Accessibility in the ATLAS Building at the University of Colorado Boulder

Prepared for Facilities Management Access Services

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Abstract

The purpose of this article is to acknowledge the lack of ADA Push Buttons in work spaces, labs, and areas that students would access alone in the ATLAS Building at the University of Colorado Boulder. ADA push buttons should be implemented in these spaces to assure every student is able to utilize these rooms. This article is going to be distributed to CU's Facilities Management, Access Services, and Disability Services.

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Introduction

The University of Colorado Boulder's ATLAS building was officially opened in 2006 after demolition for the building started in 2002. The ATLAS building is now the home for thousands of Creative Tech and Design students and film students. As a student at the University of Colorado Boulder I believe that everyone should have an equal opportunity and access to what CU has to offer. The ATLAS Building offers a lot of opportunities for students to create and work in workspaces and labs throughout the building. These are areas where ATLAS students probably spend the majority of their time in the later years of the Creative Tech and Design program.

None of these rooms offer ADA push buttons for students with disabilities. This is a common theme with every room in the ATLAS Building. Workspaces, labs, classrooms, equipment rooms, and bathrooms. Areas that students would access alone should have better accessibility in order to give all students the same opportunities. ADA push buttons should be implemented in these spaces to assure every student is able to utilize these rooms.

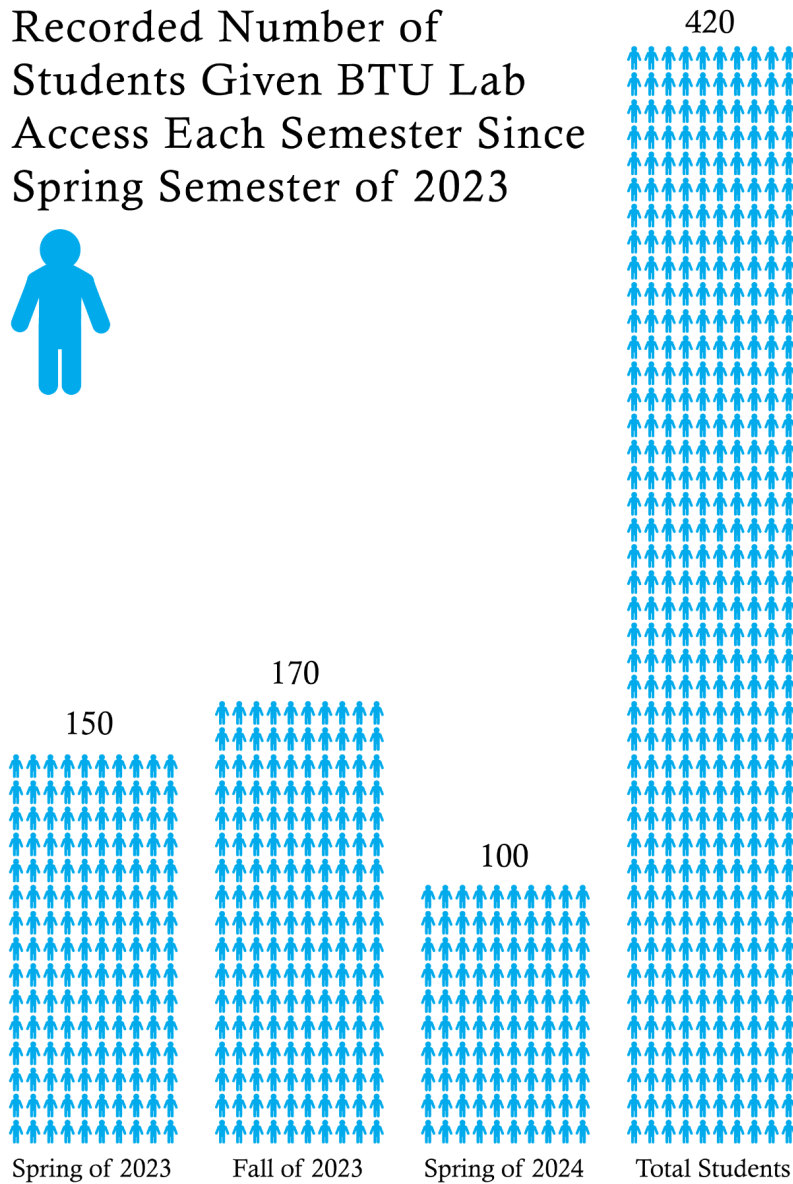Exterior entrances of the ATLAS Building do provide ADA Push Buttons for students. The issue is currently the push button on the main entrance doesn't function because the doors are locked and the other push buttons require card access after hours. The card access on both external entrances are approximately 98 inches (8 feet) from the ADA Push Button with a 5.45 second timer until access is declined.

Data Collection

The University of Colorado Boulder does not seem to provide access to data on how many doors there are in a building and what doors have handicap access or card access. With the notes app on my phone and a couple hours to spare, I was able to go through each floor of the ATLAS Building and record details on each door. This included the door number, the title of what the room was, if the door had card access or a traditional lock, how far that card access was from the door, if the door had automatic door closers, and a personal opinion on how heavy the door was to open. This was then transferred to an excel spreadsheet in order to organize the data a little better. Below I have created a visualization of the amount of different doors in the ATLAS building and how many of them have ADA Push Buttons.

ADA Push Buttons and Doors In The ATLAS Building at CU Boulder
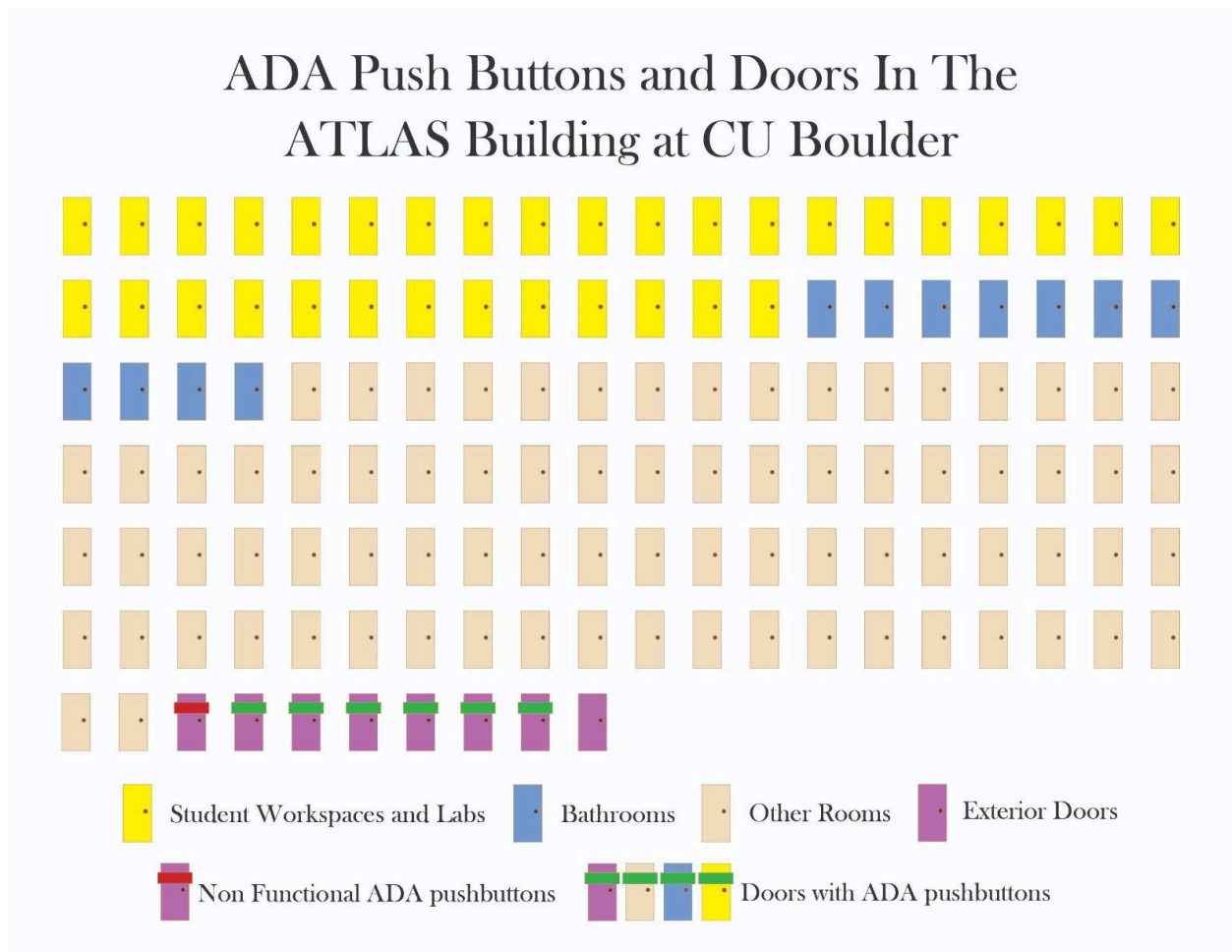
Below is the amount of students that have access to the BTU Lab provided by the head of the lab Zack Weaver. Due to there being a large amount of students moving in and out of the BTU lab, it should be more accessible. This is a lab that is granted access after an orientation, the undergrad lab is granted access after hours when you become a CTD Major.

Recorded Number of Students Given BTU Lab Access Each Semester Since Spring Semester of 2023

Spring of 2023	Fall of 2023	Spring of 2024	Total Students
150	170	100	420

According to *CU Boulder fall enrollment over time* and *CU Boulder spring enrollment over time - by major by University of Colorado Boulder IR*, two data visualizations provided by Tableau Public, in the past 4 years, starting fall semester of 2020, 684

students have enrolled in Creative Tech and Design, not including students with minors in CTD.

Communication

In order to get more information on accessibility at the University of Colorado Boulder, I communicated with several different parts of CU. This included contacting CU's Disability Services, CU's Housing Services, CU's Facilities Management, and CU's Facilities Management Access Services.

CU's Facilities Management Access Services was able to answer a few of my questions regarding the pre existing requirements implemented in the building and what is done to improve accessibility now:

Q: Is there an ADA requirement for doors to have an ADA push button within the buildings at CU? What is the requirement?
R: There is no general requirement for ADA push buttons within buildings. For older buildings, ADA push buttons are sometimes used when there are no better solutions to help with making a space accessible.

Q: Instead of ADA push buttons, are there other ways that are accommodating to people with physical disabilities? What are those ways?
R: Many times we can reduce the tension on the overhead door closer to make a door easier to open. We recommend this approach first before considering whether an ADA push button is feasible.

Q: What things about a door would make it hard or not possible to have an ADA push button?
R: Installing an ADA push button can be quite costly, depending upon the wall type, available power, etc. Also, depending upon the location, ADA push buttons tend to eventually fail due to frequency of use and/or abuse, which is why we prefer to not have to resort to ADA push buttons.

Q: Is there a requirement on how far the card access is from the ADA push button on the building entrances?
R: No real requirement, as the location is dictated by existing conditions

Q: Who makes the rules on what doors have auto close, need to remain closed, and require card access?
R: We consult with the fire marshal to review the exiting and fire/life safety requirements of the space in question as prescribed by the building code. Fire-rated doors, if required by the building code, are indeed heavier than a typical office door, and the building code gives the fire marshal the latitude to rule that fire/life-safety requirements supersede accessibility.

Q: Is there anything I am able to access that would provide me with information on CU's access requirements regarding safety and security?
R: I have added our fire marshal, Zac Niehues, in case he has an informational FAQ/presentation.

Interview

Not only did I communicate with different parts of CU, I also communicated with my peers and the students of the ATLAS building that utilize the work spaces provided by ATLAS. William Fitzgerald or Fitz, a student in his junior year majoring in Creative Tech and Design here at CU Boulder, experienced the difficulties of accessibility first hand after he recently had a surgery on his ACL, MCL, and meniscus putting him in crutches for the rest of the year. Fitz emailed disability services about the accessibility in the ATLAS building after the first couple days of struggles he was experiencing. The same week he emailed disability services, Fitz got knocked by the door on an external exit. He says this prompted him to make a report on the issues in the Atlas building involving accessibility and how he would improve the accessibility.

[Fitz Report on Accessibility](#)

In a one on one interview with Fitz, he explains he spends a lot of time in the ATLAS building, "Per week 55 - 60 hours in the ATLAS building, mainly in btu". He explains he spends his time in BTU working on school work and pants for his business. Usually Fitz is at the BTU "When there is no one to come to the door after you knock on the window", meaning he is alone after hours. He explains that before got his surgery, he did some scouting and planning of his buildings, finding what entrances provide buttons. Fitz explains he was not aware of the difficulties until he got his crutches, and experienced the building first hand. The last question on my interview was asking if he thinks ADA Push Buttons would be the best idea

for these spaces, Fitz says "I think a button would be the best solution or the only one that satisfies all the requirements".

Another student I interviewed, Atlas Ziana, a third year senior Creative Tech and Design major with a minor in Space, has been using a walker for the past two years to help with "Fibromyalgia,…. A condition where my mental health severely impacts my body. I get sick when I get anxious". I asked Ziana how their experience at CU has been in terms of accessibility, Ziana explains that its "Literally been the worst…I consider the ATLAS building the most accessible building on campus….but hearing you say that ATLAS doesn't seem accessible made me realize that it's not good, just better than others." Ziana explains more about the ATLAS building, "This building is good with most exterior, interior is awful. Some doors are the heaviest doors you have to open". Ziana brings up that disability is not only physical but there are also a lot of mental disabilities that should be considered when talking about accessibility. This increases the amount of people we should consider when facing accessibility in our buildings.

ADA Requirements

The 309 Operable Parts under the 2010 ADA Standards states, "Operable parts shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist." If a card swipe is required for the door to open after hours, this becomes another operable part required in the ADA Push Buttons use. Although the button is within the reach requirements stated in 2010 ADA Standard 308 Reach Ranges, "the high forward reach shall be 48 inches (1220 mm) maximum and the low forward reach shall be 15 inches (380 mm) minimum above the finish floor or ground", this becomes less of a one hand job, requiring the user to travel from the card swipe to the push button, assuming the user can get to the button before the card access expires. The card access on both external entrances are approximately 98 inches (8 feet) from the ADA Push Button with a 5.45 second timer until access is declined.

Fire Safety

Fire safety and security is a big consideration that makes an impact on what different doors are adjusted inside the building. A pdf provided by the NATIONAL ASSOCIATION OF STATE FIRE MARSHALS about Classroom Door Security & Locking Hardware explains more about this in regards to classrooms and schools. "To help prevent fire spread in a school building, building codes, fire codes, and life safety codes may require classroom doors to be fire-rated doors. Fire-rated doors are required to be self-latching when closed to ensure they perform their intended protective function in the event of a fire. To facilitate immediate egress from the classroom, building codes, fire codes, and life safety codes require doors from inside the room (the egress side) to unlock and unlatch with one motion without the use of a key, tool, special knowledge, or effort." An ADA Push Button implemented with the labs in the ATLAS building wouldn't change (to my knowledge) the closing speed that is required for fire-rated doors.

Technology

I asked CU's Facilities Management Access Services if there is a requirement on how far the card access is from the ADA push button on the building entrances, they said there is "No real requirement, as the location is dictated by existing conditions". History of infrastructure and location has a big impact on where things can be placed. The ATLAS building uses RM Card Readers by Software House, which are standalone card readers. Standalone means the card reader is directly wired to the door panel to control access to the door and not wired to a network.

In the article "Tallying the Pros and Cons of Standalone Access Control Readers" by Kyle Andorf in Security Magazine, it is explained "that all of the parts and smarts are within the device at the door and are not distributed across the site. This results in a reduction of costs otherwise associated to cabling, conduit and increased installation or labor costs." This leads to the assumption that moving the card reader could be possible.

Conclusion

Considering the data I have collected and the people I have talked to concerning this matter of accessibility with the ATLAS building, this study has concluded that better accessibility is needed in ATLAS and would better the lives of our students at the University of Colorado Boulder.

Accessibility in ATLAS was described as "better than most, but not good enough." With a few hundred students having access to workspaces and the building, providing to every student becomes a responsibility. On CU Boulder's official website home page under *Student Resources & Highlights,* it states: "As one of America's leading public research universities, CU Boulder is focused on creating a student-centered campus culture that enables the belonging and success of everyone in our community."

Legally, CU does not have to implement these amenities into the ATLAS building. In order to abide by CU's beliefs of inclusion, enabling belonging and success, CU has the moral obligation to provide better accessibility to the ATLAS building and the spaces it provides.

Recommendations

Based on the findings and conclusions in this study, here are my recommendations:

- Buttons on the exterior entrances should be substantially closer to the card swipe access in order to provide easier accessibility.
- Popular workspaces and labs such as the BTU and Undergrad Lab should have ADA Push Buttons implemented in order to accommodate students who access these rooms at all hours of the day. Not only will this be beneficial to students with physical or mental disabilities, but also students carrying large items into the workspace.

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