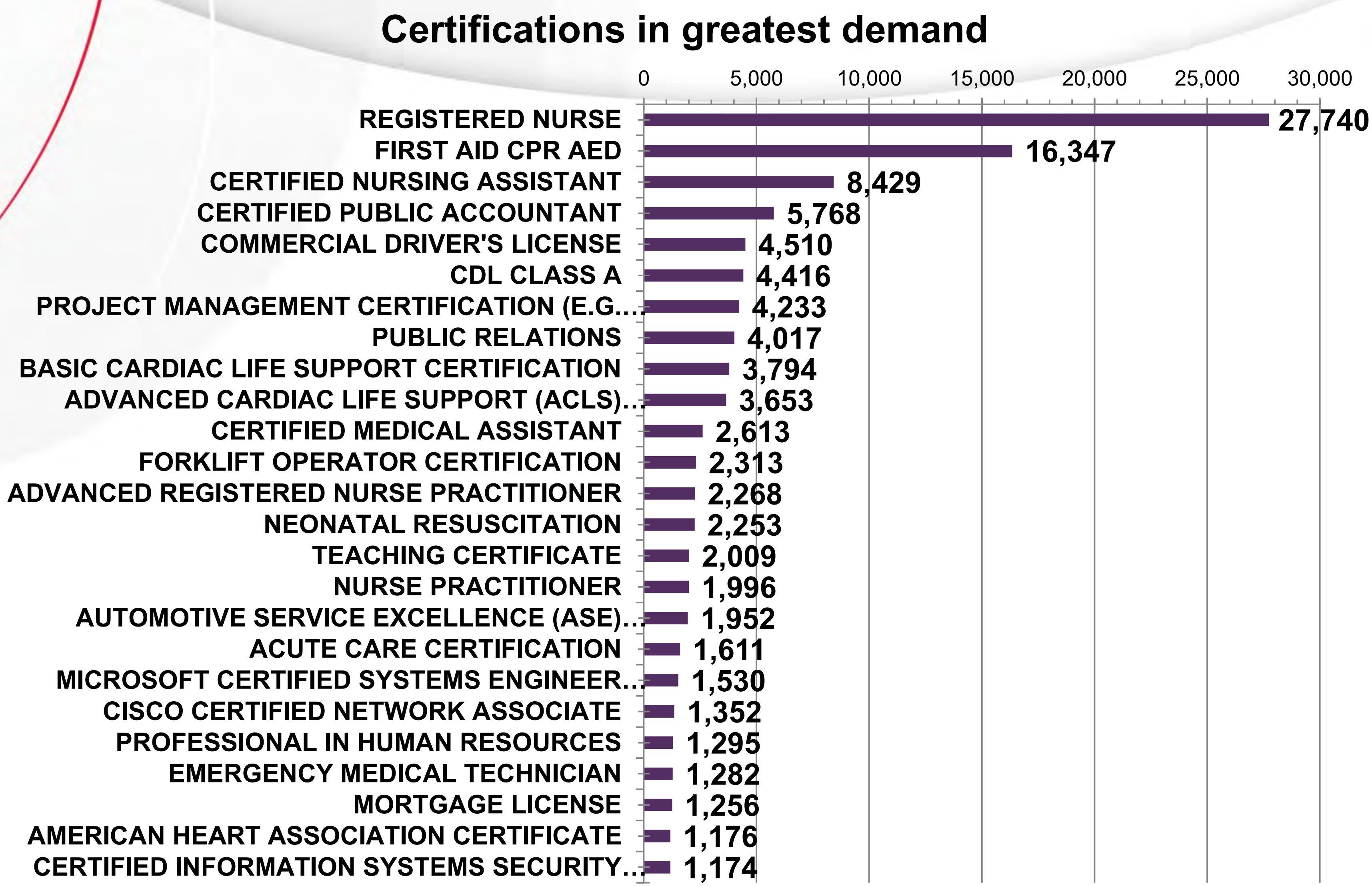


Top occupations: similar



Listings with certifications

(note only 128,000 of the 687,000)



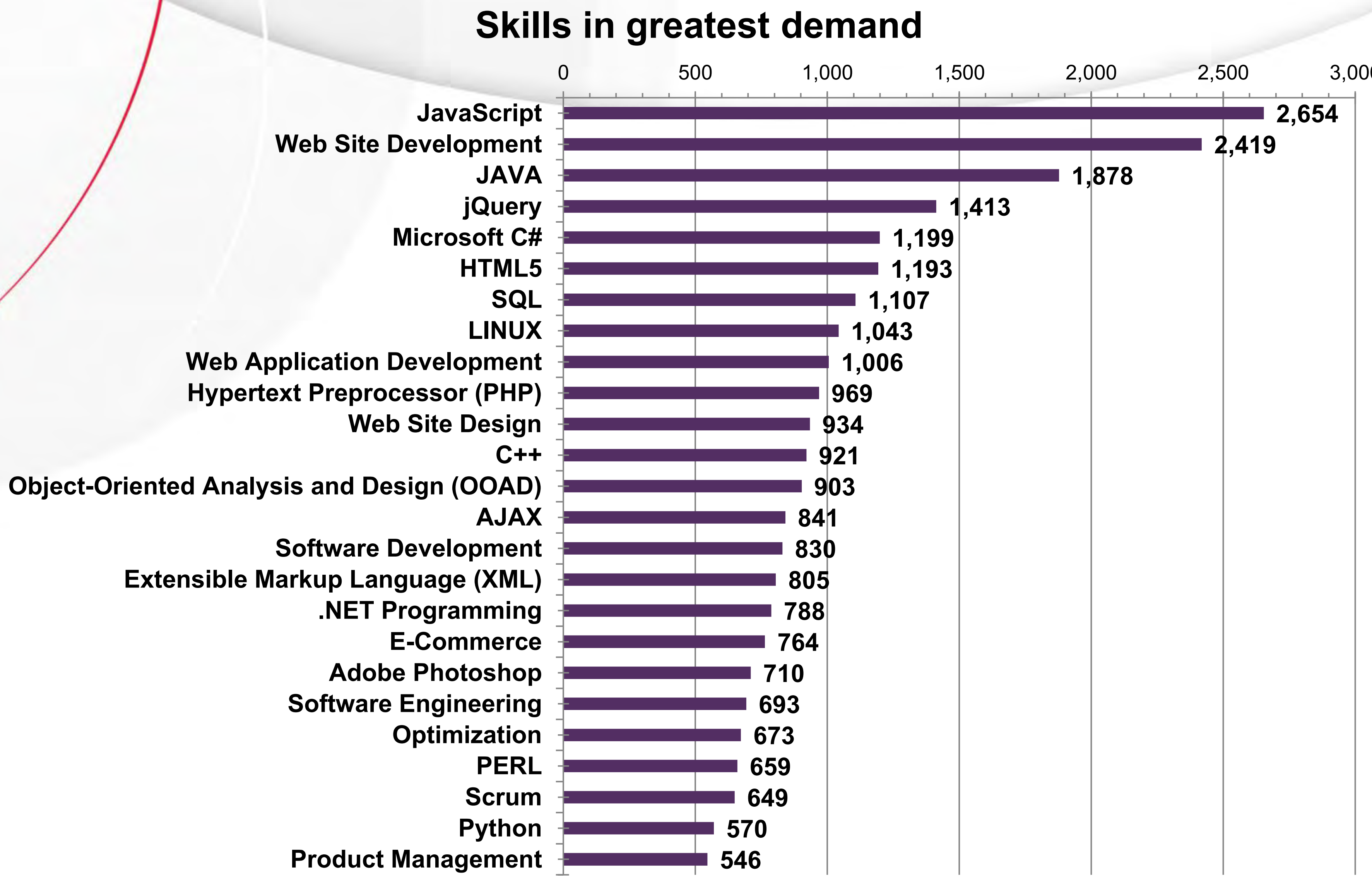
WA Top Employers, posted at least 1,500 jobs

amazon.com
Microsoft Corporation
Providence Health & Services
University Of Washington
Virginia Mason Medical Center
The Boeing Company
Starbucks Coffee Company
Catholic Health Initiatives
Sears
Multicare Health
Swedish Health Service
Nordstrom
Sammons Trucking
Bank of America
PeaceHealth
Lowe's Companies, Inc.
Macy's
Safeway Incorporated
Compucom
T Mobile Usa Incorporated
Pizza Hut
Deloitte Development LLC
REI
AT&T
Group Health Cooperative
JP Morgan Chase Company
Department of Veterans Affairs
Expedia, Inc.
Wells Fargo

Employer expectations: a look at skills expected for some programs

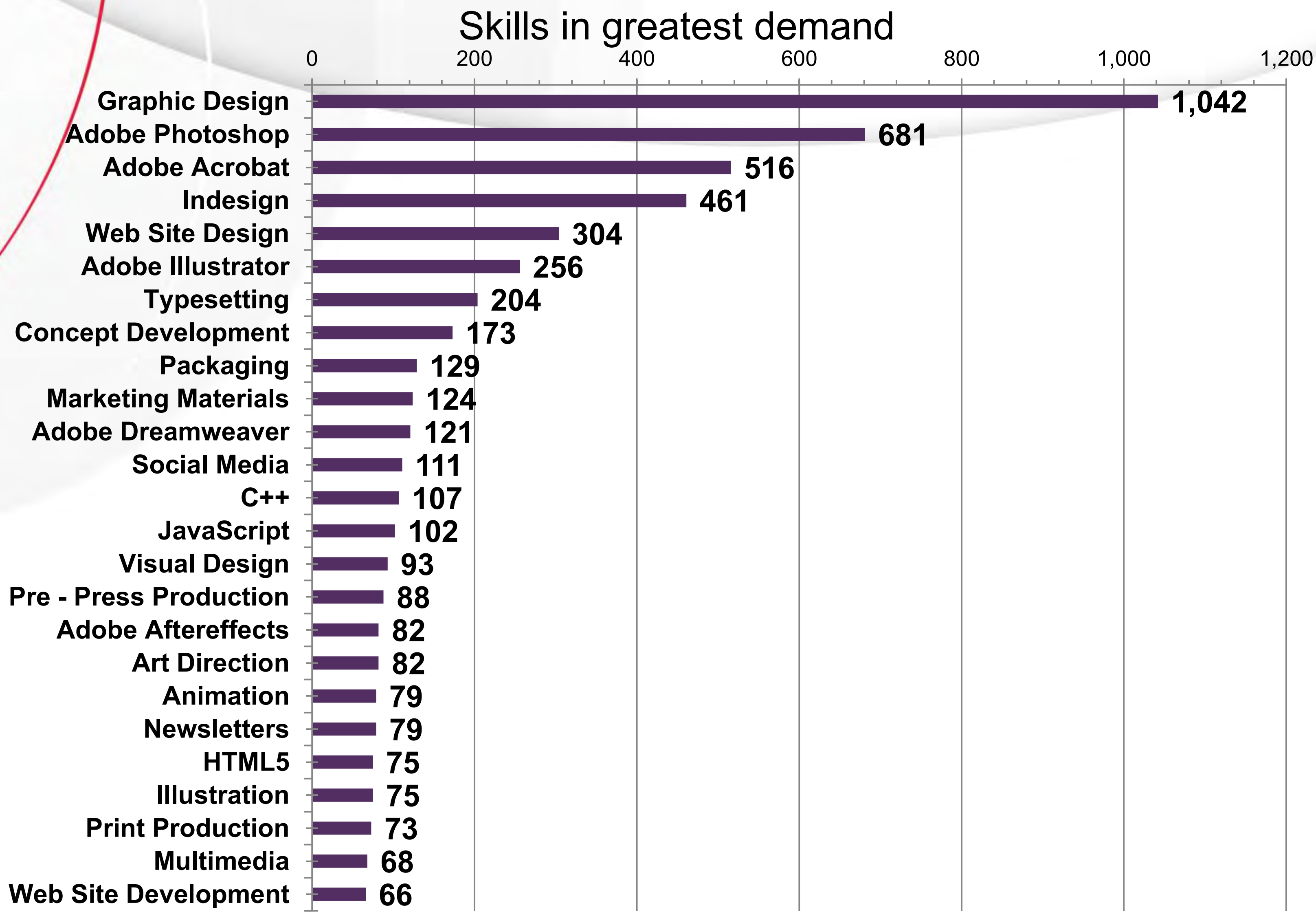
- Web, digital media, computer graphics
- Chef, culinary
- Solar technician
- Social/health services
- Legal assistant

Skills for job title "web or digital media" (8,400 listings)

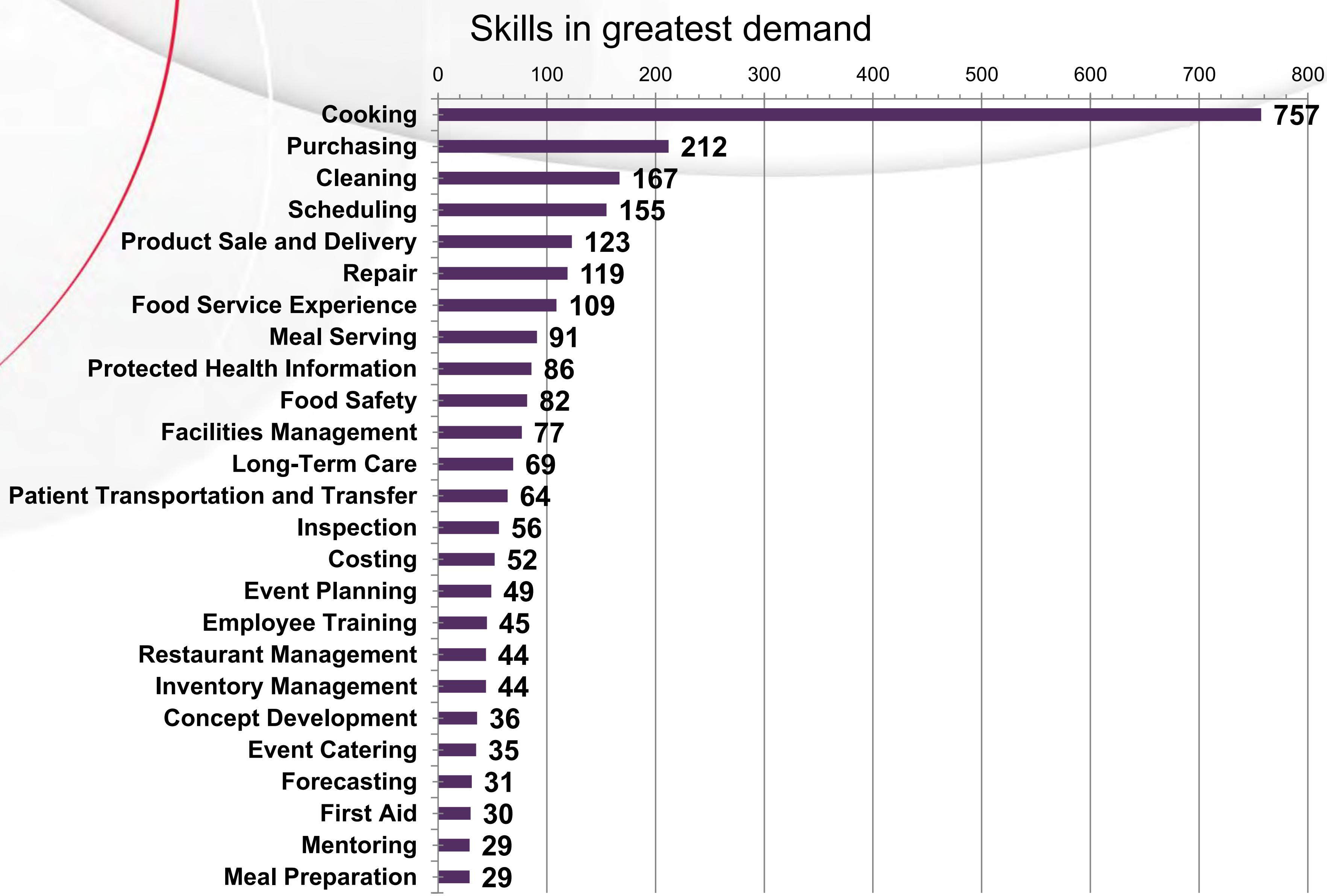


Skills for listings job title “graphic”

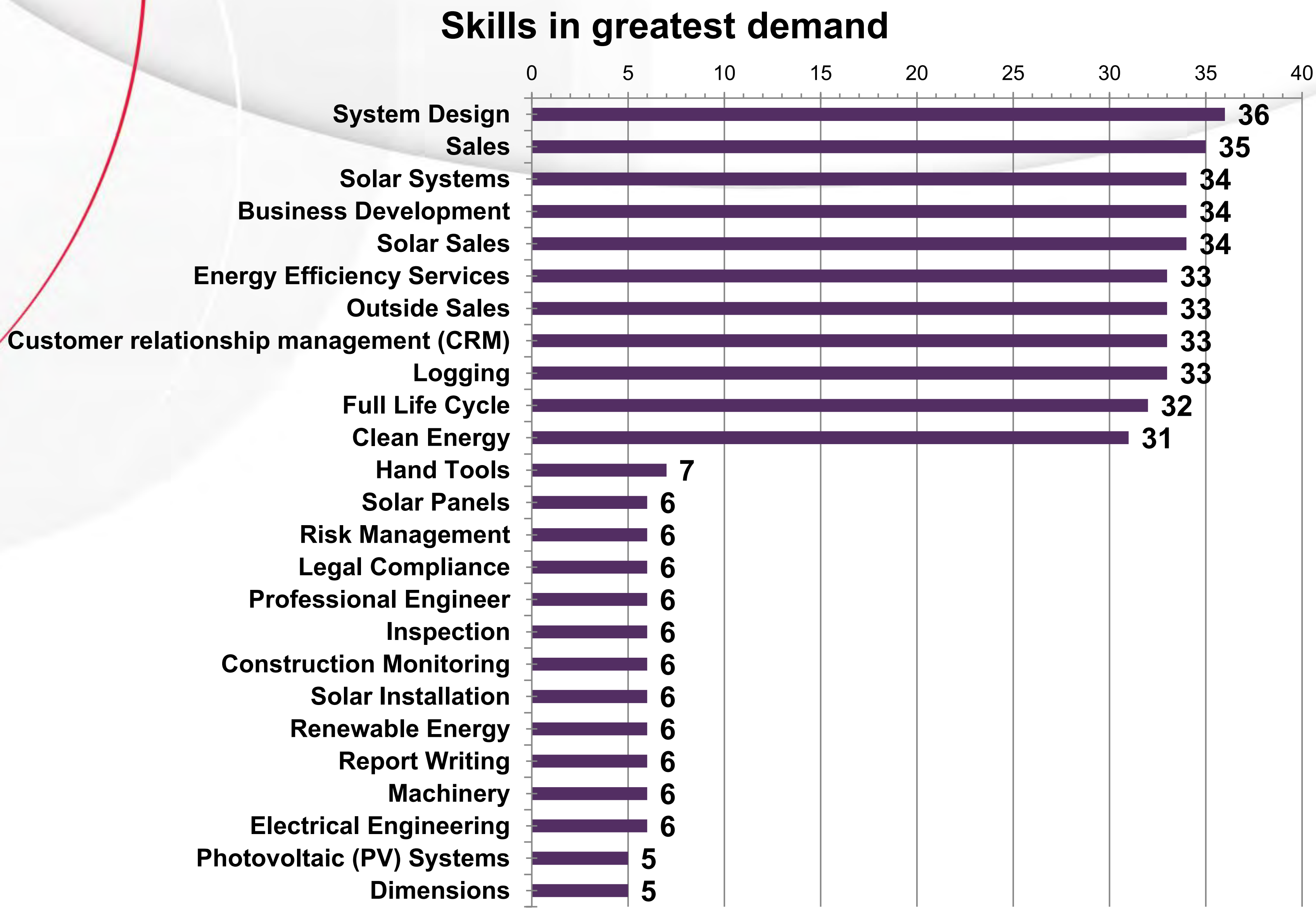
(1,400 listings)



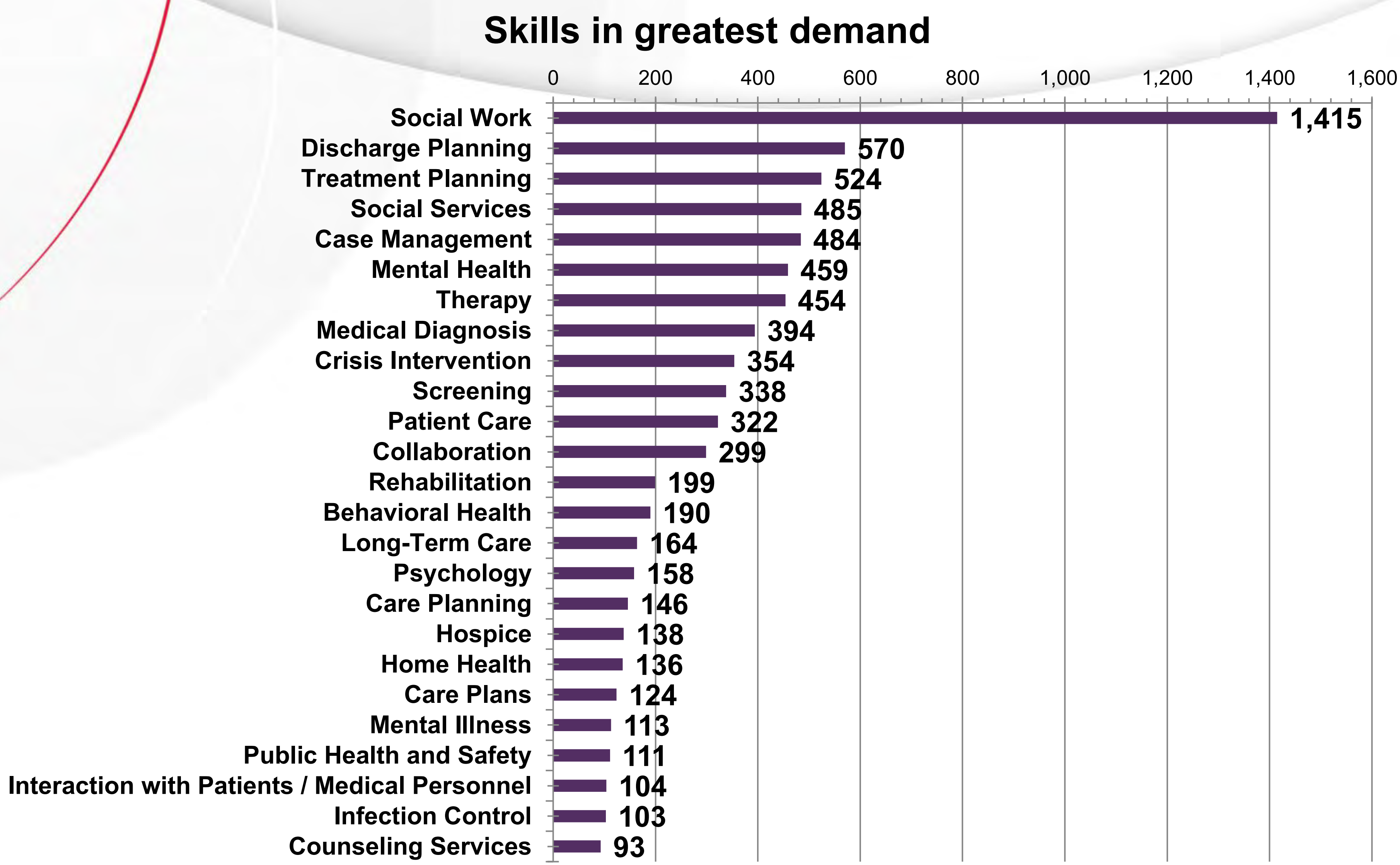
Skills for title "chef, culinary" (1,300 listings)



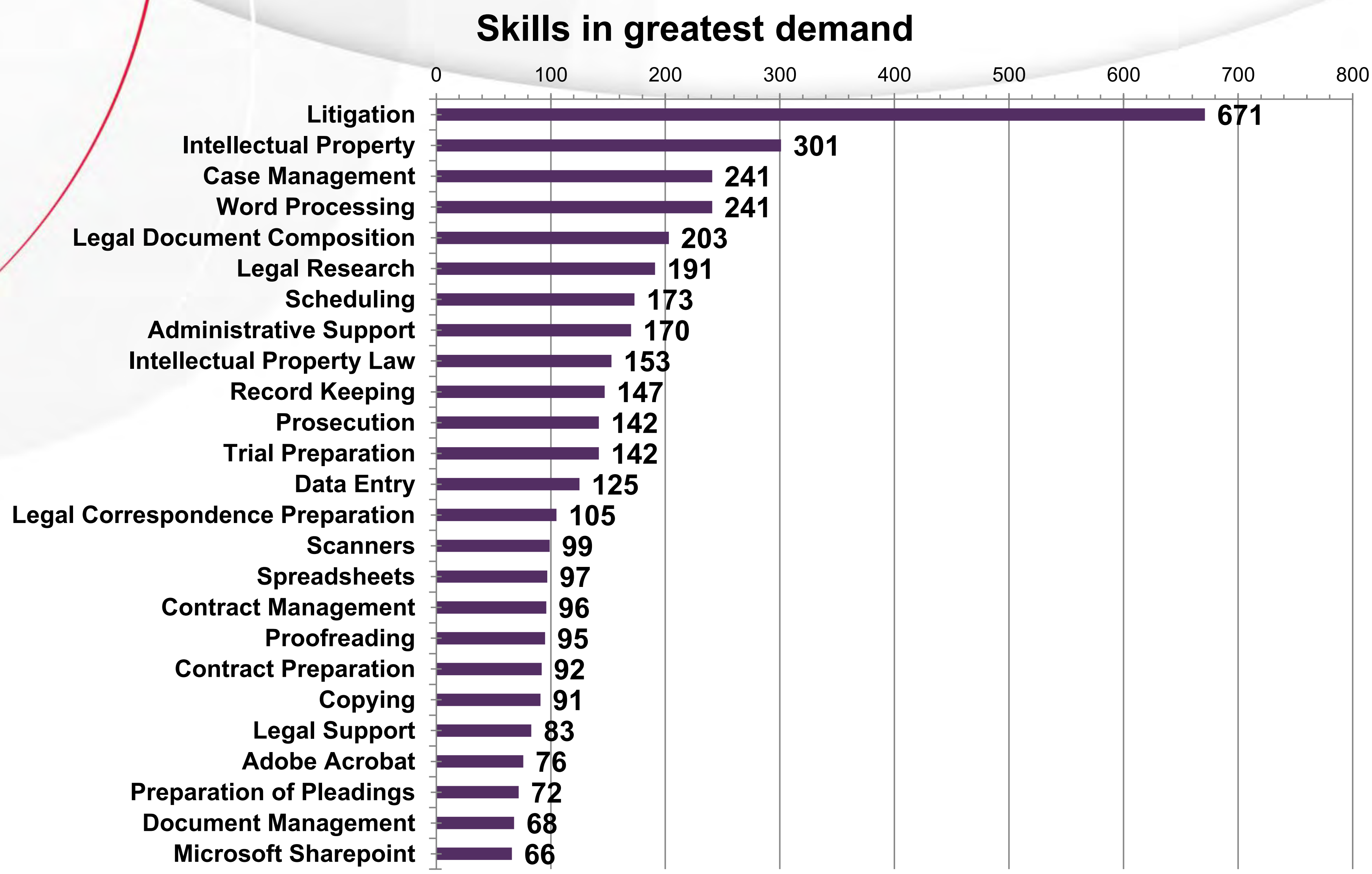
Skills for title “solar” (77 listings)



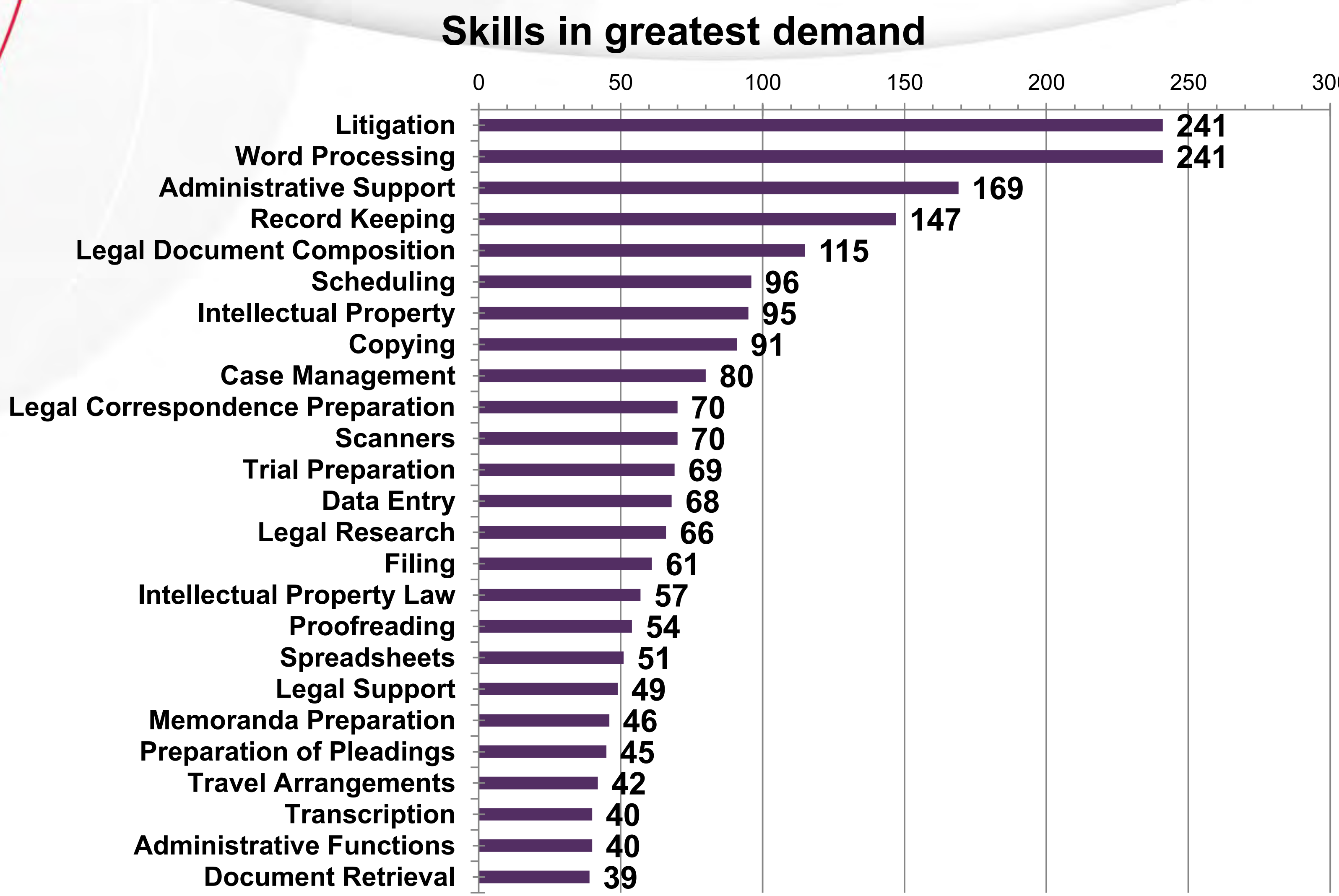
Skills for title “social, health services” (3,400 listings)



Skills for title "legal assistant, paralegal" (2,400 listings)



Skills for title "legal assistant" administrative cluster (800 listings)



4 Key findings

Most enrollment potential for RTC today

Certificate

Medical assistant
Chef
Accounting / bookkeeping
Health unit coordinator
Medical transcription
Web page / Digital media

Associates

Web page / Digital media
Registered nurse (RN)
Accounting
Computer Graphics
Computer programming / software design
Restaurant, culinary, and catering management
Dental hygiene
Computer Information Systems (CIS)

Findings and Recommendations

Critical to build awareness and value for RTC as provider among prospective students

- *Assess relationships with high schools in area to determine level of awareness and how often they may recommend traditional aged students*
- *Focus website by audience and improve navigation to programs of interest*
- *Consider creating or strengthening marketing efforts in the region*

RTC must proactively seek employer relationships, especially with larger and industry leaders

- Use new program development as an opportunity to partner with businesses to inform the curriculum
- Find ways to engage businesses that would be mutually beneficial (career fairs, specific continuing education offerings targeted to businesses, etc.)

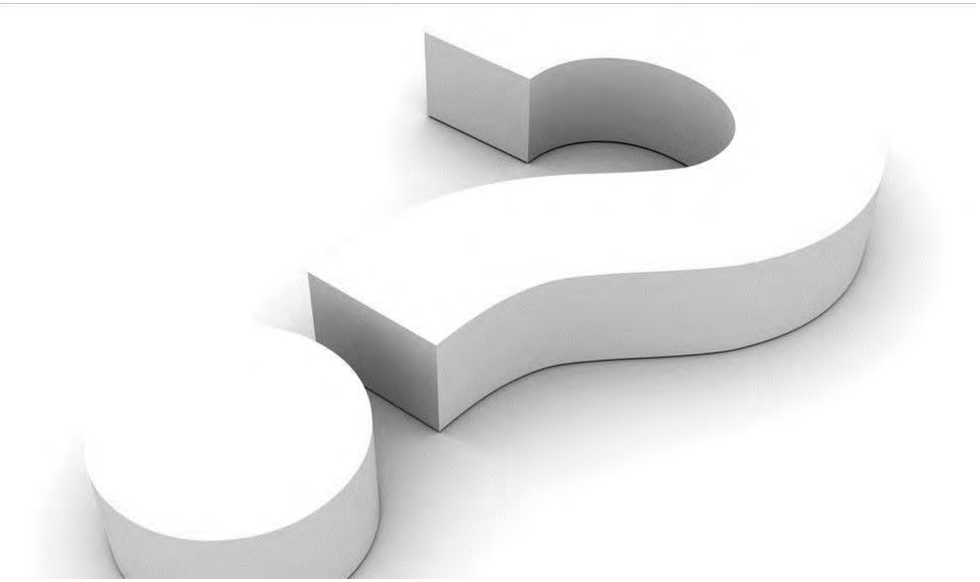
Findings Continued

- Two-year degree still in demand
- Preferences that may indicate growth potential:
  - **weekday evening offerings**
  - **online or hybrid**
  - **short intensive certificate programs**
- Opportunity to expand laddering opportunities through a variety of certificates culminating in an Associates Degree, where appropriate
- Expand, continue curricular input from employers, advisory groups

Next steps

- Additional discussion
- Ad Astra classroom capacity study and working session
- Program demand written report

Discussion



Questions
Comments

STRATEGIC CHECKUP
RENTON TECHNICAL COLLEGE

Presented by:
John Masterson
Strategic Solutions Consultant
Ad Astra Information Systems

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RTC Strategic Checkup Goals

- Align to RTC Goal to provide job training in the shortest period of time at the least cost
- Visibility into academic space utilization and management opportunities (Fall 2013 data used)
- Address current, reported scheduling challenges:
  - Limited Classroom, Lab and Computer Lab availability during primetime
- Understand course offerings inefficiencies directly impacting budgets and capacity
- Understand course offerings warning signals that potentially impact student access to required courses and graduation
- Solution framework to leverage data from the Student Information System in future terms

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Overview

Typical Strategic Issues

- Academic schedules are vitally important
  - Means of utilizing faculty
  - Means of allocating space
  - Means of providing students with a path to completion
- Academic schedules are created in a decentralized process that is difficult to measure or manage
- Strategic opportunities to efficiently and effectively utilize academic resources are rarely realized

Typical Schedule Building Process

1. Course offerings are based on a historical schedule, typically a roll-forward of a “like” term
2. Departments refine offerings in silos (distinct processes and decision makers, limited decision-support tools)
3. Student information system is updated
4. Room assignments are made/refined
5. “Final” schedule is posted (changes still occur after registration or even after classes start)

The goal is commonly completion v. improvement

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Course Offering Complexity

What is the impact of…

Students from other departments who need our courses?

The incoming class?

Curriculum changes?

Changing classroom availability and capacity to add sections at certain times?

Faculty load and capacity?

Increasing retention rates?

Changing transfer student enrollment?

Improving graduation rates?

Changing course eligibility requirements?

Changes in my department's headcount?

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Scheduling for Student Success

Noel Levitz 2013 National Student Satisfaction & Priorities Report

- Identified key challenges for institutions
- Student Response: “Courses are offered at times when I’m available” and “Ability to get the courses I need with few conflicts” were the top two challenges for 2-Year Public institutions
- Institution Response: “Courses are offered at times when I’m available” and “Ability to get the courses I need with few conflicts” were not ranked in top 25 for 2-Year Public institutions

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Strategic Checkup Approach

Course Offerings + Capacity = High Impact Change

1. Drill down from high-level metrics to related – and more granular and manageable – success drivers
2. Benchmark existing efficiencies of granular success drivers
3. Integrate relevant institutional goals and priorities (enrollment growth, cost savings, student outcomes, etc.)
4. Identify, quantify and prioritize opportunities
5. Select strategies that address opportunities and fit institution's culture
6. Implement and continually refine recommendations supporting strategies

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Course Offerings Analysis

Course Offering Analysis Concepts

General Terms and Concepts

- **Seats** – Seats offered in the term being analyzed (Fall 2014)
- **Blended Demand** – Average of trend of historical course enrollment from like terms (Fall 2009, Fall 2010, Fall 2011, Fall 2012 and Fall 2013) and enrollments from last like term (Fall 2013)
- **Enrollment Ratio** – Course-specific fill rate calculated as average enrollments divided by average enrollment caps (Fall 2013)
- **Balanced Course Ratio** – Courses wherein Enrollment Ratios are between 70% and 95% (Fall 2013)
- **Overloaded Course Ratio** – Courses wherein Enrollment Ratios are over 95% (Fall 2013)

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Course Offering Analysis Concepts

Analysis Term Disconnects

- **Statistical Excess Seats** – Seats offered in excess of Blended Demand
- **Statistical Additional Seats Needed** – Blended Demand in excess of Seats
- **Reduction Candidates** – Surplus sections of courses that could be removed
- **Elimination Candidates** – Courses that can potentially be removed from a schedule entirely for that term
- **Addition Candidates** – Potentially needed sections of courses that can be added to a schedule

Candidate Example	Course	Seats	Demand	Enrollment Ratio	Sections	Sections Needed
Reduction	AAA 200	75	40	53%	3	2
Elimination	AAA 201	25	8	32%	1	0
Addition	AAA 100	50	75	100%	2	3

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Course Offering Summary – Fall 2013

Measurement	Percent	Number	Courses	Percentile
Enrollment Ratio (Goal 85%)	40%	Avg. Enroll / Avg. Enroll Cap. 10 / 26		Lowest Measured
Balanced Course Ratio (Goal 40%)	10%		50 of 501	Lowest Measured
Overloaded Course Ratio (Goal 10%)	7%		36 of 501	95^{th} Percentile

Average Enrollment / Average Enrollment Capacity						
RTC	Mean	2-year Public Institutions Mean	Min Enroll	Min Cap	Max Enroll	Max Cap
10 / 26	22 / 29	18 / 25	10	18	41	53

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Course Offering Analysis – Fall 2014

Measurement	Percent	Number	Courses	Percentile
Statistical Excess Seats	61%	11,600 of 19,000 seats	767	Lowest Measured
Statistical Additional Seats Needed	17%	3,192 of 19,000seats	873	61st Percentile
Additional Seats Needed (Fall 2014 courses only)	.72%	137 of 19,000 seats	200	89th Percentile
Reduction Candidates (Goal < 10%)	17%	121 of 705 sections		18th Percentile
Elimination Candidates (Goal < 10%)	20%	146 of 705 sections		10th Percentile
Addition Candidates (Goal < 5%)	16%	115 of 705 sections		69th Percentile
Addition Candidates (Fall 2014 Only)	2%	15 of 705 sections		69th Percentile

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Course Offering Analysis
By Level

Level	Baseline Sections	Enrollment Ratio	Enrollment	Enrollment Cap	Sections per Course
000 Level	174	78%	10	13	4
100 Level	460	36%	11	29	1.2
200 Level	102	31%	10	32	1.1
600 Level	1	52%	13	25	1
Totals	**737**	**40%**	**10**	**26**	**1.5**

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Course Offering Analysis By Level

Level	Fall 2014 Sections	Addition Candidates	Addition Candidates, Fall 2014 Only	Reduction Candidates	Elimination Candidates
000 Level	167	23	14	41	5
100 Level	439	80	1	72	107
200 Level	98	10	0	8	34
600 Level	1	0	0	0	0
Totals	**705**	**113**	**15**	**121**	**146**

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Course Offering Analysis By Sections per Course

Sections per Course	Courses	Average Enrollment	Enrollment Ratio	Balanced Course Ratio	Overloaded Course Ratio
1	400	12	37%	10%	7%
2	60	8	31%	8%	5%
3 to 5	29	8	51%	17%	14%
6 to 10	11	9	89%	9%	27%
11 +	1	17	63%	0%	0%
Totals	**501**	**10**	**40%**	**10%**	**7%**

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Course Offerings by Enrollment Ratio Tier

Enrollment Ratio	Courses	% of Total	Average Enrollment	Average Enrollment Cap
1-19%	90	18%	3	35
20-49%	233	47%	11	33
50-69%	92	18%	10	17
70-95% (Balanced)	50	10%	15	18
> 95% (Overloaded)	36	7%	15	13

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Course Offering Opportunities

- Improved graduation rates from additional seats offered in “gateway” addition candidates (focus on required courses)
- Reduction of inefficiency/expense from reduction and elimination candidates (267 total candidates; 38% of all sections)
- Increased scheduling flexibility and capacity
  - Reallocation of faculty, moving from reduction candidates to addition candidates
  - Increased faculty capacity by increasing average enrollment from 10 to 22 (112% capacity increase, to 85% enrollment ratio goal)

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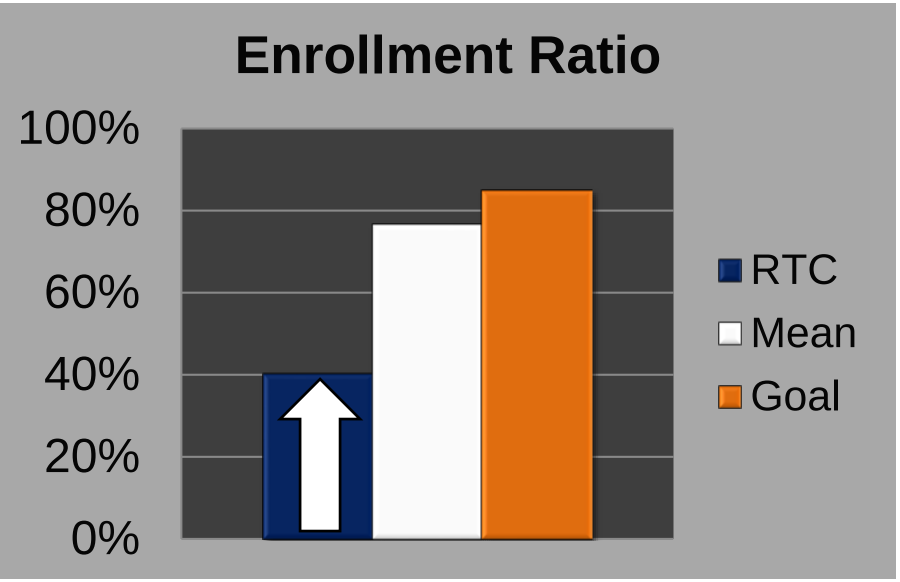
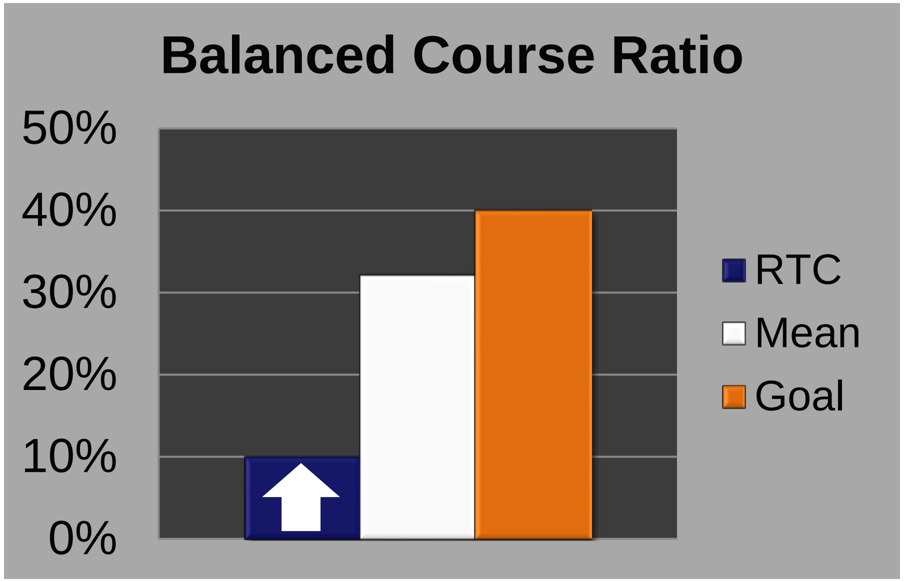
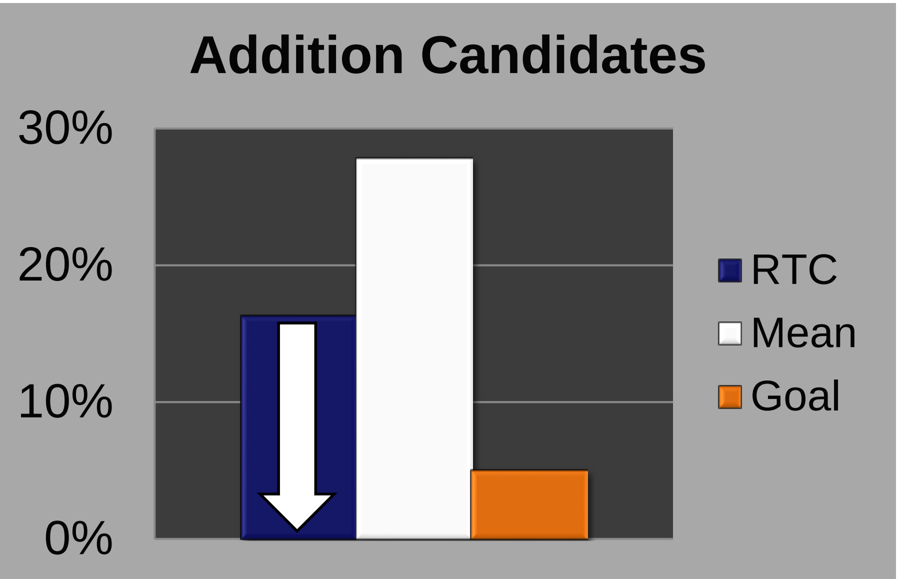
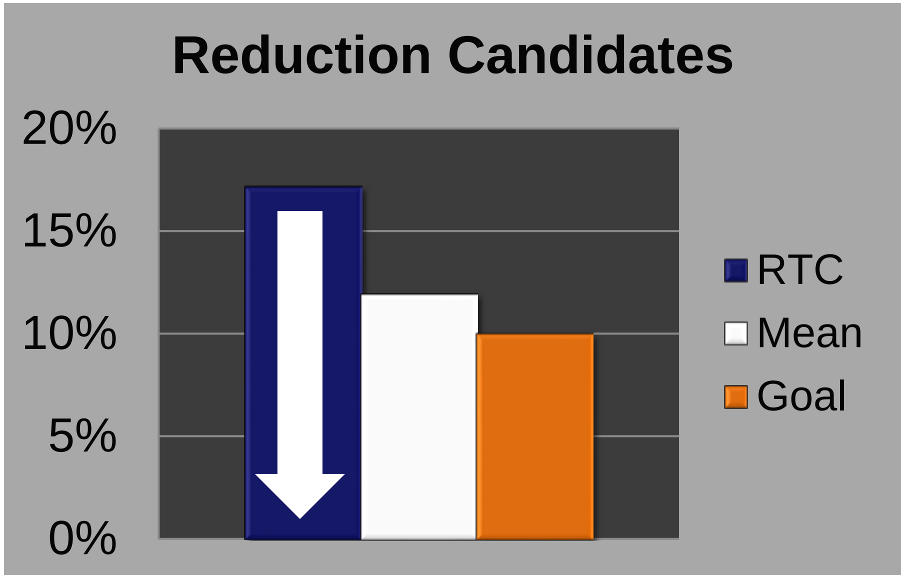
Course Offering Analysis Dashboards









Capacity Analysis

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Space Bottleneck Concept

Average Utilization does not reflect capacity or inform space management

Room Type	Campus "A" Primetime Util.	Campus "B" Primetime Util.
Classrooms (2)	50%	50%
Science Lab (1)	50%	10%
Tech Auditorium (1)	50%	90%
Average Util.	**50%**	**50%**

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Capacity Management Process

1. Identification of enrollment capacity for analysis term (Fall 2013):
   a. 80% primetime utilization and/or
   b. 95% effective utilization of any of the most dominant primetime meeting patterns
2. Analysis of strategies to maximize quality/capacity
3. Selection of scheduling strategies/recommendations
4. Scheduling recommendation refinement/enforcement (ongoing)
5. Strategic renovation/new construction planning

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Capacity Management Findings 1

- Average utilization of all instructional rooms:
  - 75-hour standard week (7am – 10pm M-F) – **36%**
  - 35-hour daytime prime week (8am – 3pm M-F) – **62%**
  - 12-hour evening prime week (6:00pm – 9:00pm M-R) – **28%**
- Daytime Prime Time Utilization is extremely high in Computer Labs :

	Classroom (47)	Lab (22)	Lab Computer (20)
75-hour Standard Week	36%	32%	42%
35-hour Daytime Prime	55%	57%	85%
12-hour Evening Prime	44%	13%	7%

- Classroom utilization during the standard week is low (**14th Percentile**)
- Classroom Daytime Prime Ratio (percentage of all usage in daytime primetime) is Moderately High (**5th Percentile**)***** – **71%**

* Even spread would be 47% (35 of 75 hours)

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Capacity Management Findings 2

- **Classroom** daytime primetime utilization is higher in small rooms:

SEATS	ROOMS	PRIME ROOM HRS.	PRIME UTILIZATION	PRIME RATIO
1 – 25	34	681	57%	70%
26 – 40	10	180	51%	75%
41 – 100	3	49	47%	78%
Total	**47**	**910**	**55%**	**71%**

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Capacity Management Findings 2

- **Lab** daytime primetime utilization is evenly spread:

SEATS	ROOMS	PRIME ROOM HRS.	PRIME UTILIZATION	PRIME RATIO
1 – 25	17	341	57%	83%
26 – 40	5	96	55%	83%
Total	**22**	**438**	**57%**	**83%**

- **Lab-Computer** daytime primetime utilization is higher in small rooms:

SEATS	ROOMS	PRIME ROOM HRS.	PRIME UTILIZATION	PRIME RATIO
1 – 25	16	508	89%	98%
26 – 40	4	119	69%	81%
Total	**20**	**627**	**85%**	**95%**

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Capacity Management Findings 3

- Prime Utilization is extremely high in most departmental space:

Department	ROOMS	OVERALL UTILIZATION	PRIME UTILIZATION	PRIME RATIO
401	1	43%	86%	92%
Basic Studies	11	49%	68%	66%
Boiler/Property Maintenance	1	56%	86%	71%
Construction Management	1	59%	64%	51%
Dental Assistant	1	43%	93%	100%
Early Childhood	1	54%	100%	86%
General Education	6	22%	34%	71%
Lecture	3	19%	25%	60%
Machining	1	56%	93%	77%
Machinist Apprenticeship	1	17%	20%	56%
Medical Assistant	2	51%	93%	84%
Medical Office	1	15%	16%	52%
Message Therapy	1	43%	93%	100%
Nursing	4	28%	52%	85%
Physics Labs	1	61%	92%	72%
Plasters Apprenticeship	1	57%	100%	82%
Science Lecture	1	34%	54%	75%
Surgical Tech	3	47%	93%	91%

Capacity Management Findings 4

- Seat fill ratios in **Classrooms** are higher in smaller rooms:

SEATS	ROOMS	CAPACITY	ENROLL	FILL (ENROLL)	ENROLL CAP	FILL (CAP)
1 – 25	34	21	16	73%	30	141%
26 – 40	10	31	19	61%	40	127%
41 – 100	3	51	9	18%	48	94%
Total	**47**	**24**	**16**	**65%**	**33**	**133%**

- Total Classroom Seat Fill (Enroll) ratio comparison: **62nd Percentile**
- Total Classroom Seat Fill (Cap) ratio comparison: **Highest Measured**
- Unrealistic Enrollment caps are causing “insider” scheduling

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Capacity Management Findings 4

- Seat fill ratios in **Labs** are higher in smaller rooms:

SEATS	ROOMS	CAPACITY	ENROLL	FILL (ENROLL)	ENROLL CAP	FILL (CAP)
1 – 25	17	22	14	63%	35	161%
26 – 40	5	32	12	36%	45	142%
Total	**22**	**24**	**13**	**56%**	**37**	**155%**

- Seat fill ratios in **Lab-Computer** is higher in small rooms:

SEATS	ROOMS	CAPACITY	ENROLL	FILL (ENROLL)	ENROLL CAP	FILL (CAP)
1 – 25	16	23	13	56%	25	109%
26 – 40	4	33	10	32%	29	90%
Total	**20**	**25**	**12**	**50%**	**26**	**104%**

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Capacity Management Opportunities

- Evenly utilize all Classrooms at 50% across the 75-hour standard week
  - Result: Increase standard scheduling across all Classrooms (**38%** capacity increase)
  - Graph category label: “Optimize Rooms”
- Increase average enrollments through course offering management to get to 85% enrollment ratio goal
  - Result: Increase average enrollment from 10 to 22 (112% capacity increase, to 85% enrollment ratio goal)
  - Graph category label: “Enrollment Ratio”

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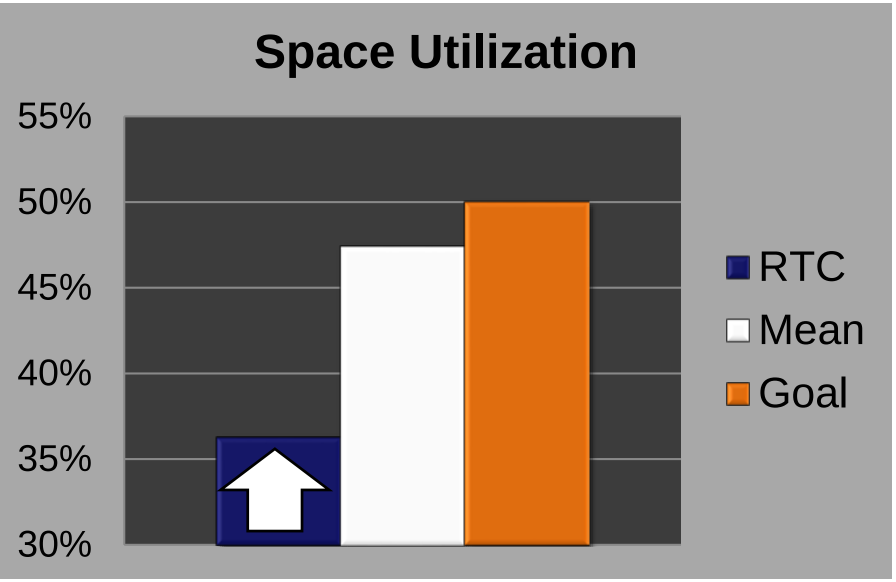
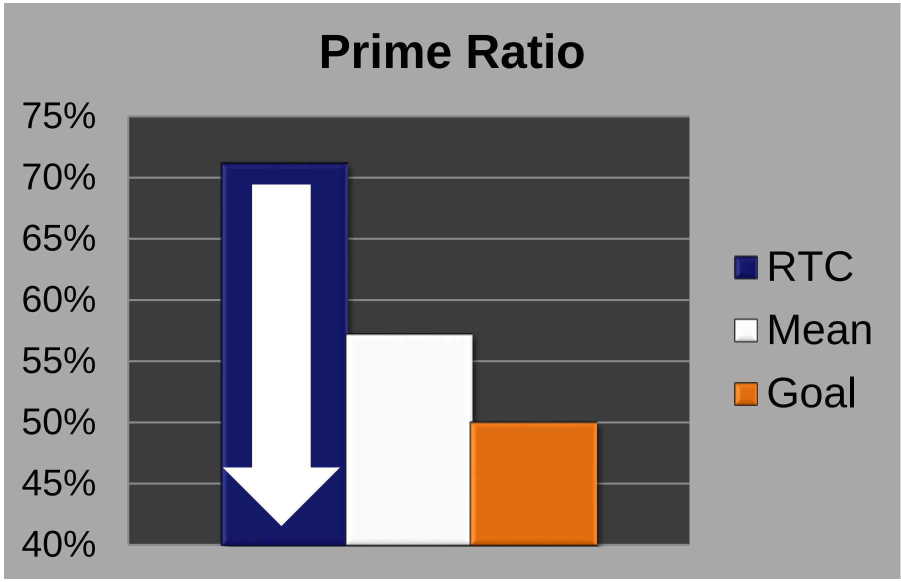
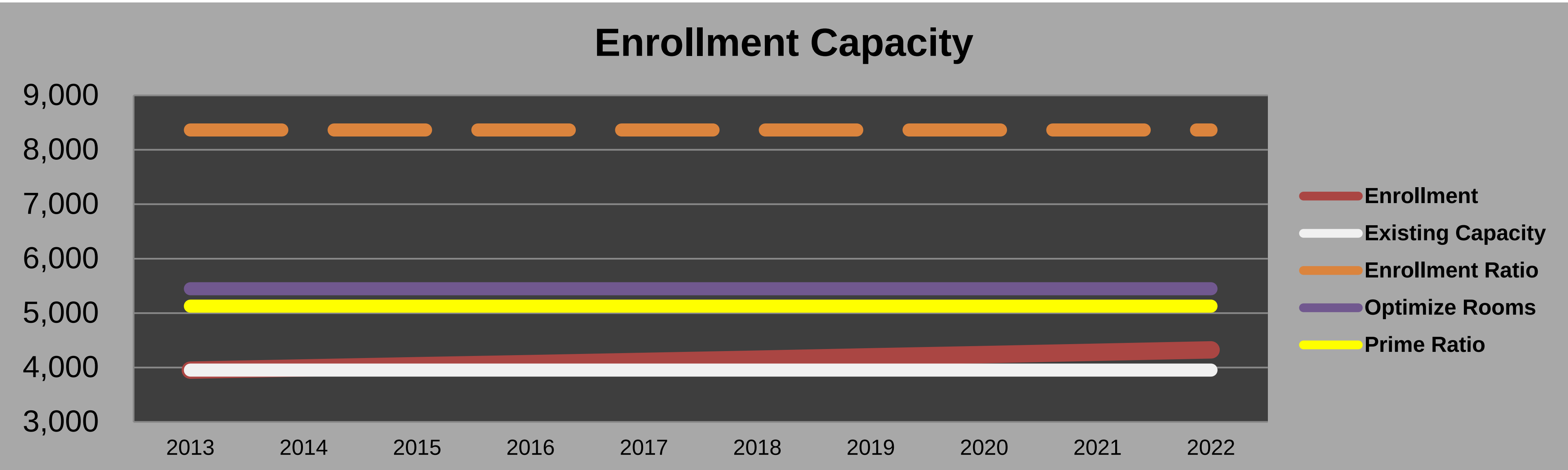
Capacity Management Dashboards







RTC Strategy Options to Evaluate

Course Offering Efficiency Strategies:

- Evaluate Elimination Candidates for degree requirement impact
- Select Reduction and Elimination Candidates to remove from Fall 2014 schedule (267 total candidates; 38% of all sections)

Course Offering Student Success Strategies:

- Evaluate Addition Candidates for degree requirement impact
- Consider implementation of Platinum Analytics (uncover key Addition Candidates to improve student completion rates)

Capacity Management Strategies:

- Optimize Rooms (38% potential capacity)
- Enrollment Ratio (112% potential capacity)

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RTC Potential Next Steps

- Develop a schedule review team and process
  - Senior leadership and academic department representation
  - Focused on leveraging and sharing schedule analysis
- Develop data-driven scheduling policies
  - Realistic Course/Section Capacities
  - Course offering efficiency and effectiveness
  - Room assignment efficiency
- Integrate other academic planning processes (curriculum planning, academic space planning, student success initiatives, etc.)

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Questions?

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