

OFFICE OF AUDITOR OF STATE
STATE OF IOWA

State Capitol Building
Des Moines, Iowa 50319-0006
Telephone (515) 281-5834

Rob Sand
Auditor of State

NEWS RELEASE

Contact: Rob Sand
515/281-5835
Or Jim Cunningham
515/281-5834

FOR RELEASE

September 4, 2024

Auditor of State Rob Sand today released a report on a special investigation of the University of Iowa (University), Department of Physics and Astronomy (Department), for the period July 1, 2017 through September 30, 2021. The special investigation was requested by University officials because a member of the Department, Brian Busch, failed to disclose his ownership of D3Signtech (D3T) in compliance with the University's Conflicts of Interest and Commitment policy. University officials were also made aware of the possibility Mr. Busch may have used University assets and staff to divert revenue from the University to his personal business. As a result, the University placed Mr. Busch on paid administrative leave effective September 17, 2021. Mr. Busch was the Department's Machine Shop Manager at the time he was placed on administrative leave.

Sand reported the special investigation identified \$943,634.97 was deposited into Mr. Busch's personal bank accounts or to a Stripe account held by Mr. Busch. The \$943,634.97 was received from Xometry for jobs Mr. Busch's company, D3T, completed using University staff and equipment. Because University staff and equipment was used, the \$934,634.97 received from Xometry should have been deposited to the University's bank account.

In addition, Sand reported the procedures identified \$6,313.39 of improper personal purchases Mr. Busch made with his University issued procurement card (Pcard). The procedures also identified \$136.38 of unsupported disbursements related to shipping charges made on University accounts.

The report includes a recommendation University officials continue to improve and communicate the disclosure requirements related to conflicts of interest and conflicts of commitment. The report also includes a recommendation University officials implement procedures to ensure the Department's internal controls are strengthened, including performing RT system reconciliations, performing an independent review of adjustments and deletions made to the RT System, and maintaining inventory counts of materials and tools purchased by the Department, while performing periodic inventory counts and spot checks.

Copies of the report have been filed with the Iowa Board of Regents' Office of Internal Audit, the University of Iowa's Department of Public Safety, the Division of Criminal Investigation, the Johnson County Attorney's Office, and the Attorney General's Office. A copy of the report is available for review on the Auditor of State's website at [Special Interest Reports](#).

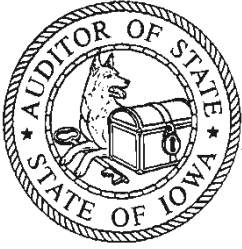
###

**REPORT ON SPECIAL INVESTIGATION OF THE
UNIVERSITY OF IOWA
DEPARTMENT OF PHYSICS AND ASTRONOMY – MACHINE SHOP

FOR THE PERIOD
JULY 1, 2017 THROUGH SEPTEMBER 30, 2021**

Table of Contents

	<u>Page</u>
Auditor of State's Report	3-4
Investigative Summary:	
Background Information	5-8
Detailed Findings	8-26
Recommended Control Procedures	26-27
Exhibit:	
	<u>Exhibit</u>
Summary of Findings	A 29
Diverted Revenues Matched to Xomerty Jobs	B 30-55
Diverted Revenue Through Protostudios	C 56-71
Payments from Brian Busch to Protostudios	D 73
Diverted Revenues – Unmatched to a Specific Xomerty Job	E 74-92
Improper and Unsupported Procurement Card Purchases	F 93
Staff	94
Appendices:	
	<u>Appendix</u>
Xometry Website – SUI Search	1 97
Text Messages from Brian Busch to Employee – Management Awareness	2 98-110
Copy of Purchase Order Number J0010BE9	3 112-128
Copy of Purchase Order Number J0010F4C	4 130-138
Copy of Purchase Order Number J0013024	5 140-147
Copy of Purchase Order Number J001351F	6 148-153
Copy of Purchase Order Number J0016DED	7 154-157
Copy of Purchase Order Number J0021B47	8 158-163
Copy of Purchase Order Number J001663B	9 164-169
Copy of Purchase Order Number J00196AB	10 170-181
Copy of Purchase Order Number J0019434	11 182-215
Copy of Purchase Order Number J001A88B	12 216-247
Copy of Purchase Order Number J001699C	13 248-255
Copy of Purchase Order Number J0018FD2	14 256-272
Text Messages from Brian Busch to Employee – Time Entry	15 274-286
Text Messages from Brian Busch to Employee – Enticements	16 288-304



OFFICE OF AUDITOR OF STATE STATE OF IOWA

Rob Sand
Auditor of State

State Capitol Building
Des Moines, Iowa 50319-0006
Telephone (515) 281-5834

Auditor of State's Report

To President Wilson and the Members of
the Board of Regents, State of Iowa:

As a result of alleged improprieties regarding certain financial transactions and at the request of State University of Iowa (University) officials, we conducted a special investigation of the State University of Iowa, Department of Physics and Astronomy (Department) Machine Shop (Machine Shop). Based on a review of relevant information and discussions with University and Department personnel and officials, we performed the following procedures for the period July 1, 2017 through September 30, 2021.

1. Reviewed information gathered by University officials and Department staff to obtain an understanding of the concerns regarding an entity established by Brian Busch, a Department Engineering Specialist/Machine Shop Manager.
2. Obtained an understanding of University policies and procedures related to the use of University equipment and resources, conflicts of interest and commitment disclosure forms, and the use of procurement cards (Pcards).
3. Evaluated internal controls to determine whether adequate policies and procedures were in place and operating effectively.
4. Interviewed University and Department personnel, including the Head of Physics and Astronomy Department, and staff members of Protostudios to obtain an understanding of how Mr. Busch carried out his job duties.
5. Interviewed University and Department personnel and staff members of Protostudios to obtain an understanding of Protostudios and Mr. Busch's relationship with Protostudios.
6. Obtained and reviewed all charges to Mr. Busch's University Pcard to determine the propriety of selected charges.
7. Obtained and reviewed all charges to the Department's UPS and FedEx shipping accounts to identify payments made by the University related to shipping charges and to determine the propriety of selected charges.
8. Obtained and reviewed information from Xometry to identify payments to Brian Busch and/or his personal business (D3signtech) and the University for the period of July 1, 2017 through October 31, 2021.
9. Compared jobs recorded in the Machine Shops time reporting system (RT system) to purchase orders, job specification drawings, and accepted and shipped dates obtained from Xometry for all jobs shown as accepted and completed by the University, Mr. Busch, and/or D3Signtech to determine who received the payments and to what account(s) the payments were deposited the time period of July 1, 2017 through October 31, 2021.
10. Obtained and examined copies of timesheets for all Machine Shop employees and monthly hourly billing spreadsheets for the period July 1, 2017 through October 31, 2021. We compared the hours recorded on timesheets to the hours billed by the Department to Xometry job records to determine what jobs were completed by University staff and at the Machine Shop and identify any unallocated or unbilled time.

11. Reviewed activity in the billing records held by Protostudios to identify any jobs related to Xometry or Mr. Busch's personal business completed by Department staff.
12. Reviewed emails recovered from Mr. Busch's University email account to identify Xometry jobs completed, D3Signtech jobs completed, Protostudios jobs completed, and any discussions had with staff and management regarding the Xometry, D3Signtech and/or Protostudios jobs completed, and equipment/materials purchased.
13. Obtained computer images of the hard drives from Mr. Busch's University computers and flash drives recovered by the University's Department of Public Safety to identify any information related to goods and services for which Mr. Busch received personal payment.
14. Obtained and reviewed bank statements for accounts held by Mr. Busch, including an account for D3Signtech, to determine the source of certain deposits and the disposition of funds from the accounts.

The procedures identified \$943,634.97 of diverted revenues which resulted from Mr. Busch receiving payment for Xometry jobs completed by Department staff at the Machine Shop. The diverted revenues were deposited into Mr. Busch's personal bank accounts or to a Stripe account held by Mr. Busch. Additionally, the procedures identified \$6,313.39 of improper personal purchases made with Mr. Busch's University Pcard and \$136.38 of unsupported disbursements related to shipping charges made on University accounts for these jobs. The procedures also identified concerns with University policies and procedures related to conflicts of interest and commitment. The detailed findings and recommendations are presented in the Investigative Summary of this report and **Exhibits A** through **F**.

The procedures described above do not constitute an audit of financial statements conducted in accordance with U.S. generally accepted auditing standards. Had we performed additional procedures, or had we performed a review of the entire Department of Physics, other matters might have come to our attention which would have been reported to you.

Copies of the report have been filed with the Iowa Board of Regents' Office of Internal Audit, the University of Iowa's Department of Public Safety, the Division of Criminal Investigation, the Johnson County Attorney's Office, and the Attorney General's Office

We would like to acknowledge the assistance and many courtesies extended to us by the officials and personnel of the State University of Iowa during our investigation.



Rob Sand
Auditor of State

August 23, 2024

Report on Special Investigation of the
University of Iowa
Department of Physics Machine Shop

Investigative Summary

Background Information

The Department of Physics and Astronomy (Department) is part of the State University of Iowa (University), which is owned and operated by the State of Iowa and under the supervision of the Board of Regents. The Department is located in Van Allen Hall on the University's campus. According to the Department's website, it "provides comprehensive and rigorous instruction, as well as research facilities and guidance in selected specialties for advanced individual scholarly work."

The Department includes a Machine Shop which provides the following services:

- machining, fabricating, welding, design and precise measurement of mechanical parts and assemblies,
- custom part prototyping and machine part problem solving,
- carpentry,
- laser plastics,
- water jet cutting,
- 3D printing, and
- training for students and faculty to work on manual milling machines, lathes, CNC milling machines and in CAD/CAM design.

The Machine Shop provides services to various University department's, faculty, research staff, and students. The Machine Shop also receives grant/contract work from various federal agencies such as the National Aeronautics and Space Administration (NASA) and European Council for Nuclear Research (CERN). According to Department officials, if the Machine Shop was not busy, they could also accept requests to perform work for other Universities and/or Colleges and private companies.

For the period of July 1, 2017 through September 30, 2021, the Machine Shop employed three full-time employees and a part time employee. The Machine Shop also employs qualified students depending on its workload. Brian Busch began employment with the Machine Shop as the Shop Manager on August 15, 2016. As the Shop Manager, Mr. Busch was responsible for:

- Ordering materials, tools and other miscellaneous supplies needed for various projects.
- Ensuring the machines were maintained and kept in good working order.
- Overseeing projects, including staffing.
- General Supervision of staff and the day-to-day operations of the Machine Shop.

According to Department staff, the Machine Shop was to be self-supporting, in that it was to cover its costs by billing for its services. To do this the Machine Shop established billing rates for its services which were based on the hours worked to complete the design, machining, and fabricating of parts. During the period of our investigation, the rate billed for University projects ranged from \$77.00 to \$86.00 per hour and the rate for external clients was \$100.00 per hour. Materials and supplies, if needed, are ordered using the Machines Shops Pcard or by purchase order (PO) process. If the materials and supplies are for a University job, they are charged to the requesting department and if the materials and supplies are for an external client, the costs are billed as part of the invoice.

RT System

According to Department staff, all jobs or requests made to the Machine Shop are processed through an email-based system known as the RT system. A ticket is created by logging into the RT system, or a user can email the job request which prompts a job to be created. Because the Machine Shop was to be self-sufficient and staff time was to be accounted for, a ticket should have been created for each job, Training Time, Shop Time, Instructional Time, etc. This information was then used to allocate costs to be billed or to allocate costs to the Machine Shops overhead such as training and shop time.

Once an employee is assigned or starts a job, the employee(s) enter their time spent working on each individual ticket into the RT system. Time is recorded in minutes. As an industry standard, the Machine Shop employees also input machine run time for all jobs. Both the employee's time and machine time are billed for each job. For example, if they spent 120 minutes (2 hours) working on design, 120 minutes (2 hours) to set up and program the machine(s) making the part, and then the machine runs for 240 minutes (4 hours) to make the part, the total time charged to the job would be 480 minutes or 8 hours. Of the 480 minutes, 240 minutes would be staff time and 240 minutes is machine run time.

Each month the University's IT department provides the department's accounting staff with a download of the RT system for the previous month. The department's accounting staff prepares invoices for external clients and University jobs. The invoices include the hours worked for each job and any materials and supplies for external clients. Invoices for external entities are mailed with payment instructions. Invoices for the various University departments are processed through the normal University workflow. Supplies and materials for University jobs are either provided by the department or purchased using the Machine Shops Pcard and then billed to the Department.

Xometry

As previously stated, the Machine Shop was to be self-sufficient and was allowed to accept jobs from outside the University when its workload allowed. During the Summer of 2018, Mr. Busch approached the Department's Administrator about Xometry, a 3rd party website. According to Department officials, Mr. Busch wanted to ensure when University work and their usual external customers work was slow, the Machine Shop had the ability to provide work to their staff while also ensuring the University was receiving income to cover the Machine Shops expenses.

Xometry offers a range of solutions to help anyone interested in developing effective prototypes and scaling up to production parts. According to Xometry's website, "it makes custom parts on demand using over 70 materials and 15 processes. It has a network of over 5,000 highly vetted manufacturers to choose from." Customers of Xometry receive "pricing, lead times and design-for-manufacturing feedback in a matter of clicks, not days." The website also talks extensively about its certifications and vetting services.

The Machine Shop became certified as a Xometry manufacturer in the Summer of 2018 and began selecting jobs from the Xometry website in the Fall of 2018. As a manufacturer, the University had a login ID to access the job boards. With this login, Mr. Busch and other Machine Shop employees could review the job requests, the materials needed, the specification drawings, and the deadline for those jobs. After a job was selected, it was up to the staff assigned to the job to create a ticket in the RT system and complete the job by the deadline of the jobs. Once the job was complete and the requirements of the job were approved and vetted, the finished product was shipped to either Xometry or directly to the requesting party. After the parts were confirmed to be in receipt of the requestor, a payment was issued via check, EFT and/or Stripe account payment.

Protostudios

According to the Machine Shop's website, the Machine Shop also collaborates with Protostudios, a state-of-the-art, rapid prototyping facility located on the University campus. According to Protostudios' website, they are a not-for-profit prototyping workshop within the University of Iowa's Department of

Innovation and Economic Development. Protostudios is equipped with 3D design software and the specialized equipment needed to produce small, high-resolution devices, associated software, and integrated electronics. Additionally, they assist entrepreneurs, inventors, companies, and University faculty and staff in creating demonstrable proof-of-concept devices. All intellectual property remains with the assisted properties.

Protostudios has 3 locations on University property, including the MERGE coworking space in downtown Iowa City, a 3D printer located at the University of Iowa Hospitals and Clinics (UIHC), and a lab across from the Machine Shop in Van Allen Hall. While Protostudios had dedicated staff, they also routinely collaborate with the Machine Shop and used Machine Shop equipment and staff to help complete jobs. Protostudios is overseen by the Director of Operations, Spencer Kuhl. As the Director, Mr. Kuhl oversaw the day-to-day operations of Protostudios, including building relationships with the Machine Shop and other entities, helping coordinate services, and invoicing all Protostudios jobs.

When Protostudios was established, they planned on offering a membership program for businesses, entrepreneurs outside of the University, as well as offering University faculty and staff memberships. There was an initial membership set up fee, followed by a monthly billing amount for access to the Protostudios lab maintained in Van Allen Hall. The membership program ended around the Fall of 2018. The membership program was cancelled due to the nature of the equipment, the liability of individuals being in the Protostudios lab unsupervised, and the requirement for new and ongoing training. Protostudios did offer to grandfather in all initial members of the program moving forward while not offering any new memberships. The only member who was grandfathered in was Mr. Busch, the Machine Shop Manager.

When we asked how Protostudios operates and bills for services, Mr. Kuhl provided an example. Mr. Kuhl stated, Protostudios is approached by a 3rd party about having an idea or needing a widget created; however, the 3rd party doesn't have the time or ability to complete the widget. At that point, Protostudios reaches out to the various shops on campus that could complete the request. If a shop accepts the job, the shop bills Protostudios for the shop's time and supplies. Protostudios then bills the 3rd party for the project. Mr. Kuhl also stated he was responsible for invoicing all Protostudios billings.

Notification

On August 30, 2021, an email was sent from Mr. Kuhl of Protostudios to Mr. Busch concerning time being charged to Protostudios he did not feel was warranted. Subsequently, this email was forwarded to the Department's accounting staff to be followed up on. According to Department staff, during the review of the job being billed to Protostudios, the purchasing department became aware of Mr. Busch's ownership of D3Signtech (D3T). The purchasing department along with the Department Administrator began a conflict-of-interest review of D3T and determined Mr. Busch's ownership of D3Signtech (D3T) was in violation of the University's conflict of interest policy.

On September 13, 2021, the Department Administrator met with Mr. Kuhl about Protostudios' work with D3T. Mr. Kuhl stated Mr. Busch was a member of Protostudios and they regularly worked with him as the owner of D3T and as the Shop Manager. Additionally, Mr. Kuhl stated Mr. Busch had informed him three and a half years ago that he had all of his conflict-of-interest information filled out with the University. Department officials found there was no record of this information ever being filed with the University until August 30, 2021.

On September 17, 2021, after the Department had concluded their review of Mr. Busch's conflict of interest documentation, Department officials determined Mr. Busch was using University resources for his personal business. As a result, Mr. Busch was placed on paid administrative leave effective September 17, 2021. In addition, based on the working relationship between Mr. Busch and William Crile and discussions with University and Department staff and officials, William Crile was placed on paid administrative leave effective September 29, 2021.

As a result of the concerns identified, Department officials requested the Board of Regents' Office of Internal Audit (Internal Audit) perform a review. On September 22, 2021, Internal Audit contacted the Office of Auditor of State and the University of Iowa Police Department outlining the concerns regarding Mr. Busch's personal business and his conflict of interest. In addition, the Office of Auditor of State received information from an individual regarding jobs being completed at the Machine Shop that would not have been normal University Machine Shop jobs. The information contained pictures of parts and materials which supported their claims. On September 22, 2021, we met with an individual who provided information and went over their concerns and pictures of parts being completed in the Machine Shop which were not University jobs.

During the course of our investigation, it was identified Protostudios had continued to work with Mr. Busch after he was placed on administrative leave. Based on the on-going relationship between Mr. Busch and Protostudios and discussions with University and Department staff and officials, Mr. Kuhl was placed on paid administrative leave effective July 6, 2023.

As a result of the concerns identified by Internal Audit and University officials, we performed the procedures detailed in the Auditor of State's report for the period July 1, 2017 through September 30, 2021.

Detailed Findings

The procedures identified \$943,634.97 of diverted revenues which resulted from Mr. Busch receiving payment for Xometry jobs completed using Machine Shop equipment and staff. The diverted revenues were deposited into Mr. Busch's personal bank accounts and into a Stripe account which included D3T and Mr. Busch's name.

Additionally, the procedures identified \$6,313.39 of improper personal purchases made with Mr. Busch's University Pcard. The procedures also identified \$136.38 of unsupported disbursements related to shipping charges made on University accounts for these jobs.

Because sufficient inventory records and supporting documentation was not available from the Department for the period of the investigation, it was not possible to determine if any materials, and/or tooling purchased by the Machine Shop were used for personal use.

All findings are summarized in **Exhibit A** and a detailed explanation of each finding follows.

During the course of our fieldwork, we interviewed University officials and staff to obtain explanations for certain transactions and processes followed during and after Mr. Busch's employment with the department. The information University officials and staff is included in the following sections of the report.

A Detective with the University of Iowa Department of Public Safety requested a meeting with Mr. Busch, but was informed Mr. Busch was seeking legal representation. Mr. Busch stated he would consult his legal representation and provide an answer to the Detective. Mr. Busch did not return communication confirming to meet with the Detective with the University of Iowa Department of Public Safety. As a result, we did not attempt to interview Mr. Busch.

ADMINISTRATIVE POLICIES AND PROCEDURES

As part of our investigation, it was necessary to understand restrictions placed on staff regarding use of University resources for personal use. The Department follows established University policies and procedures for its daily administrative operations. The following are several policies and definitions used throughout the report.

- Use of Other Resources – Chapter 16 of the Operations Manual covering ethics includes a statement within section 16.4 which states, "Staff will refrain from unauthorized use of work

effort or resources for non-University business.” The section also states, “Staff shall safeguard University time and property from inappropriate use, appropriation or abuse.”

- Conflict of Interest and Commitment – The University and Department Conflict of Interest Policy require faculty and staff members to disclose their outside activities that may unduly interfere with the time necessary to fulfill their obligations to the University. The policy requires a management strategy be developed for any activity which presents a potential conflict of commitment to ensure the staff’s University obligations are not adversely affected. It also requires faculty examine the total amount of time they spend in outside activities, whether professional or non-professional, and determine whether the time devoted to these activities unduly interferes with their obligations to the University.

The University also requires staff to complete online conflict of interest and conflict of commitment statements. Staff are required to update combined conflict of interest and conflict of commitment statements at least annually. If a staff person becomes aware of or performs a service which may be a conflict of interest or commitment during the year, they are required to submit an updated online disclosure form for review and approval.

Conflict of interest is defined by Operations Manual as “a situation in which faculty, staff, or student employees have significant financial or other personal considerations that may compromise, or have the appearance of compromising, their professional judgment or integrity in teaching, conducting or reporting research, or performing other University obligations.” Conflict of commitment is defined by the University of Iowa’s Operations Manual as “a situation in which an employee engages in an outside activity that interferes, or appears to interfere, with fulfillment of the employee’s obligations to the University, even if the outside activity is valuable to the University or contributes to the employee’s professional development and competence.”

All activities require advance disclosure to and authorization from the Department Executive Officer prior to initiating the activity. However, the University policy also states, “few activities which represent, or appear to represent, a conflict are actually prohibited.”

The policy also provides a list of prohibited activities. Specifically, the policy includes, “Undertaking a business or research opportunity ordinarily conducted by the University before the University has been offered the right of first refusal. A written waiver must be obtained by the employee before undertaking a business or research opportunity.”

Once disclosed, the potential conflict is evaluated by University staff. There are three possible outcomes from the evaluation under the policy:

1. no action is required beyond disclosure,
2. disclosure and management (including alteration or elimination of the conflict), or
3. prohibition of the activity.

Once the conflict is evaluated, a management plan is developed which specifies how the conflict is to be handled. The management plan sets forth the guidelines under which the individual may participate in the activity. The plan may also prohibit the individual from participating in the activity if the University does not approve.

D3SIGNTECH

As previously stated, University officials expressed concerns in the Spring of 2019 regarding jobs completed on the RT system at the Machine Shop which listed D3T as the requestor of the jobs. Specifically, there were 3 RT jobs, 1192 – SSA Connection Plate, 1433 – Machine Time, and 1641 Finish Box that were billed by the Department to D3T (Mr. Busch) for the hours input on the RT system for each of these jobs at the external rate.

Department officials stated, the 3 jobs in question, 1192, 1433, and 1641, were billed at the external rate to D3T as these were not University jobs. Additionally, officials stated although these jobs were billed, the expectation was any jobs outside of the Machine Shop, explicitly for D3T were not to be completed at the Machine Shop, with Machine Shop employees and/or using Machine Shop machines or materials. We were able to confirm Mr. Busch paid the University \$3,550.00 for the 3 jobs identified.

During an interview with the Department Administrator regarding Mr. Busch and D3T, he stated that Mr. Busch should not have done any work for his personal business at the Machine Shop, using University resources and staff. He added that it was, “categorically not allowed”. As a University employee, Mr. Busch was to complete a Conflicts of Interest and Commitment form on an annual basis.

According to Machine Shop staff we spoke with, Mr. Busch owned D3signTech (D3T). According to D3T’s website, (www.d3signtech.com) D3T offered milling, turning, sheet metal work, design, and custom machining. The Xometry invoices listed an address which corresponds to Mr. Busch’s residence in Williamsburg, Iowa. The www.d3signtech.com website has since been taken down and can no longer be found using an internet search function.

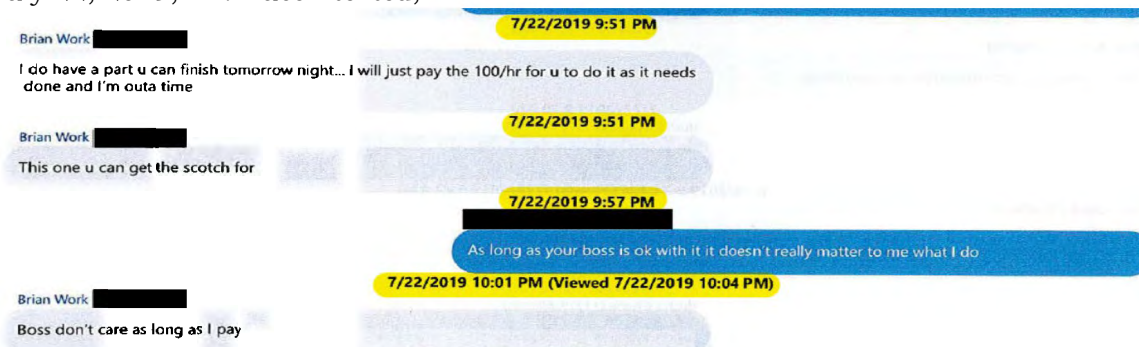
During conversations with various employees of the Machine Shop and employees of Mr. Busch’s personal business, we were told on multiple occasions that while he had machines and tools at his personal shop which would allow him to complete some work, his personal shop was not a complete shop and did not have the same capabilities of the Machine Shop. Additionally, the services provided and rendered by Mr. Busch’s personal business were the same as the Machine Shop.

Xometry’s website identified D3signTech (D3T) as a certified manufacturer for Xometry. When we searched the Xometry Marketplace section of the website for the University of Iowa, D3T’s information populated as a search result. A copy of the search results is included in **Appendix 1**. As shown in the **Appendix**, D3signTech is located in Williamsburg, Iowa. No other information was listed for the University of Iowa. A current search of the website does not return any information related to the University of Iowa.

A search of the Iowa Secretary of State website returned no results for “D3signTech.” A search for D3T returned D3T, LLC. According to the information on the Secretary of State website, D3T, LLC. was registered on December 16, 2021. According to the Certificate of Organization, D3T was organized as a Limited Liability Corporation. The Articles list Brian Busch as the manager. No other individuals were listed as officials or managers of the LLC. The Secretary of State website also included a “Declaration of Dissolution” for D3T dated August 16, 2023. According to the letter, D3T was dissolved for failure to deliver the 2023 Biennial Report as required by Iowa Code Section 489.209.

As part of the investigation, we were provided text messages from Mr. Busch to Machine Shop employees. During our review of the text messages, there were instances of the former employee asking about if the Department was aware of the jobs they were requested to work on. Copies of the text messages are included in **Appendix 2**. Examples of the text messages are included below:

- July 22, 2019, Mr. Busch texted,



According to Mr. Busch's boss, they were not aware Mr. Busch was performing work for his personal business at the Machine Shop and that would "categorically not been allowed".

- June 26, 2020, Mr. Busch texted,

Brian Work [REDACTED] 6/26/2020 9:49 AM (Viewed 6/26/2020 9:50 AM)

Also haas leaving soon. Really wish u and [REDACTED] wouldn't have told everyone about me owning it. Especially since my supervisor approved it. U guys just made having nice things harder. Really just need to talk tho ha out between us in the shop. Everyone would be better off if we just stayed united. What you guys think u know u may not. Ur a good guy just sorry u guys feel like it's necessary to do those things but I get it

Mr. Busch sent a series of follow up text messages on the same date,

Brian Work [REDACTED] 6/26/2020 9:59 AM (Viewed 6/26/2020 10:00 AM)

Basically if U and [REDACTED] want me out just say so or If something is bothering u. I'm not perfect and if u want me to do things better or differently let's have that discussion. [REDACTED] and [REDACTED] don't really need to know how the sausage is made..

Brian Work [REDACTED] 6/26/2020 10:04 AM

It really sucks walking in and knowing people are talking shit especially when I give those people basically whatever they want

Brian Work [REDACTED] 6/26/2020 11:04 AM (Viewed 6/26/2020 11:17 AM)

Are u here?

[REDACTED] 6/26/2020 12:21 PM

How about we let the smack talking stay in the past and if problems arise again I'll say something instead of bottling it up

Brian Work [REDACTED] 6/26/2020 12:22 PM (Viewed 6/26/2020 12:33 PM)

That's all fine with me man I am as guilty as anybody and really just want to get along with people but sometimes trip on my own dick

The Haas, Mr. Busch is referring to is a personal machine of Mr. Busch's which was placed in the Machine Shop during the COVID pandemic without the University or Department officials' knowledge. Once it was known the machine was for Mr. Busch's personal business and was not insured by the University, it was moved out of the Machine Shop.

- November 16, 2020, Mr. Busch texted,

Brian Work [REDACTED] 11/16/2020 5:10 PM (Viewed 11/16/2020 5:11 PM)

If you drop the stipulation about Proto studios work it'll probably be easier to get work that doesn't suck

[REDACTED] 11/16/2020 5:36 PM

Speaking of protostudio did Spencer say something about wanting a couple more inserts made? He texted me this afternoon asking but didn't go much into detail

Brian Work [REDACTED] 11/16/2020 5:37 PM

He did say something today about more molds hopefully that comes to fruition so I guess we'll see but as you know I got to have work lined up because that's my job

Brian Work [REDACTED] 11/16/2020 5:44 PM (Viewed 11/16/2020 5:45 PM)

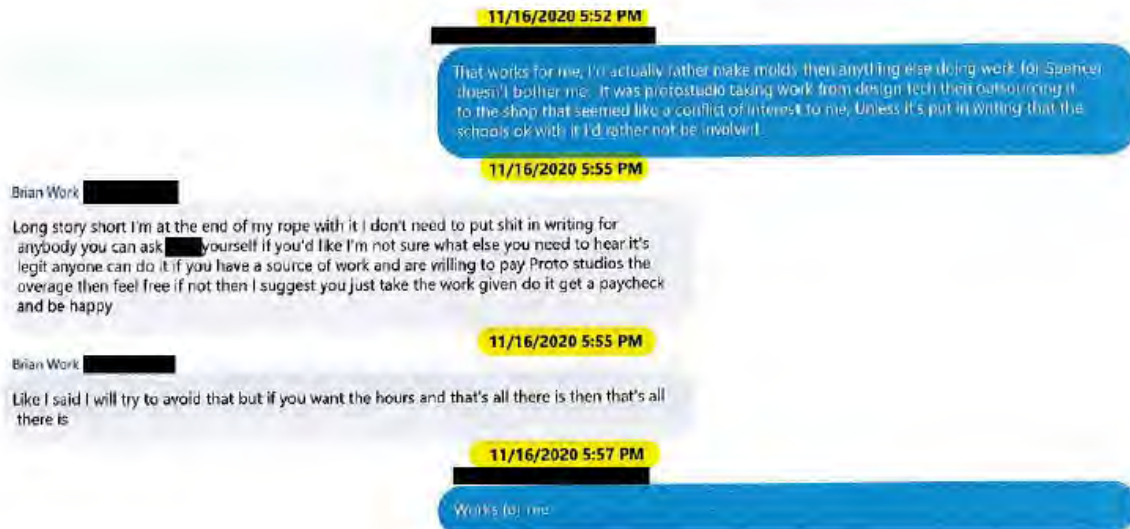
So the question remains then will you still just do the work or does it matter that much

Brian Work [REDACTED] 11/16/2020 5:45 PM

Obviously the priority is university work then universities amatory work then Proto studios work

Brian Work [REDACTED] 11/16/2020 5:47 PM

In other words Proto studios work would be the last resort if nothing else came along



During conversations with the Department Administrator, he stated they were not aware of Mr. Busch's personal business or his use of University staff and resources to complete work for his business. Furthermore, the Department Administrator stated, had they been aware of it, the activity would not have been allowed.

As part of the University's internal review, Department officials determined there was no record of Mr. Busch disclosing his ownership of D3SignTech (D3T) until August 30, 2021. University officials also determined Mr. Busch did not submit any conflict of interest or commitment forms until August 30, 2021.

Because D3signTech (D3T) performed work which was ordinarily conducted by the University and Mr. Busch requested and was approved by the Department Administrator to use Xometry to supplement the machine Shops work when things were slow, Mr. Busch should have disclosed D3T was a potential conflict of interest at the time he created and accepted jobs from Xometry.

DIVERTED REVENUE – D3SIGNTECH (D3T)

As previously stated, the Machine Shop became certified as a Xometry manufacturer in the Summer of 2018 and the Machine Shop started accepting jobs from the Xometry website in the Fall of 2018. As a certified manufacturer, Mr. Busch and other Machine Shop employees could review the job requests, the materials needed, the specification drawings, and the deadline for those jobs. After reviewing the available information, Mr. Busch or an employee could accept a job from the Xometry site.

However, prior to beginning a job, the Machine Shop employs were expected to create a RT system job entry for each job to track the time the Machine Shop's staff was incurring for these jobs. Once the job was completed, it would be shipped to Xometry or the requesting entity. Once the job was approved by Xometry or the requesting entity, Xometry should have remitted payment to the University.

Also as previously stated, when we used the Xometry website search function to search for the "University of Iowa," the site returned D3signTech as a match for the University of Iowa. A copy of the search result is included in **Appendix 1**. When we asked a Xometry representatives why D3signTech would show up as a result for the University of Iowa, they could not provide an explanation. A subsequent search done at the completion of investigation turned up no search results for the "University of Iowa."

As a result of the initial search, we requested and obtained all purchase orders for jobs accepted by D3T and the Machine Shop. The information provided by Xometry included the job accepted, shipped dates, specification drawings, payment issuance date, and payment method for the period September 13, 2018 through September 30, 2021.

During our review of purchase orders received from Xometry, we identified 636 jobs totaling \$1,026,129.09 completed by D3T and the Machine Shop during the period of our investigation. Using the purchase orders, jobs accepted, and shipped dates received from Xometry, we created a schedule of all Xometry purchase orders for the period September 2018 through September 2021.

Table 1 summarizes the number of Xometry Jobs completed and the amounts to be paid to the University and D3T.

Table 1		
Account	Number of Jobs	Amount to be Paid by Xometry
Physics Machine Shop	49	\$ 74,639.21
D3T	587	951,489.88
Total	636	\$ 1,026,129.09

As illustrated by the **Table**, we identified 49 of the 636 jobs were completed by the Machine Shop and the amount paid by Xometry was deposited into the University's bank account. The remaining 587 jobs were completed by D3T. During our review, we identified instances where the amount to be paid per the Xometry purchase orders were reduced by credits and or advances. **Table 2** shows where the \$943,634.97 paid by Xometry to D3T was deposited.

Table 2	
Deposited to	Amount
Personal Bank Account	\$ 405,871.53
Stripe	334,960.51
Not provided by Xometry	202,802.93
Total	\$ 943,634.97

As shown in the **Table**, Xometry did not provide deposit information for \$202,802.93 paid to D3T. During our review of payment records provided by Xometry, we identified 13 instances totaling \$13,315.65 in payments from Xometry to D3T which could not be tied to purchase orders we were provided. We did note that three of the 13, totaling \$1,983.49, were duplicate payments on purchase orders completed by D3T that Xometry had already paid out.

As previously stated, on September 22, 2021, we met with a Machine Shop employee who provided pictures of parts in various forms of completion as well as pictures of materials in the Machine Shop which would not have been needed for the Machine Shop's normal business. On December 15, 2021, we interviewed a former Machine Shop employee. During the interview, the individual stated they had text messages between themselves and Mr. Busch which included instructions, job board screenshots, and pictures of parts in various stages of completion. The former Machine Shop employee provided us a copy of all their text messages with Mr. Busch.

To identify Xometry jobs completed for the University and D3T at the Machine Shop using University employees and resources, we performed the following procedures.

1. Using the Xometry purchase orders, we created a schedule of all Xometry purchase orders for the period of September 2018 through September 2021. The accept date and shipped date provided by Xometry provide the time frame in which a job would have needed to be completed.

2. Using the information compiled in step 1, we met with a current and former Machine Shop employee and walked through each job pulling up the job specification drawings, provided by Xometry, to inquire if they remember the job, if they worked on the job, and if they recalled the job, an estimate of hours it would have taken to complete the job. We asked staff to identify jobs done for the University and those done for D3t or other entities.

As previously stated, we had been provided pictures and text messages related to jobs done at the Machine Shop for D3T. During these interviews, we showed the pictures and text messages to staff to help determine if they recalled the job.

3. Using the accept and shipped dates provided by Xometry we compared the description and timing to the descriptions on the RT system and/or in the RT job name. We attempted to tie out Xometry jobs completed to specific RT job numbers on the SUI system. The details of the RT Job, the RT job number and the number of RT hours were included. Below are examples of what we identified based on this procedure.
 - For some jobs on the RT system, the name tied out to the exact Xometry Job #. For example, RT job 1891 described as “Xom Part J001BFF9” is the same as Xometry J001BFF9
 - For some jobs on the RT system, the names tied out to the part id of the Xometry Job Purchase Order. For example, RT Job 1345 described as “Xometry job 00CD71D,” the “00CD71D” is the part ID for Xometry Job J001210F.
 - For some jobs on the RT system, their names identify the type of part that was built. For example, RT Job 1360 described as “Xom Heat Sink” ties to the name of the part on the Xometry Job Purchase Order, J0012A5C.
 - For other Xometry Jobs, we tied out to Jobs on the RT system based on conversations with staff and identifying certain jobs that were not identifiable as Xometry jobs on the RT system, but there were no other jobs on the RT system listed for the University. Based on the dates of the RT entries and dates of when the jobs were completed these were able to be linked together.
4. For Xometry jobs which had accept dates and ship dates and a corresponding date range on the RT system for which no University job or a job for another entity was identified as being competed, we inquired of University officials as to how the time was billed.

Based on the procedures performed, we identified 67 D3T Xometry jobs which were completed at the Machine Shop using University employees and resources. The 67 jobs, totaling \$173,097.60, are included on **Exhibit B**. The following are examples of the jobs which used Machine Shop equipment and staff for which D3T received the payment.

- Xometry job J0010BE9 was accepted on November 12, 2018 and shipped to the client on December 14, 2018. Xometry remitted a payment of \$7,500.00 for completing the job which was deposited into Mr. Busch’s personal bank account on January 14, 2019. We were able to determine this job was completed at the Machine Shop by comparing the job specification drawings obtained from Xometry to pictures taken of the part in various stages of production in the Machine Shop. In addition, we were able to reconcile the job to an RT job entry, number 1093 which had 16.0 hours of work charged by Mr. Busch and two other Machine Shop employees. The RT job was created on November 26, 2018 with time entered on the job on November 29, November 30, December 6, and December 12, 2018. A copy of the purchase order, the job specification drawings, and pictures taken of the part in the Machine Shop are included in **Appendix 3**.
- Xometry job J0010F4C was accepted on November 27, 2018 and shipped to the client on December 20, 2018. Xometry remitted a payment of \$2,850.00 which was deposited into Mr. Busch’s personal bank account on January 14, 2019.

We were able to determine this job was completed at the Machine Shop by comparing the job specification drawings obtained from Xometry to a picture taken of the part on Machine Shop equipment. In addition, we noted the specification drawings were saved on a University computer seized from the Machine Shop. In addition, in a text message sent from Mr. Busch at 5:40 pm on December 17, 2018 to an employee, Mr. Busch stated “I have to absolutely ship that part on Wednesday”, which was December 19, 2018. The employee responded with, “I was planning on it actually if it was done by midday on Wednesday would that be ok?”.

We were also able to reconcile this job to two RT job entries, 1190 and 1192, respectively which had 9.0 hours of worked charged by Mr. Busch and the employee receiving the text messages. RT job number 1190 was created on December 17, 2018 with time entered on the job on December 17, 2018, the time entered was adjusted off and the job was deleted from the RT system on December 17, 2018. RT job number 1192 was created on December 17, 2018 with time entered on the job on December 17 and December 21, 2018. A copy of the purchase order, the job specification drawings, the picture of the part on Machine Shop equipment, the blueprint drawings found on a University computer, and the text messages exchanged between Mr. Busch and an employee are included in **Appendix 4**.

- Xometry job J0013024 was accepted on March 9, 2019 and shipped to the client on March 14, 2019. Xometry remitted a payment of \$1,000.00 for completing the job which was deposited into Mr. Busch’s personal bank account on April 15, 2019.

We were able to determine this job was completed at the Machine Shop by comparing the job specification drawings obtained from Xometry to a series of text messages from Mr. Busch to an employee. In those text messages, Mr. Busch sent pictures of the part from the Xometry website to the employee. In addition, in the texts sent by Mr. Busch, he stated, “I got a part for you on Sunday but you’re gonna have to bust your ass ...”. The employee asked Mr. Busch when the part needed to be done by and Mr. Busch responded with “14th”. After the employee confirmed they understood the task and provided a plan of hours they were going to work, Mr. Busch responded with “I sent u email with files stp and pdf...get we done. Don’t make a ticket or log hours...cash money *money bag emoji* holmes.” During our review of the RT system, we identified unbilled and unallocated time during the accepted and shipped dates. However, the job specification drawings and text messages between Mr. Busch and an employee, show that University equipment was used to complete this job. A copy of the purchase order, the job specification drawings, and the text messages exchanged between Mr. Busch and an employee are included in **Appendix 5**.

- Xometry job J001351F was accepted on March 22, 2019 and shipped to the client on April 10, 2019. Xometry remitted a payment of \$8,250.00 for completing the job, which was deposited into Mr. Busch’s personal bank account on June 14, 2019.

We were able to determine this job was completed at the Machine Shop by comparing the job specification drawing obtained from Xometry to a series of pictures taken of the part on Machine Shop equipment. On March 31, 2019, a text was sent from an employee to Mr. Busch stating, “It just got done.” Mr. Busch asked for a picture, the employee responded with a picture of the completed part that matched the job specification drawing as well as the series of pictures of the part on Machine Shop equipment. During our review of the RT system, we identified unbilled and unallocated time during the accepted and shipped dates. However, the job specification drawings, pictures of the part on Machine Shop equipment, and text messages between Mr. Busch and an employee, show that University equipment was used to complete this job. A copy of the purchase order, the job specification drawing, pictures of the part on Machine Shop equipment, and the text messages exchanged between Mr. Busch and an employee are included in **Appendix 6**.

- Xometry job J0016DED was accepted on August 3, 2019 and shipped to the client on August 12, 2019. Xometry remitted a payment of \$750.00 for completing the job, which was deposited into Mr. Busch’s personal bank account on September 16, 2019.

We were able to determine this job was completed at the Machine Shop by comparing the job specification drawing obtained from Xometry to a text message sent from an employee to

Mr. Busch of the completed part on August 9, 2019. Mr. Busch responded with “need close up of inspection it self”, the employee provided a picture as requested. We also noted the specification drawing was saved on a University computer seized from the Machine Shop. During our review of the RT system, we identified unbilled and unallocated time during the accepted and shipped dates. However, the job specification drawings, the blueprint drawing found on a University computer, and text messages between Mr. Busch and an employee, show that University equipment was used to complete this job. A copy of the purchase order, the job specification drawing, the blueprint drawing found on a University computer, and the text messages exchanged between Mr. Busch and an employee are included in **Appendix 7**.

- Xometry job J0021B47 was accepted on June 1, 2020 and shipped to the client on June 23, 2020. Xometry remitted a payment of \$7,000.00 for completing the job, which was deposited into Mr. Busch’s personal bank account on August 14, 2020.

We were able to determine this by comparing the job specification drawings obtained from Xometry to a text message sent from an employee to Mr. Busch of the job specification drawing. During our review of the RT system, we identified unbilled and unallocated time during the accepted and shipped dates. However, the job specification drawings and text messages between Mr. Busch and an employee, show that University equipment was used to complete this job. A copy of the purchase order, the job specification drawings, and the text message exchange between Mr. Busch and an employee are included in **Appendix 8**.

Of the 67 D3T jobs completed at the Machine Shop, we identified 45 jobs, totaling \$121,326.45, were deposited into Mr. Busch’s personal bank account. In addition, we identified 12 jobs, totaling \$23,650.00, were deposited to a Stripe account held by Mr. Busch. The remaining 10 D3T jobs, totaling \$28,121.15, were completed, and paid per Xometry’s purchase orders; however, the payment issuance date and payment methods for these jobs were not provided to us as part of our request from Xometry. As a result, we cannot determine if the funds were deposited into a personal account or Stripe.

Because Mr. Busch did not disclose or file a conflict of interest and commitment form with the University related to his D3T business, and Mr. Busch used Machine Shop equipment and staff for his personal business and gain, the \$173,097.60 included in **Exhibit B**, is included in **Exhibit A** as improper diverted revenue from the University.

As previously stated, University officials expressed concerns in the Spring of 2019 regarding jobs completed on the RT system by the Machine Shop which had D3T as the requestor of the jobs. Specifically, there were 3 RT jobs: 1192 SSA Connection Plate, 1433 Machine Time D3signTech.com, and 1641 Finish Box (D3signTech). Based on University officials, these jobs were identified as D3T Xometry jobs and are included in **Exhibit B**.

It was also noted that RT job 1641 Finish Box (D3signTech) was also a Protostudios job that was billed to Mr. Busch by Protostudios and will be discussed in more detail below. The Department billed Mr. Busch for each of these jobs based on the hours input on the RT system at the external rate. **Table 3** summarizes the total billings issued to Mr. Busch from the Department for RT jobs identified as D3T jobs.

Table 3

Invoice Date	Invoice Number	Description	Unit Price	Amount
04/29/19	1192	16 Hours – SSA Connection Plate	\$100.00	\$1,600.00
05/28/19	1433	2 Hours – Machine Time 4/3/19; 6 Hours – Machine Time 4/6/19	100.00	800.00
08/05/19	1641	11.5 Hours – Finish Box Put Holes in sides of box. Tap Holes 8-32 through bottom of box. Blend the radi to Walls Machine Radii edges	100.00	1,150.00
Total				<u>\$3,550.00</u>

As illustrated by the **Table**, Mr. Busch was billed a total of \$3,550.00 by the University. During our review, we identified two payments made from Mr. Busch's personal bank accounts to the University of Iowa totaling \$3,550.00. The first payment was made on June 12, 2019, with check number 1156 for \$2,400.00 and was deposited in the University's bank account on the same day. The second payment was made on September 18, 2019, with check number 1830 for \$1,150.00 and was deposited in the University's bank account on the same day. As a result, the two payments totaling \$3,550.00 are included in **Exhibit A** as repayments.

DIVERTED REVENUE – PROTOSTUDIOS

As previously stated, Protostudios offered a membership program for businesses, entrepreneurs outside of the University, as well as offering University faculty and staff memberships. The membership program ended around the Fall of 2018. Protostudios did offer to grandfather in all initial members of the program. However, the only member who was grandfathered in was Mr. Busch, the Machine Shop Manager. According to available documentation, Mr. Busch paid \$225.00 for a membership for the period December 2018 through February 2019 and \$225.00 for a membership for the period June 2019 through August 2019.

The procedures performed during the investigation also identified 23 D3T jobs totaling \$71,673.87 which were recorded on the RT system as jobs for Protostudios. The 23 jobs are listed in **Exhibit C**. We determined the 23 jobs were for D3T using the same procedures discussed above. Based on the procedures performed we determined:

- The 23 jobs were recorded as 19 different projects on the RT system. Two of the 19 projects recorded on the RT system included multiple Xometry jobs.
- The 19 jobs recorded on the RT system included "Protostudios" as a description recorded in the RT system.
- Of the 19 jobs recorded on the RT system, 10 of the jobs were created by Mr. Busch, and nine of the jobs were created by Machine Shop staff.
- Of the 19 jobs, 16 were billed to Protostudios by the Department for the hours listed on the RT system. These jobs totaled 325.50 hours totaling \$25,333.00 billed.
- Of the 23 projects, only seven were done during the period Mr. Busch was a paid member of Protostudios. The remaining jobs were all done when Mr. Busch was not a member of Protostudios.
- Job RT 1662 and RT 1674 were billed to Protostudios at a fixed rate amount and not based on the hours charged on the RT system.
- Job RT 1840 had the time recorded on the RT system which was later adjusted to show zero hours charged. This resulted in the Department not billing Protostudios. There was no information recorded in the RT system explain why the hours were adjusted to Zero.
- We also identified one Xometry job was split between two RT job numbers. RT Job number 1639 included a description "Protostudios" and is include in **Exhibit C**. Job 1641 was shown as a job for D3T and was questions by the Department and is included in **Exhibit B** as a diverted revenue and in **Table 2** above as a repayment by Mr. Busch.

The 23 jobs listed in the **Exhibit C** were accepted from the Xometry job board by Mr. Busch/D3T. Once accepted a Protostudios ticket was created by Mr. Busch or a Machine Shop employee on the RT system. A Machines Shop employee completed the job and entered time on the RT system. The Department billed Protostudios for the work completed for D3T using University staff and resources. When we asked Mr. Kuhl about these jobs, he stated, "I don't know. You have asked me that already. I have no idea."

According to Mr. Kuhl's Supervisor at Protostudios, Mr. Busch would not be allowed to create RT jobs on behalf of Protostudios Furthermore, Mr. Busch would not be able to create a job for Protostudios and "farm it out" on their behalf.

As previously stated, we were provided copies of text messages, screenshots of emails, and pictures. During our review of the text messages exchanged between Mr. Busch and a former employee, we identified instances where Mr. Busch instructed the former employee to create a ticket with Protostudios not D3T as the requestor. Those instances identified include the following:

- July 20, 2019 – Text from Mr. Busch to a former employee, “I’ll make a job ticket and put the files in it for u. Will bill this through protostudios...throw Spencer a bone”. Based on procedures performed, we determined the text was referencing Xometry job J001663B, a D3T job, completed at the Machine Shop which was shipped on July 30, 2019, and Mr. Busch received \$1,102.63 for completing the job. A copy of the purchase order, the job specification drawings, the text message exchange between Mr. Busch and an employee, and the Protostudios invoice issued to Mr. Busch are included in **Appendix 9**.
- October 18, 2019 – Text from a former employee to Mr. Busch, “Is there a ticket made up for these?” Mr. Busch responds with, “Sorry no just make on call protostudios ball parts.” Based on procedures performed, we determined the text was referencing Xometry job J00196AB, a D3T job, completed at the Machine Shop which was shipped on October 22, 2019, and Mr. Busch received \$3,500.00 for completing the job. A copy of the purchase order, a picture of the completed parts in the Machine Shop, the text message exchange between Mr. Busch and an employee, and the Protostudios invoice issued to Mr. Busch are included in **Appendix 10**.

During our review of the pictures, such as screenshots of emails and of the RT system, provided by a Machine Shop employee, we identified jobs recorded in the RT system which were identified as Protostudios jobs. However, these were actually for Xometry. Based on discussions with Mr. Kuhl, he stated, “Protostudios didn’t have anything to do with Xometry, because the bar (to get involved) was way too high.” Those instances identified are detailed below:

- We identified Xometry job J0019434 was a D3T job which was completed at the Machine Shop, for which Mr. Busch received \$1,875.00 for completing the job. We were provided a screenshot of a forwarded email from Mr. Busch to the Machine Shop employees. The original email that was forwarded was from Mr. Kuhl and stated, “One of our clients has a machining request. It’s a tight schedule, delivery on Monday.” The email also included a .step file and a pdf drawing of parts. We received a screenshot of the PDF of the part specification drawing and it agrees exactly to the job specification drawing for the Xometry job we received from Xometry. Additionally, on October 11, 2019, Mr. Busch sent a text to a former employee, “Did the job for hood have a shop ticket? Just need to be sure if the machine shop machines are used we charge it out. For all I care I can charge it to instructional time ...” A copy of the purchase order, the job specification drawings, a picture of the forwarded email including the attachments, the text message exchange between Mr. Busch and an employee, and the Protostudios invoice issued to Mr. Busch are included in **Appendix 11**.
- We identified Xometry job J001A88B was a D3T job which was completed at the Machine Shop for which Mr. Busch received \$9,750.00 for completing the job. The screenshots of the RT system that were provided showed Mr. Kuhl was the requestor of RT job 1848 Large Monolithic Structure. In addition, there is a screenshot of Mr. Busch changing the name of the RT job to Large Monolithic Structure Max Hours 100 on December 20, 2019. We also received pictures of the part in process on Machine Shop equipment and the part agrees to the job specification drawings provided by Xometry. The part is discussed in the text messages exchanged between Mr. Busch and a former employee.

The former employee sends a text discussing the size of the part and how to make sure its secured on the machine. Mr. Busch sent a text to the former employee on December 14, 2019 stating, “Charge fixture time to shop time. Btw basically were at max project charge time at this point so its shop time, training time from here on.” Mr. Busch sends another text to the former employee on December 18, 2019 stating, “Also I was wrong on number more time can be charged to project. Ur time last weekend can be charged to it. I though we were already over 100.”.

We identified from the RT system the former employee charged exactly 100 hours to the job, but also had 25.0 hours of unbilled time for that pay period. A copy of the purchase order, the job specification drawing, pictures of the RT system for the job, pictures of the part in process on a Machine Shop machine, the text message conversation between Mr. Busch and an employee, and the Protostudios invoice issued to Mr. Busch are included in **Appendix 12**.

As shown above, Mr. Busch instructed Machine Shop employees to create tickets for Protostudios. We also identified an instance where Mr. Busch was the RT job requestor for a job that was listed as a Protostudios job; however, the job was for Mr. Busch's personal business.

Specifically, we identified Xometry job J001699C as a D3T job which was completed at the Machine Shop resulting in Mr. Busch receiving \$2,675.00 for completing the job. The description on the Xometry purchase order is "SingleBoard_HeatSink" and was determined to be RT job 1646 Heat Sink, the requestor on the job was Mr. Busch. The screenshots of the RT system for job 1646 showed the subject was "xom heat sink", as well as "Bill to Protostudios." In addition, a former employee texted Mr. Busch and asked "... what was the next job?". Mr. Busch responds with "Heat Sinks *redacted* is going to wj." A copy of the purchase order, the pictures of the RT system, the text message exchange between Mr. Busch and an employee, and the Protostudios invoice issued to Mr. Busch are included in **Appendix 13**.

Based on discussions with Protostudios and Department officials and staff, as well as our review of the text message conversations between Mr. Busch and a former employee, the Protostudios RT jobs, listed in **Exhibit C**, were jobs for D3T Xometry and not Protostudios jobs.

As illustrated by **Exhibit C**, we identified Mr. Busch was billed by Protostudios for 15 of the 23 jobs which were identified as Protostudios jobs in the RT system. The 15 jobs billed to Mr. Busch totaled \$21,212.98. Of the \$21,212.98 we determined,

- \$17,494.50 was billed for the actual RT jobs.
- \$2,444.98 was billed for the 15% Protostudios service fee.
- \$1,048.50 was billed for projects not related to a Xometry job. Specifically invoice numbers 1255 and 1401.
- \$225.00 was billed for membership dues for the period December 13, 2019 through March 13, 2019 on invoice number 1303. This invoice was dated June 13, 2019.

The **Exhibit** does not include six invoices totaling \$1,871.92 billed to Mr. Busch because we were unable to match these jobs to a D3T Xometry jobs.

As previously stated, we obtained Mr. Busch's personal and business bank statements. We scheduled all payments issued from Mr. Busch's bank accounts to Protostudios. **Exhibit D** lists the payments issued from Mr. Busch's personal and business bank accounts to Protostudios. As illustrated by the **Exhibit**, we identified 13 payments totaling \$23,678.70 issued to Protostudios which include invoice numbers, membership, and labor listed in the memo lines of the payments.

Based on the invoices, \$17,494.50 of the \$23,678.70 paid by Mr. Busch, were for Xometry jobs recorded on the RT system as Protostudios but were for D3T, Mr. Busch's company. The \$17,494.50 is included on **Exhibit A** as repayments.

DIVERTED REVENUE – REMAINING XOMETRY

As previously stated Xometry provided us purchase orders, accepted and shipped dates, and payment information for all jobs accepted by D3T and the Machine Shop for the period September 13, 2018, through September 30, 2021. As shown in **Table 1**, there was a total of 636 jobs of which 587 were related to D3T. Of the 587 jobs, 67 were tied directly to D3T and 23 were recorded as Protostudios jobs on the RT system but were related to D3T. The remaining 520 jobs could not be directly tied to D3T or

Protostudios based on the information recorded in the RT system or other available information. Based on the information received from Xometry, the last D3T job was started on September 30, 2021, which was after Mr. Busch and another employee were placed on paid leave by the University. Because we cannot determine if the jobs were done at the Machine Shop, this job was not included in our review. The remaining 519 D3T Xometry jobs are listed on **Exhibit E**.

Of the 519 jobs listed on **Exhibit E** we determined

- 191 jobs totaling \$284,545.08, were deposited in Mr. Busch's personal bank account.
- 228 jobs totaling \$311,310.51, were uploaded to a Stripe account held by Mr. Busch.
- 100 jobs totaling \$174,681.78, were completed, and paid per Xometry's records. However, the payment issuance date and payment methods of these jobs were not provided by Xometry. As a result, we cannot determine where the funds were deposited. However, the purchase orders listed Brian Busch or D3T.

Additionally, we identified eight deposits made to Mr. Busch's personal bank account totaling \$40,027.15 that were not included in the payment records we provided by Xometry. These eight deposits were made from August 2018 through December 2018. We were unable to determine what jobs these deposits were for as Xometry did not provide records for these.

Based on a review of the text messages between a former employee and Mr. Busch, we identified numerous instances where Mr. Busch instructed the former employee on how to charge time for certain jobs and not mark all hours worked on others. Except as noted below, copies of selected text messages showing these conversations are included in **Appendix 15**. Examples of these text message exchanges are listed below:

- January 27, 2019, Mr. Busch texted an employee "Ok for today put in 3 hours to project and the rest to Protostudios training u will have to maya ticket fro that." The employee responded to Mr. Busch, "Ok sounds good. For the ticket going to Protostudios do I put my name as the requestor?" Mr. Busch responded with "Spencer Kuhl".
- March 24, 2019, Mr. Busch texted an employee "Please use RW-12 on those parts...hoping inside can get done today so we stay on track...btw don't log these hours..."
- March 25, 2019, Mr. Busch texted an employee "Go ahead and log ur time yesterday as training. I had to throw those back as there is no way we could deliver and they were suggesting it so I had no legs to stand on. Too short of a pull this time." The former employee responded to Mr. Busch, "OK. Should I charge time to a ticket for today?" Mr. Busch responded with "Yes it's a u xom job."
- April 14, 2019, an employee texted Mr. Busch "What should I put time on today?" Mr. Busch responded to the employee, "What did u work on? If it was some cleaning machine etc. charge that to shop time... if it was playing with water jet training. Other than that don't charge it. I will take care of u." The employee responded to Mr. Busch, "Ok I'll put hrs on shop time then that'll leave 2 not put on anything. I just screwed up that aluminum part willy had jetted out so we just cut out another one." Mr. Busch responded to the former employee, "Ok it happens to us all I still got u. How far did u get on it cuz it has a due date."
- May 9, 2019, Mr. Busch texted an employee "Bottom line any hours you want paid for need to be billed ... You basically have two options one look at the parts that *redacted* put in the queue or to get on ours on the tree account and pick something." The employee responded to Mr. Busch "is the tree account the xom stuff?" Mr. Busch responded "It sure is *redacted* can help you get logged on. Sorry man we're just really scraping the bottom of the barrel at this point." The employee responded to Mr. Busch "It's ok I'll see if *redacted* has anything and if he doses then I'll look on xom. Doesn't I mean."
- July 23, 2019, Mr. Busch texted an employee "That box u can add hours to that work order...not sure how it goes together exactly." The employee responded to Mr. Busch "Oh ok

I thought those were for Spencer along with that oval thing do last night I made a ticket up for it and today he didn't have any idea what they were. The oval thing is gone today though so someone must have grabbed it is there a way to credit his account for four hours?" Mr. Busch responded to the employee "It doesn't matter that much cuz I'll get the bill for both so nbd...I just didn't have the time to run the box through spencer." The employee responded to Mr. Busch "Ok. Maybe you could let him know so he's not confused." Mr. Busch responded to the employee "He just gets to Bill me for doing nothing really but I'll let h know."

- October 3, 2019, Mr. Busch texted an employee "I put a job in ur queue please limit charged hours to 12. I can't imagine u would have more actual *redacted* time in them..machine run time I'm sure will." The employee responded to Mr. Busch, "If I were to work 18 hours this weekend what should I put the other 6 towards?" Mr. Busch responded with "Shop time just do some cleaning and organizing while things are running. Point I am trying to make is I don't super care as long as things get done and we can charge 80 percent of ur time weekly." A copy of the purchase order, the job specification drawings, the blueprint drawing found on a university computer, the text message exchange between Mr. Busch and an employee, and the Protostudios invoice issued to Mr. Busch are included in **Appendix 14**.
- October 25, 2019, Mr. Busch texted an employee "How many hours u need this weekend? Basically this job is 10 charged *redacted* hours and then u can do some 5s stuff if you want." The employee responded to Mr. Busch "I was thinking 15, who should I charge the ticket to?" Mr. Busch responded to the employee "Protostudios make on and make Spencer Kuhl the requestor. Actually marry comes to more like 12. But 3 hours to shop time etc is fine."
- May 12, 2020, Mr. Busch texted an employee "No need to make a new ticket for clean up just charge to whatever project it is u are working on at the time."
- June 1, 2020, Mr. Busch texted an employee "I had someone come to me with some titanium parts to make I would like to run them through Proto studios and have you make them are you interested."
- October 14, 2020, Mr. Busch texted an employee "Hey I took a few simple Xom jobs to keep work going for u. Lmk what u think...really cake stuff btw." The employee responded to Mr. Busch "If you really want to know what I think here it is, Xom stuff as a whole is a pain if everyone in the shop had to do it then it would be allot more bearable but if you look at the work that has been through the shop in the last year and a half probably 50% of the stuff I've done has been xom which requires severe efficiency's while the salary people have done 0 xom and sat around milking out everything they could so they "don't run out of work" while the fact is they can do xom stuff to they just start crying if they have to do anything they don't want to, if you want to take advantage of the fact I've proven myself to be the most capable so I have to do xom so the full time guys don't get sand in there vaginas it's whatever just know I'm there 15 hrs a week regardless if the job is done or not." Mr. Busch responded to the employee "Dude I'm doing xom work right now...that's not an accurate statement. If you don't want to work just say so." The employee responded to Mr. Busch "Is it under your account or the schools?"

Mr. Busch responded to the employee "The schools Bro...we've discussed this. U should probably look at the jobs before freaking out...cuz they are easy. *redacted* and I have 0 problem doing Xometry work when it's needed. Ur first statement was not accurate. I don't control work flow. If u can find another pt job that pay 24/hr and let's u work when u want...go for it. I don't know what u want me to do. Until we start another project it's either xometry work or moving stuff or shop improvement. But we can only spend so much time on shop improvement as we don't have budget for it." ... "*redacted* doesn't care what he does. He just does it."

According to current and former staff that we spoke with, they stated on numerous occasions they were told by Mr. Busch to charge a maximum number of hours on a job and anything over needed to be charged to shop or training time on the RT system. For example. A former employee stated, they were told by Mr. Busch, "anything over 30 hours, I'll lose money on."

During our review of the text messages between Mr. Busch and a former employee, we also identified numerous instances of Mr. Busch trying to entice the employee to perform side work for him (Mr. Busch). Copies of selected text messages showing these conversations are included in **Appendix 16**. Examples of these text messages are included below:

- February 5, 2019, Mr. Busch texted an employee “Do you have any room in your schedule for some extra time this week I got a cash bonus situation for you”.
- March 24, 2019, Mr. Busch texted an employee “Btw if u want to work long enough to get them done if possible I will make it more than worth ur time... like triple+ what u normally get. I just don’t have time.”
- July 22, 2019, Mr. Busch texted an employee “I do have a part u can finish tomorrow night...I will just pay the 100/hr for u to do it as it needs done and I’m outa time. This one u can get the scotch for.” The employee responded with “As long as your boss is ok with it doesn’t really matter to me what I do.” Mr. Busch responded with, “Boss don’t care as long as I pay.” According to conversations we had with Mr. Busch’s boss at that time of these text messages, they stated that they were not aware of Mr. Busch performing work for his personal business at the Machine Shop and that would “categorically not been allowed”.
- October 26, 2019, Mr. Busch sent an employee a picture message of a bottle of Lagavulin scotch and said, “I This is ur gold at the end of the rainbow”.
- December 10, 2020, Mr. Busch texted an employee “If **redacted** and I bought you a TM pause machine do you have a garage it could go in **redacted** fits his in a garage with 8 foot ceilings”. The employee responded “No, I don’t even have a house lol”. Mr. Busch replied, “Nether does **redacted** but he’s gat a machine in a garage. Ur missing an opportunity.” The employee replied, “Thanks anyway I’ll have more than enough on my plate for the next 4 or 5 years with school and the stipulations of getting into grad school”. Mr. Busch replied, “Just trying to help a brother out you’d make way better money but I get it if you don’t wanna make the commitment”.

Based on the discussions with current and former employees and information included in the text messages we reviewed the time entries for all employees recorded in the payroll system as well as the hours recorded in the RT system.

For hourly employees, we used the time record detail report to schedule out the dates the and the number of hours worked for each day of a pay period. Using the Physics and Astronomy monthly billing spreadsheets, we added the dates the individual had hours allocated or billed per pay period, noting the date, the RT job name and number, and the number of hours billed.

We compared the total hours worked to the total hours billed per pay period. Any variances were noted by pay period and in total by individual. We also noted any instances of RT job numbers which were identified by the accounting staff as unbillable. Examples of unbillable RT jobs were things like shop time, training time, and clerical. For hourly employees, we took the schedule by pay period and combined it into a monthly schedule of total hours worked per the payroll system to total hours billed per the RT system.

For salary employees, we used the time record detail for each individual to schedule out the dates they had vacation, sick leave, or holiday pay for each month. Salaried employees are not required to track their hours worked by day. They are only required to report time off on their timesheets. We calculated the number of hours each full-time employee should have worked each month, using the standard 8 hours per day, for 5 days a week for each month. Using the Physics and Astronomy monthly billing spreadsheets, we added the dates the individual had hours allocated or billed per month, noting the date, the RT job name and number and the number of hours billed. We compared the total hours worked to the total hours billed per month. Any variances were noted by month and in total by individual. We also noted any instances of RT job numbers that were identified by the accounting staff as unbillable. Examples of unbillable RT jobs include shop time, training time, instructional time, and clerical.

Based on a comparison of the hours worked to the time recorded in the RT system, for the period September 2018 through September 2021, we identified 1,808.73 hours of unbilled time and 2,512.93 hours of unallocated time for salary employees and 496.50 hours of unbilled time and 1,282.99 hours of unallocated time for hourly employees.

According to University staff unbilled time is time charged by staff for shop time, training time, instructional time, and clerical. Unallocated time is defined as hours that were worked and paid by the University which had no RT job number associated with the time paid. According to University staff and officials we spoke with, some amounts of unallocated or unbilled time would be acceptable; however, the amounts identified, including the frequency, were not in line with the expectations established by Department officials.

Using the accept and shipped dates provided by Xometry, we compared the dates to time recorded in the RT system for the 519 jobs included in **Exhibit E**, to determine if employees could have worked on a Xometry job during the period which was recorded as unbilled or unallocated time. Based on this comparison, we determined there were sufficient hours recorded in the RT system which were unbilled or unallocated which occurred between the accept and shipped dated for the 519 Xometry jobs.

When we spoke to the former Department Administrator and showed them the amounts of unallocated and unbilled time by the Machine Shop's employees, they stated that it was reasonable that these Xometry jobs were completed during these periods of unallocated and unbilled time. As illustrated by the **Exhibit**, the remaining 519 Xometry jobs totaling \$774,742.28 are diverted revenue being paid to Mr. Busch. The \$774,742.28 is included in **Exhibit A** as improper diverted revenue.

During our procedures, we were told Mr. Busch had a shop at his personal residence. According to an individual we spoke with, who occasionally worked at Mr. Busch's personal shop, while Mr. Busch had some machines and abilities to work, Mr. Busch did not have the capabilities or the same quality of machines as the Machine Shop.

Subsequent to our procedures, the SUI Police Department issued a subpoena to Xometry to obtain all purchase orders for jobs accepted by D3T and the Machine Shop, including the job accepted and shipped dates, payment issuance date and payment method for the period October 2, 2021 through September 2, 2023. The information obtained was provided to our office for review. During our review, we identified D3T had completed 11 jobs totaling \$11,516.05 for the period October 2, 2021 through September 2, 2023. In addition, we received confirmation from a Xometry representative that this was all the activity they had on record for Mr. Busch and D3T since he was placed on paid administrative leave by the University.

PROCUREMENT CARD IMPROPER AND UNSUPPORTED DISBURSEMENTS

University officials have established policies and procedures regarding the use of Pcards for the entire University, including the Physics and Astronomy Department. The policies and procedures are included in the operations manual and are listed on the University's Accounts Payable and Receivable website. These policies and procedures can be accessed by all University employees. Departments are allowed to establish policies and procedures which are more restrictive, but, at a minimum, meet the University's policy.

When a University Pcard is used, the purchase is submitted through the University's "ProTrav" system. The "ProTrav" system requires the user to complete a form and electronically scan and attach supporting documentation for the charge(s). The completed form and supporting documentation are electronically routed to the cardholder's supervisor for approval and then forwarded to the Shared Services staff assigned to the Department for final review and approval. University policy requires the employee or the Department to maintain the original supporting documentation until this process is completed and the information is loaded into the University's accounting system. Pre-approvals of purchases made with Pcards are not required.

In addition to the supporting documentation submitted by the cardholder, the University receives “Level III” information as part of the data received from the Pcard processor. This information is included in the electronic procurement card transaction file the University receives daily. Level III detail includes a description of the item(s) purchased and the price. This information is only provided from vendors who collect and include the data with the information they submit to the Pcard processor. Examples of vendors who include Level III detail include Amazon, Oriental Trading Company, Pigott, American Airlines, and Delta Airlines.

Shared Services staff compare the support scanned into the accounting system by the Pcard holder to the Level III data to confirm the items purchased agree with the information scanned in by the Pcard holder. During the review process, if a Shared Services staff member identifies a concern or would like more clarification regarding a charge, they may request the original support, additional support, or clarification for the charge from the card holder.

Personal Purchases on University Procurement Card

As previously stated, Mr. Busch was assigned a University Pcard to make purchases for the Department’s operations, including tooling and materials and to pay for conference registrations and travel arrangements. He also used the Pcard to purchase miscellaneous supplies and pay for anodizing of parts.

We obtained a list of all charges made to Pcards assigned to the Machine Shop staff for the period October 1, 2016 through September 30, 2021. Using the supporting documentation available from the Department, information obtained from selected vendors, Level III detail provided by the University, internet searches, the vendor, the frequency and amount of the payments, discussions with Department officials, and University policies, we classified payments as improper, unsupported, or reasonable.

Disbursements were classified as improper if they were personal in nature or not necessary or reasonable for operations of the Department. Disbursements were classified as unsupported if it was not possible to determine if the disbursement was related to Department operations or was personal in nature. Other disbursements were classified as reasonable if it appeared, they were for Department operations based on available supporting documentation, the vendor, frequency, and amount of the payments, and/or discussions with Department officials.

Based on the information received from the Level III data, supporting documentation maintained by the Department, and the nature of the goods and services provided by certain vendors, we identified purchases which contained items personal in nature and not appropriate for the Department operations. **Exhibit F** list the purchases made with Mr. Busch’s University Pcard which included items not reasonable or necessary for the Department operations.

As illustrated by the **Exhibit**, we identified \$6,313.39 of improper purchases which included items such as, iTunes purchases, materials from suppliers that were identified as material used for D3T Xometry jobs, and convenience store purchases.

The improper Pcard purchases we identified were made with the Pcard assigned to Mr. Busch. We did not identify any improper or unsupported Pcard purchases made with the Pcard assigned to other staff within the Department. The \$6,313.39 of improper purchases identified are included on **Exhibit A**.

According to Shared Services officials we spoke to, \$6,196.48 of the improper charges identified were payroll deducted from Mr. Busch. The \$6,196.48 of payroll deductions are included on **Exhibit A** as repayments.

Physics Department Shipping Account Charges

The University has established shipping accounts for various departments with FedEx and UPS to allow for faculty and staff to ship and receive items. As part of these accounts, the University receives detailed

transaction information for each shipment, including sender name and address, recipient name and address, a Tracking number, the shipped and delivery dates, and the charge details.

As previously stated, as part of the work performed on Xometry jobs, the manufacturer had to ship the finished products to Xometry or the requesting customer as soon as the part was complete for verification to receive payment from Xometry. Due to the concerns regarding the use of University staff and resources to complete Xometry jobs on behalf of Mr. Busch and D3T, we obtained a history of the Department's FedEx and UPS shipping accounts for the period November 2018 through September 2021.

Using the supporting documentation obtained from the University, internet searches, the frequency, and discussions with Department officials and staff, we classified payments as reasonable or unsupported. Shipping costs were classified as unsupported if the shipment was made by Mr. Busch, and it was not possible to determine if the shipment was related to Department operations or was personal in nature. Shipping costs were classified as reasonable if they were for Department operations based on available supporting documentation, the vendor, frequency, and amount of the payments, and/or discussions with Department officials.

In total, we identified six FedEx charges totaling \$117.51 and one UPS charge for \$18.87 which included Mr. Busch and the Van Allen Hall address listed as the sender. Based on the shipping information, we were unable to determine the reason for the shipping charge. As a result, the \$117.51 and the \$18.87 are considered unsupported charges and included on **Exhibit A**.

OTHER ADMINISTRATIVE ISSUES

RT System – As previously stated, we obtained all RT system activity for the Machine Shop from September 2016 through December 2021 and performed an analysis and comparison of the data maintained on the system. During our review of the system, as well as discussions held with University officials and Department staff, we identified anyone with access to the RT system can create adjustments, delete jobs from the system, and create a RT job with someone other than themselves as the requestor of the job.

In addition, the majority of adjustments made were not supported by a note or explanation as to why there was an adjustment made. Furthermore, there was no independent review or approval of adjustments made to jobs on the RT system. Also, once a job is deleted on the RT system, the job disappears and only the administrator of the system can see those. During our period of the investigation, the Administrator of the Machine Shop's RT system was Mr. Busch. We also noted that there was no independent review or approval of deletions made on the system.

Billable Hour Goals – During discussions with Department officials and staff, we were informed the Machine Shop has a billable hour goal for the Machine Shop in total and for each individual employee. As part of our procedures, we obtained all Physics and Astronomy Service Center Logged and Billed Hours Summaries for the period June 2017 through June 2022. We identified that the Machine Shop as a Department was under the billable hour goal established by Department officials for 38 of the 60 months and for 3 of the 5 years in total.

In addition, we identified Mr. Busch was under his billable hours goal for 43 of the 51 months he was employed by the Department and for all 5 years in total. It was also noted that the other two full-time employees of the Machine Shop were under their billable hours goal for 24 of the 60 months and 35 of the 51 months, respectively, and for 2 of the 5 years and 4 of the 5 years, respectively, in total. It was noted that while these employees were under their billable hours goal and the Machine Shop in total was under their billable hours goal, there were no ramifications or changes made by Department officials.

Protostudios Invoicing – During our procedures, we obtained all Protostudios billings and invoices from July 2018 through September 2021. In addition, we obtained Protostudios billings and invoices

issued to Mr. Busch and D3T from October 2021 through May 2021. During our review of all Protostudios billings and invoices, we identified 25 invoices were missing invoices in the files provided by Protostudios. It was determined these invoices were not used and Protostudios does not follow a numeric sequence for their invoices. We also identified Mr. Busch was placed on paid administrative leave from the Department because of concerns identified with conflicts of interest as it related to his personal business, D3T, and Protostudios continue to perform work for Mr. Busch. Specifically, we identified Protostudios issued five invoices totaling \$1,484.66 to Mr. Busch/D3T for the period October 2021 through May 2023.

Protostudios Memberships – As previously stated, when Protostudios was established, they had a membership program for Businesses, Entrepreneurs outside of the University, as well as for University faculty and staff. There was an initial membership set up fee, followed by a monthly billing amount for access to the Protostudios lab maintained in Van Allen Hall. This program was stopped shortly around the Fall of 2018. During our review of all Protostudios billings and invoices from July 2018 through September 2021, we identified there were six individuals who had a Protostudios membership including Mr. Busch. The membership program was cancelled due to the nature of the equipment, the liability of individuals being in the Protostudios lab unsupervised and the requirement of new and ongoing training. Protostudios did offer to grandfather in all initial members of the program moving forward while not offering any new memberships. It was noted the only member which was grandfathered in was Mr. Busch, the Shop Manager.

Machine Shop Inventory – As previously stated, Mr. Busch was assigned a University Pcard to make purchases for the Department's operations, including tooling, materials, and miscellaneous supplies. During our review of the activity on Mr. Busch's University Pcard, we identified numerous purchases for tooling, materials, and miscellaneous supplies. However, the Department did not keep an inventory of material, tools, or supplies purchased. As a result, we were unable to determine if any of the material, tools, or supplies purchased on Mr. Busch's University Pcard were improperly purchased for his personal business.

Recommended Control Procedures

As part of our investigation, we reviewed the controls used by the University of Iowa. An important aspect of internal control is to establish procedures that provide accountability for assets susceptible to loss from errors or irregularities. These procedures provide the actions of one individual will act as a check on those of another and provide a level of assurance errors or irregularities will be noted within a reasonable time during the course of normal operations. Based on our findings and observations detailed below, the following recommendations are made to strengthen the University's internal controls.

- (A) **Conflicts of Interest and Commitment** – The University requires all employees to complete Conflicts of Interest and Commitment Disclosure forms annually and to review the Conflicts of Interest and Commitment policy. The University relies on the employees' complete understanding of the policies and ethics to properly disclose all required or potential conflicts. Such reliance is not sufficient.

Recommendation – University officials should continue to stress employees are to report concerns related to conflicts of interest, conflicts of commitment, or other concerns to the University's Compliance hotline or the Office of Internal Audit. The University should communicate this to employees during training events and during annual employee evaluations. In addition, updated forms should continue to be signed by employees which include any revisions.

Also, University officials should be observant for indications of possible conflicts. These indications may result from, but not be limited to, information included in grant applications, information included in travel documentation, and communications or notifications from employees or affiliated organizations. University officials should also respond in a timely manner to any indication of potential conflicts.

- (B) Diverted Revenues – We determined Brian Busch, used University equipment at the Machine Shop and University staff to complete Xometry jobs for his personal business D3signtech (D3T). Based on the information provided by Xometry, the diverted revenues totaled \$950,689.88.

Recommendation – University officials should ensure a review is performed of all conflict of interest and commitment forms are reviewed to identify any potential conceits. University officials should ensure decision making regarding such new work should not be made by a single individual or an individual who can use undue influence over others. In addition, all staff time recorded should be reconciled to a job performed, billed, and collected by the University. Any adjustments, deletions or unallocated, unbilled time recorded should be explained and approved by the staff's supervisor.

- (C) RT System – We identified anyone with access to the RT system could:
- a. create a job with their name or another staff person's name as the creator of the job,
 - b. make adjustments to the number of hours charged to a job, and
 - c. delete a job from the system.

In addition, we determined there no independent review or approval of adjustments and deletions made to jobs on the RT system and a reconciliation of hours charged to a job to the actual number of hours billed was not performed.

Recommendation – University officials should work with its IT professionals to create an audit trail for items which are adjusted or deleted from the system and any adjustments and deletions are approved. In addition, a reconciliation of hours charged to a job to the actual number of hours billed should be performed.

- (D) Inventory – By their nature, inventory purchased by the Department are attractive to individuals and susceptible to loss. Based on the procedures performed, we identified the following concerns over the Department's materials, tools, and supplies:
1. The Department did not maintain adequate records indicating the project and the purpose for which materials, tools and supplies were purchased.
 2. The Department did not maintain adequate supporting documentation showing when materials, tooling or supplies were expended and for what project.
 3. The Department did not maintain an inventory listing by material, tools, and supplies purchased, expended, and on hand were properly safeguarded.

Recommendation – Department officials should develop policies and procedures for the purchases, distribution, inventorying, safeguarding, and tracking of materials, tools, and supplies.

- An inventory of all materials, tools, and supplies should be maintained for the Machine Shop. A comparison of materials, tools, and supplies on hand should be conducted periodically and compared to the inventory listing by someone independent of the record keeping and custody functions. Any irregularities or inconsistencies identified should be investigated and resolved in a timely manner.
- An independent party should periodically compare materials, tools, and supplies purchases and expended to the inventory records. Any irregularities should be investigated and resolved in a timely manner.
- A log should be maintained of all individuals who access the materials, tools, and supplies, including dates, the reason for access, and any materials, tools, and supplies added to or removed from the inventory.

Exhibits

Report on Special Investigation of the
University of Iowa Department of Physics Machine Shop

Summary of Findings
For the Period July 1, 2017 through September 30, 2021

Description	Exhibit/Table/ Page Number	Improper	Unsupported	Total
Diverted Revenue:				
D3Signtech Xometry Jobs Completed with University Staff/Resources	Exhibit B	\$ 173,097.60	-	173,097.60
D3Signtech Xometry Jobs Completed with University Staff/Resources	Exhibit E	770,537.37	-	770,537.37
Subtotal of Diverted Revenue		943,634.97	-	943,634.97
Improper and unsupported disbursements:				
Personal purchases on University Procurement Card	Exhibit F	6,313.39	-	6,313.39
Physics Department Shipping Account Charges	Page 8	-	136.38	136.38
Subtotal of improper and unsupported disbursements		6,313.39	136.38	6,449.77
Total		\$ 949,948.36	136.38	950,084.74
Less: Repayment by Brian Busch to Protostudios	Page 19			(17,494.50)
Less: Repayment by Brian Busch to SUI	Page 16			(3,550.00)
Less: Repayment by Brian Busch to SUI via Payroll Deduct	Page 24			(6,196.48)
Net amount				\$ 929,040.24

Report on Special Investigation of the
University of Iowa Department of Physics Machine Shop

Diverted Revenues Matched to Xometry Jobs
For the Period July 1, 2017 through September 30, 2021

Per Xometry Records				Per Interview of Current and Former Staff
Xometry Job	Accepted Date	Shipped Date	Amount	
J0010BE9	11/12/18	12/14/18	\$ 7,500.00	Miller Done at the Shop - estimated 2-3 weeks worth of work
J0010F4C	11/27/18	12/20/18	2,850.00	None
J0011025	11/28/18	12/20/18	3,150.00	None
J0011ED4	01/22/19	01/25/19	484.47	None
J0011F3B	01/22/19	01/28/19	625.00	None
J00120B0	01/27/19	03/15/19	8,900.00	~ Miller highly doubts its for anyone upstairs based on the image he provided

Per RT System			
	Job Number	Hours	Notes
Busch had 2.0 hours to the Job and 90.0 hours unallocated/unbilled time. Crile had 13.5 hours to the job and 49.0 hours of unbilled time. Miller had 0.5 hours to the job and 30.75 hours of unallocated/unbilled time. Stansberry had 11.5 hours of unbilled time.	1093	16.00	None
Busch had (22.0) hours charged to job 1190 and 16.0 hours charged job 1192. Stansberry had 15.0 hours to job 1190 and 26.75 hours of unbilled time.	1190 1192	9.00	Per text from Busch to student employee "I absolutely need to ship that plat on Wednesday (sic 12/19/18).
Busch 158.0 hours of unallocated/unbilled time. Crile had 41.0 hours of unbilled time. Miller had 53.75 of unallocated/unbilled time. Stansberry had 31.75 hours of unallocated/unbilled time.	-	-	None
Busch had 42.75 hours of unallocated/unbilled time. Crile had 25.5 hours of unallocated/unbilled time. Miller had 21.0 hours of unallocated time. Stansberry had 0.30 hours of unallocated time. Pestalozzi had 40.0 of unallocated time. Amstutz had 24.30 hours of unallocated time. Helland had 10.0 hours of unallocated time. Mannien had 8.0 hours of unallocated time.	-	-	None
Protostudios job - Stansberry had 7.0 hours to the job and 5.0 hours to Protostudios training.	1338	7.00	Protostudios was billed for 7.0 hrs at a cost of \$539.00
-	-	-	Only job during this time period that was done with BLACK ABS material. No RT job number and not a university job.

Report on Special Investigation of the
University of Iowa Department of Physics Machine Shop

Diverted Revenues Matched to Xometry Jobs
For the Period July 1, 2017 through September 30, 2021

Per Xometry Records				
Xometry Job	Accepted Date	Shipped Date	Amount	
J001218E	01/30/19	02/08/19	489.03	Crile didn't remember any Xometry jobs that were ran thorough the RT system that were not Protostudios tickets, but he does not recall, he could have worked on them
J0012695	02/12/19	02/20/19	273.21	Crile "I'm surprised by it but its obviously true there, at the same token when your machining hundreds of parts, sometimes I don't know what I made 2 months ago. I just don't remember him (Brian) submitting jobs, personally to the Shop."
J00127B9	02/14/19	02/23/19	475.00	Crile "I'm surprised by it but its obviously true there, at the same token when your machining hundreds of parts, sometimes I don't know what I made 2 months ago. I just don't remember him (Brian) submitting jobs, personally to the Shop."
J0012803	02/15/19	02/15/19	600.00	Crile "I'm surprised by it but its obviously true there, at the same token when your machining hundreds of parts, sometimes I don't know what I made 2 months ago. I just don't remember him (Brian) submitting jobs, personally to the Shop."
J001290D	02/18/19	02/26/19	1,100.00	Crile "I'm surprised by it but its obviously true there, at the same token when your machining hundreds of parts, sometimes I don't know what I made 2 months ago. I just don't remember him (Brian) submitting jobs, personally to the Shop."
J0012A5C	02/21/19	03/13/19	5,250.00	Crile "I'm surprised by it but its obviously true there, at the same token when your machining hundreds of parts, sometimes I don't know what I made 2 months ago. I just don't remember him (Brian) submitting jobs, personally to the Shop."

Per RT System			
	Job Number	Hours	Notes
Crile had 19.17 hours to the job. Stansberry had 24.83 hours to the job.	1349	44.00	None
Busch had 90.0 hours to the job over a period of 3 months. Crile had 21.0 hours to the job over a period of 1 month.	1350	111.00	* RT system had a total of 327.0 hours to the job with no explanation provided to Andrea Shaevitz as to why the full amount was not billed.
Busch had 90.0 hours to the job over a period of 3 months. Crile had 21.0 hours to the job over a period of 1 month.	1350	111.00	* RT system had a total of 327.0 hours to the job with no explanation provided to Andrea Shaevitz as to why the full amount was not billed.
Busch had 90.0 hours to the job over a period of 3 months. Crile had 21.0 hours to the job over a period of 1 month.	1350	111.00	* RT system had a total of 327.0 hours to the job with no explanation provided to Andrea Shaevitz as to why the full amount was not billed.
Busch had 90.0 hours to the job over a period of 3 months. Crile had 21.0 hours to the job over a period of 1 month.	1350	111.00	* RT system had a total of 327.0 hours to the job with no explanation provided to Andrea Shaevitz as to why the full amount was not billed.
Busch had 90.0 hours to the job over a period of 3 months. Crile had 21.0 hours to the job over a period of 1 month.	1350	111.00	* RT system had a total of 327.0 hours to the job with no explanation provided to Andrea Shaevitz as to why the full amount was not billed.

Report on Special Investigation of the
University of Iowa Department of Physics Machine Shop

Diverted Revenues Matched to Xometry Jobs
For the Period July 1, 2017 through September 30, 2021

Per Xometry Records				
Xometry Job	Accepted Date	Shipped Date	Amount	Per Interview of Current and Former Staff
J0013024	03/09/19	03/14/19	1,000.00	Stansberry some still familiar. Crile "I'm surprised by it but its obviously true there, at the same token when your machining hundreds of parts, sometimes I don't know what I made 2 months ago. I just don't remember him (Brian) submitting jobs, personally to the Shop."
J0013145	03/13/19	03/17/19	512.36	None
J001348C_1	03/21/19	04/19/19	4,392.77	None
J001351F	03/22/19	04/10/19	8,250.00	Crile "I'm surprised by it but its obviously true there, at the same token when your machining hundreds of parts, sometimes I don't know what I made 2 months ago. I just don't remember him (Brian) submitting jobs, personally to the Shop."
J001377C	03/29/19	04/17/19	1,079.58	None
J001387E	04/02/19	04/12/19	969.99	None
J0013E6E	04/19/19	05/02/19	786.52	Miller confirmed this was the same thing as the picture provided
J00143F6_1	05/03/19	05/14/19	984.00	None
J00147DC	05/14/19	05/24/19	1,885.00	Stansberry set up for Pestalozzi to finish, Stansberry completed a few parts

Per RT System			
	Job Number	Hours	Notes
Busch had 90.0 hours to the job over a period of 3 months. Crile had 21.0 hours to the job over a period of 1 month.	1350	111.00	* RT system had a total of 327.0 hours to the job with no explanation provided to Andrea Shaevitz as to why the full amount was not billed. Picture of part in texts from Busch to Student Employee and Busch states "don't make a ticket or log hours ... cash money (moneybag emoji) holmes.
Crile had 9.0 hours to the job.	1393	9.00	None
Stansberry had 21.70 hours to the job.	1415	21.70	None
Busch had 90.0 hours to the job over a period of 3 months. Crile had 21.0 hours to the job over a period of 1 month.	1350	111.00	* RT system had a total of 327.0 hours to the job with no explanation provided to Andrea Shaevitz as to why the full amount was not billed. Picture of part in texts from Busch to Student Employee.
Stansberry had 7.50 hours to the job.	1428	7.50	None
Busch had 8.0 hours to the job.	1433	8.00	None
Busch had 65.5 hours of unallocated/unbilled time. Crile had 81.0 hours of unallocated/unbilled time. Miller had 39.0 hours of unallocated/unbilled time. Stansberry had 3.0 hours of unbilled time. Pestalozzi had 32.0 hours of unallocated time. Amstutz had 30.5 hours of unallocated time. Mannien had 16.0 hours of unallocated time.	-	-	None
Busch had 8.0 hours to the job and 17.0 hours to unbilled time.	1517	8.00	None
Pestalozzi had 15.33 hours to the job.	1516	15.33	Picture of parts in texts between Busch and student employee. Student employee also stated he got the pockets done in the L bars and the 12 is running the R bars.

Report on Special Investigation of the
University of Iowa Department of Physics Machine Shop

Diverted Revenues Matched to Xometry Jobs
For the Period July 1, 2017 through September 30, 2021

Per Xometry Records				
Xometry Job	Accepted Date	Shipped Date	Amount	Per Interview of Current and Former Staff
J0014B31	05/22/19	06/10/19	1,300.00	None
J001607B_1	07/08/19	07/27/19	8,600.00	Miller confirmed this appears to be the same thing as the picture provided
J0016595	07/18/19	07/25/19	1,300.24	None
J001663B	07/19/19	07/30/19	1,102.63	Stansberry completed

Per RT System			
	Job Number	Hours	Notes
Stansberry had 36.5 hours to the job.	1532	36.50	<i>None</i>
Protostudios job - Requestor was D3Signtech. Stansberry had 4.0 hours to job 1639 and 11.5 hours to job 1641. Xometry Spec Drawings included on the RT system as an attachment.	1639 1641	15.50	Protostudios was billed for 4.0 hrs at a cost of \$308.00 - D3signtech was billed by ProtoStudios for \$354.20. Busch sent a text to a student employee of a picture of a trash can full of metal shavings with shavings piled up on the floor around it. The text included "That's about 1/8 of the shit I've made this weekend. Bags and Bags of Chips." <i>This could be a job that was completed the weekend of 07/19/19 to 07/21/19.</i>
Busch had 101.0 hours of unallocated/unbilled time.	-	-	Busch sent a text to a student employee of a picture of a trash can full of metal shavings with shavings piled up on the floor around it. The text included "That's about 1/8 of the shit I've made this weekend. Bags and Bags of Chips." <i>This could be a job that was completed the weekend of 07/19/19 to 07/21/19.</i>
Protostudios job - Stansberry had 16.0 hours to the job.	1638	16.00	Protostudios was billed for 16.0 hrs at a cost of \$1,232.00 - D3signtech was billed by ProtoStudios for \$1,416.80. Picture of parts in texts between Busch and student employee. Busch also states "I'll make job ticket and put files in it for u. Will bill this through protostudios...throw Spencer a bone"

Report on Special Investigation of the
University of Iowa Department of Physics Machine Shop

Diverted Revenues Matched to Xometry Jobs
For the Period July 1, 2017 through September 30, 2021

Per Xometry Records				Per Interview of Current and Former Staff
Xometry Job	Accepted Date	Shipped Date	Amount	
J00166B3	07/20/19	07/25/19	492.41	None
J00169EB	07/25/19	08/05/19	750.00	None
J001699C	-	-	2,675.00	^ None
J0016AB6	07/29/19	08/07/19	2,461.65	None
J0016DED	08/03/19	08/12/19	750.00	Miller confirmed this was the same thing as the blueprint located
J0016E88	08/05/19	08/14/19	2,850.00	None
J0018030	09/09/19	09/25/19	5,250.00	Stansberry 1 part seems familiar

Per RT System			
	Job Number	Hours	Notes
Busch had 101.0 hours of unallocated/unbilled time.	-	-	Busch sent a text to a student employee of a picture of a trash can full of metal shavings with shavings piled up on the floor around it. The text included "That's about 1/8 of the shit I've made this weekend. Bags and Bags of Chips." <i>This could be a job that was completed the weekend of 07/19/19 to 07/21/19.</i>
Protostudios job - Stansberry had 13.0 hours to the job. Xometry Spec Drawings included on the RT system as an attachment.	1662	13.00	Protostudios was billed a fixed price of \$400.00 - D3signtech was billed by ProtoStudios for \$460.00
Protostudios job - Stansberry had 21.5 hours to the job.	1646	21.50	Protostudios was billed for 21.5 hrs at a cost of \$1,655.50 - D3signtech was billed by ProtoStudios for \$1,903.83. In Texts between Busch and a student employee, the student asks what the next job is and Busch responds with Heat Sinks.
Protostudios job - Pestaloozi had 7.50 hours to the job.	1660	7.50	Protostudios was billed for 7.5 hrs at a cost of \$577.50
-	-	-	Picture of part in texts between Busch and a student employee. Student employee was sending a picture of the completed part to Busch for inspection prior to shipping.
Protostudios job - Pestaloozi had 9.0 hours to the job.	1674	9.00	Protostudios was billed a fixed price of \$600.00 - D3signtech was billed by ProtoStudios for \$690.00
Protostudios job - Stansberry had 13.5 hours to the job.	1752	13.50	Protostudios was billed for 13.5 hrs at a cost of \$1,053.00 - D3signtech was billed by ProtoStudios for \$1,210.95

Report on Special Investigation of the
University of Iowa Department of Physics Machine Shop

Diverted Revenues Matched to Xometry Jobs
For the Period July 1, 2017 through September 30, 2021

Per Xometry Records				Per Interview of Current and Former Staff
Xometry Job	Accepted Date	Shipped Date	Amount	
J0018FD2	10/02/19	10/22/19	3,250.00	Stansberry completed the plate
J0019434	10/09/19	10/18/19	1,875.00	None

Per RT System			
	Job Number	Hours	Notes
Protostudios job - Stansberry had 12.0 hours to the job. Xometry Spec Drawings included on the RT system as an attachment.	1792	12.00	Protostudios was billed for 12.0 hrs at a cost of \$936.00 - D3signtech was billed by Protostudios for \$1,076.40. In texts between Busch and a student employee, Busch asks the employee if he is working this weekend, the employee confirms, and Busch responds with "I put the job in ur queue please limit charged hours to 12. I can't imagine u would have more actual **Redacted** time in them...machine run time I'm sure u will. The employee responds with ok and asks if he were to work 18 hrs this weekend what should I put the other 6 hrs towards? Busch Responds with "Shop time just do some cleaning and organizing while things are running. Point I am trying to make is I don't super care as long as things get done and we can charge 80 percent of ur time weekly". Pic of Part is also included.
Protostudios job - Stansberry had 10.0 hours to the job. Xometry Spec Drawings included on the RT system as an attachment.	1797	10.00	Protostudios was billed for 10.0 hrs at a cost of \$780.00 - D3signtech was billed by Protostudios for \$897.00. In Text messages between Busch and a student employee. <i>Employee</i> to Busch "How many hours should I put on this job?", Busch responds with 10. Employee confirms.

Report on Special Investigation of the
University of Iowa Department of Physics Machine Shop

Diverted Revenues Matched to Xometry Jobs
For the Period July 1, 2017 through September 30, 2021

Per Xometry Records				Per Interview of Current and Former Staff
Xometry Job	Accepted Date	Shipped Date	Amount	
J001949D	10/11/19	11/08/19	4,250.00	Stansberry looks familiar. Miller confirmed this was the same thing as the picture provided.
J00196AB	10/14/19	10/22/19	3,500.00	None
J0019C3F	10/23/19	11/07/19	1,412.59	None

Per RT System			
	Job Number	Hours	Notes
Busch had 64.5 hours of unallocated/unbilled time. Crile had 39.8 hours of unallocated/unbilled time.	-	-	None
Protostudios job - Stansberry had 12.0 hours to the job.	1809	12.00	RT job name "Protostudios Ball Parts". Picture of part in text messages between Busch and a student employee. The employee asked Busch if there was anything he could work on for 5 hrs tomorrow evening, Busch responded with yes and provided a picture of this part. After a picture of the completed parts was sent by the employee to Busch, the employee asked if there was a ticket for this job. Busch responded with "sorry no just make on call protostudios ball parts".
Protostudios job - Stansberry had 8.0 hours to the job.	1829	8.00	RT job name "fiberglass disks qty 4". Per the purchase order and drawings this was for 4 garolite disks. Garolite is fiberglass. Protostudios was billed for 8.0 hrs at a cost of \$624.00 - D3signtech was billed by Protostudios for \$624.00. In texts between Busch and a student employee, Busch "How many **REDACTED** hours you suppose?". The employee responds with "It'll probably take about 8 hours to do those fiber glass things and I was planning on working 12 hours total".

Report on Special Investigation of the
University of Iowa Department of Physics Machine Shop

Diverted Revenues Matched to Xometry Jobs
For the Period July 1, 2017 through September 30, 2021

Per Xometry Records				Per Interview of Current and Former Staff
Xometry Job	Accepted Date	Shipped Date	Amount	
J001A3BB	11/05/19	11/12/19	1,400.00	Stansberry completed 2 of the parts - maybe 6 to 10 hours of his time
J001A377	11/06/19	11/23/19	4,250.00	<i>None</i>
J001A4A4	11/08/19	11/12/19	1,550.00	Stansberry completed - maybe 5 to 10 hours of his time
J001A88B	11/14/19	12/23/19	9,750.00	~ Stansberry "Sore Subject, straw that broke the camels back", was told 100 hours max and to charge anything over that to shop/training time.
J001B2BB	12/04/19	12/11/19	1,600.00	<i>None</i>

Per RT System			
	Job Number	Hours	Notes
Protostudios job - Stansberry had 17.0 hours to the job, however these hours were deleted and moved to job 1841.	1840	-	Protostudios was billed for 36.0.0 hrs at a cost of \$2,808.00 - D3signtech was billed by Protostudios for \$3,229.20. Picture of part in texts between Busch and a student employee.
Protostudios job - Busch had 16.0 hours to the job and Stansberry had 20.0 hours to the job.	1841	36.00	Protostudios was billed for 36.0.0 hrs at a cost of \$2,808.00 - D3signtech was billed by Protostudios for \$3,229.20. Picture of part in texts between Busch and a student employee.
-	-	-	Picture of part in texts between Busch and a student employee. Stansberry did not have time to a job that this could be for, but did have 25.0 hours of unallocated time during the time period of this job.
Protostudios job - Stansberry had 100.0 hours to the job and 25.0 hours to unbilled time.	1848	100.00	Protostudios was billed for 100.0 hrs at a cost of \$7,800.00 - D3signtech was billed by Protostudios for \$4,574.70. In texts between Busch and a student employee.
Busch had 79.0 hours of unallocated/unbilled time. Crile had 25.5 hours of unallocated/unbilled time. Stansberry had 11.0 hours of unallocated/unbilled time. Pestalozzi had 32.50 hours of unallocated/unbilled time. McGonagle had 12.0 hours of unallocated time.	-	-	None

Report on Special Investigation of the
University of Iowa Department of Physics Machine Shop

Diverted Revenues Matched to Xometry Jobs
For the Period July 1, 2017 through September 30, 2021

Per Xometry Records				
Xometry Job	Accepted Date	Shipped Date	Amount	Per Interview of Current and Former Staff
J002055B	04/23/20	04/28/20	1,200.00	None
J00213A6	05/16/20	05/18/20	1,200.00	Stansberry looks familiar, he did not work on it, but remembers seeing it in the shop
J0021B47	06/01/20	06/23/20	7,000.00	None
J0028281	10/20/20	10/29/20	6,600.00	Crile "I remember doing 1 for Protostudios, it was a long piece of Delrin, there might have been another one, but I don't recall. Long parts, required bushings in it, and they were messed up and the job failed."
J0028281_1	10/20/20	10/29/20	-	Crile "I remember doing 1 for Protostudios, it was a long piece of Delrin, there might have been another one, but I don't recall. Long parts, required bushings in it, and they were messed up and the job failed."

Per RT System			Notes
	Job Number	Hours	
-	-	-	Miller found a McMaster-Carr packing list dated 04/20/20 with copper as the material being purchased shipped to Busch's personal residence, during our review of Busch's SUI p-card we were able to tie the purchase to his P-card. Additionally, this is the only copper part created for Xometry during the time period of this purchase. Because the material was purchased with the SUI p-card, shipped to his home, was the only copper part created and the packing slip was located in the shop, this job is considered to have been done at the Shop.
Busch had 113.0 hours of unallocated/unbilled time. Crile had 105.7 hours of unallocated/unbilled time.	-	-	None
-	-	-	Picture of Part in text messages between Busch and a student employee.
Protostudios job - Crile had 20.0 hours to the job.	2369	20.00	Protostudios was billed for 20.0 hrs at a cost of \$1,560.00 - D3signtech was billed by Protostudios for \$1,794.00.
Protostudios job - Crile had 20.0 hours to the job.	2369	20.00	Protostudios was billed for 20.0 hrs at a cost of \$1,560.00 - D3signtech was billed by Protostudios for \$1,794.00.

Report on Special Investigation of the
University of Iowa Department of Physics Machine Shop

Diverted Revenues Matched to Xometry Jobs
For the Period July 1, 2017 through September 30, 2021

Per Xometry Records				Per Interview of Current and Former Staff
Xometry Job	Accepted Date	Shipped Date	Amount	
J0028281_2	10/20/20	10/29/20	4,422.00	Crile "I remember doing 1 for Protostudios, it was a long piece of Delrin, there might have been another one, but I don't recall. Long parts, required bushings in it, and they were messed up and the job failed."
J002964F	11/10/20	11/12/20	700.00	None
J0029650	11/10/20	11/16/20	300.00	None
J0029659	11/10/20	11/18/20	350.00	None
J002978B	11/11/20	11/17/20	500.00	None
J002979C	11/11/20	11/17/20	600.00	None
J0029D31	11/18/20	12/04/20	1,500.00	None

Per RT System			
	Job Number	Hours	Notes
Protostudios job - Crile had 20.0 hours to the job.	2369	20.00	Protostudios was billed for 20.0 hrs at a cost of \$1,560.00 - D3signtech was billed by Protostudios for \$1,794.00.
Busch had 49.33 hours to the job and 88.0 hours of unallocated/unbilled time for a period of 3 months. There was also an adjustment of 2.0 hours on the RT system reducing the total hours of the RT system	2352	49.33	* None
Busch had 49.33 hours to the job and 88.0 hours of unallocated/unbilled time for a period of 3 months. There was also an adjustment of 2.0 hours on the RT system reducing the total hours of the RT system	2352	49.33	* None
Busch had 49.33 hours to the job and 88.0 hours of unallocated/unbilled time for a period of 3 months. There was also an adjustment of 2.0 hours on the RT system reducing the total hours of the RT system	2352	49.33	* None
Busch had 49.33 hours to the job and 88.0 hours of unallocated/unbilled time for a period of 3 months. There was also an adjustment of 2.0 hours on the RT system reducing the total hours of the RT system	2352	49.33	* None
Busch had 49.33 hours to the job and 88.0 hours of unallocated/unbilled time for a period of 3 months. There was also an adjustment of 2.0 hours on the RT system reducing the total hours of the RT system	2352	49.33	* None
Protostudios job - Pestalozzi had 13.0 hours to the job. Busch had an adjustment of (5.0) hours to the job.	2415	8.00	Protostudios was billed for 8.0 hrs at a cost of \$624.00.

Report on Special Investigation of the
University of Iowa Department of Physics Machine Shop

Diverted Revenues Matched to Xometry Jobs
For the Period July 1, 2017 through September 30, 2021

Per Xometry Records				Per Interview of Current and Former Staff
Xometry Job	Accepted Date	Shipped Date	Amount	
J0029D31_1	11/18/20	12/04/20	1,900.00	None
J002A179	11/22/20	12/02/20	1,400.00	None
J002A4FE	11/25/20	12/23/20	14,000.00	None
J002B2E8	12/11/20	12/15/20	3,200.00	Stansberry completed this, "anything over 30 hours, I'll lose money on"
J002BAED	12/21/20	01/05/21	199.15	None
J002C22B	01/03/21	01/15/21	2,500.00	None
J002C2E7	01/04/21	01/07/21	2,400.00	None

Per RT System			
	Job Number	Hours	Notes
Protostudios job - Pestalozzi had 13.0 hours to the job. Busch had an adjustment of (5.0) hours to the job.	2415	8.00	Protostudios was billed for 8.0 hrs at a cost of \$624.00.
Protostudios job - Pestalozzi had 12.0 hours to the job.	2418	12.00	Protostudios was billed for 12.0 hrs at a cost of \$936.00
Busch had 49.33 hours to the job and 88.0 hours of unallocated/unbilled time for a period of 3 months. Crile had 38.5 hours of unallocated/unbilled hours. There was also an adjustment of 2.0 hours on the RT system reducing the total hours of the RT system	2352	49.33	* None
Protostudios job - Stansberry had 30.0 hours to the job and 5.0 hours to unbilled time.	2451	30.00	Protostudios was billed for 30.0 hrs at a cost of \$2,340.00. Picture of Part in text messages between Busch and a student employee.
Busch had 49.33 hours to the job and 88.0 hours of unallocated/unbilled time for a period of 3 months. Crile had 38.5 hours of unallocated/unbilled hours. There was also an adjustment of 2.0 hours on the RT system reducing the total hours of the RT system	2352	49.33	* None
Busch had 49.33 hours to the job and 88.0 hours of unallocated/unbilled time for a period of 3 months. Crile had 38.5 hours of unallocated/unbilled hours. There was also an adjustment of 2.0 hours on the RT system reducing the total hours of the RT system	2352	49.33	* None
Busch had 49.33 hours to the job and 88.0 hours of unallocated/unbilled time for a period of 3 months. Crile had 38.5 hours of unallocated/unbilled hours. There was also an adjustment of 2.0 hours on the RT system reducing the total hours of the RT system	2352	49.33	* None

Report on Special Investigation of the
University of Iowa Department of Physics Machine Shop

Diverted Revenues Matched to Xometry Jobs
For the Period July 1, 2017 through September 30, 2021

Per Xometry Records				Per Interview of Current and Former Staff
Xometry Job	Accepted Date	Shipped Date	Amount	
J002D430	01/23/21	01/28/21	4,500.00	None
J002DE53	02/03/21	02/12/21	500.00	None
J002DE53_1	02/03/21	02/12/21	500.00	None
J002DE52	02/03/21	02/18/21	1,400.00	Miller confirmed these are for sure the same thing as the pictures provided, additionally have pictures of the files from a University hard drive
J002DE52_1	02/03/21	02/18/21	1,400.00	Miller confirmed these are for sure the same thing as the pictures provided, additionally have pictures of the files from a University hard drive

Per RT System			
	Job Number	Hours	Notes
Busch had 49.33 hours to the job and 88.0 hours of unallocated/unbilled time for a period of 3 months. Crile had 38.5 hours of unallocated/unbilled hours. There was also an adjustment of 2.0 hours on the RT system reducing the total hours of the RT system	2352	49.33	* None
Busch had 49.33 hours to the job and 88.0 hours of unallocated/unbilled time for a period of 3 months. Crile had 38.5 hours of unallocated/unbilled hours. There was also an adjustment of 2.0 hours on the RT system reducing the total hours of the RT system	2352	49.33	* None
Busch had 49.33 hours to the job and 88.0 hours of unallocated/unbilled time for a period of 3 months. Crile had 38.5 hours of unallocated/unbilled hours. There was also an adjustment of 2.0 hours on the RT system reducing the total hours of the RT system	2352	49.33	* None
Busch had 49.33 hours to the job and 88.0 hours of unallocated/unbilled time for a period of 3 months. Crile had 38.5 hours of unallocated/unbilled hours. There was also an adjustment of 2.0 hours on the RT system reducing the total hours of the RT system	2352	49.33	* None
Busch had 49.33 hours to the job and 88.0 hours of unallocated/unbilled time for a period of 3 months. Crile had 38.5 hours of unallocated/unbilled hours. There was also an adjustment of 2.0 hours on the RT system reducing the total hours of the RT system	2352	49.33	* None

Report on Special Investigation of the
University of Iowa Department of Physics Machine Shop

Diverted Revenues Matched to Xometry Jobs
For the Period July 1, 2017 through September 30, 2021

Per Xometry Records				
Xometry Job	Accepted Date	Shipped Date	Amount	Per Interview of Current and Former Staff
J0035D91	05/19/21	05/25/21	2,900.00	<i>None</i>
Total			<u>\$ 173,097.60</u>	

NOTE: Auditor's notations are italics.

^ - Accepted and Shipped Dates not provided by Xometry, but based on purchase order date, it is properly placed in choronological order.

* - Individual had more hours allocated to jobs in the month than hours worked. These can be explained by timing issues of jobs being billed and/or machine time properly being billed by the individual.

~ - Amount paid was less than the amount listed on the Purchase Order due to credits/advances applied per Xometry's payment records.

Per RT System			
	Job Number	Hours	Notes
Protostudios job - Busch had 8.0 hours to the job.	2751	8.00	The RT name of the job was Protostudios G10 part (Charge This). G10 is garolite which is the material used for this job. Protostudios was billed for 8.0 hrs at a cost of \$624.00 - D3signtech was billed by ProtoStudios for \$624.00.

Report on Special Investigation of the
University of Iowa Department of Physics Machine Shop

Diverted Revenue Through Protostudios
For the Period July 1, 2017 through September 30, 2021

Per Xometry Records				Per RT System		
Xometry Job	Accepted Date	Shipped Date	Amount		Job Number	Hours
J0011F3B	01/22/19	01/28/19	625.00	Protostudios job - Stansberry had 7.0 hours to the job and 5.0 hours to Protostudios training. RT job created by Busch.	1338	7.00 ~
J001607B_1	07/08/19	07/27/19	8,600.00	Protostudios job - Requestor was D3Signtech. Stansberry had 4.0 hours to job 1639 and 11.5 hours to job 1641. RT job 1639 created by Stansberry and RT job 1641 created by Busch. Xometry Spec Drawings included on the RT system as an attachment.	1639 1641	15.50
J001663B	07/19/19	07/30/19	1,102.63	Protostudios job - Stansberry had 16.0 hours to the job. RT job created by Stansberry.	1638	16.00
J00169EB	07/25/19	08/05/19	750.00	Protostudios job - Stansberry had 13.0 hours to the job. RT job created by Busch. Xometry Spec Drawings included on the RT system as an attachment.	1662	13.00

Per Protostudios Invoices									
Invoice Number	Invoice Date	Due Date	Bill To	Terms	Activity	Rate	Qty	Amount	Notes
									Protostudios was billed for 7.0 hrs at a cost of \$539.00
1207	09/23/19	10/23/19	Brian Busch D3signTech LLC	Net 30	Outsource machining services CIB_BOX and puck (RT 1639)	\$ 308.00	1.00	\$ 308.00	Protostudios was billed for 4.0 hrs at a cost of \$308.00. Busch sent a text to a student employee of a picture of a trash can full of metal shavings with shavings piled up on the floor around it. The text included "That's about 1/8 of the shit I've made this weekend. Bags and Bags of Chips." <i>This could be a job that was completed the weekend of 07/19/19 to 07/21/19.</i>
					Protostudios Service Fee (15%)	308.00	0.15	46.20	
								<u>354.20</u>	
1178	05/21/19	06/20/19	Brian Busch D3signTech LLC	Net 30	Outsource Machining services	1,232.00	1.00	1,232.00	Protostudios was billed for 16.0 hrs at a cost of \$1,232.00. Picture of parts in texts between Busch and student employee. Busch also states "I'll make job ticket and put files in it for u. Will bill this through protostudios...throw Spencer a bone"
					Protostudios Service Fee for protostudios members	1,232.00	0.15	184.80	
								<u>1,416.80</u>	
1210	09/23/19	10/23/19	Brian Busch D3signTech LLC	Net 30	Outsource Web Plate	400.00	1.00	400.00	Protostudios was billed a fixed price of \$400.00
					Protostudios Service Fee	400.00	0.15	60.00	
								<u>460.00</u>	

Report on Special Investigation of the
University of Iowa Department of Physics Machine Shop

Diverted Revenue Through Protostudios
For the Period July 1, 2017 through September 30, 2021

Per Xometry Records				Per RT System		
Xometry Job	Accepted Date	Shipped Date	Amount		Job Number	Hours
J001699C	-	-	2,675.00	^ Protostudios job - Stansberry had 21.5 hours to the job. RT job created by Stansberry.	1646	21.50
J0016AB6	07/29/19	08/07/19	2,461.65	Protostudios job - Pestaloozi had 7.50 hours to the job. RT job created by Busch.	1660	7.50 ~
J0016E88	08/05/19	08/14/19	2,850.00	Protostudios job - Pestaloozi had 9.0 hours to the job. RT job created by Busch.	1674	9.00
J0018030	09/09/19	09/25/19	5,250.00	Protostudios job - Stansberry had 13.5 hours to the job. RT job created by Stansberry.	1752	13.50

Per Protostudios Invoices

Invoice Number	Invoice Date	Due Date	Bill To	Terms	Activity	Rate	Qty	Amount	Notes
1208	09/23/19	10/23/19	Brian Busch D3signTech LLC	Net 30	Outsource Machining for Heat Sink	1,655.50	1.00	1,655.50	Protostudios was billed for 21.5 hrs at a cost of \$1,655.50. In Texts between Busch and a student employee, the student asks what the next job is and Busch responds with Heat Sinks.
					Protostudios Service Fee (15%)	1,655.50	0.15	248.33	
								<u>1,903.83</u>	
									Protostudios was billed for 7.5 hrs at a cost of \$577.50
1209	09/23/19	10/23/19	Brian Busch D3signTech LLC	Net 30	Outsource Machining services 2 Ti-Parts	600.00	1.00	600.00	Protostudios was billed a fixed price of \$600.00.
					Protostudios Service Fee (15%)	600.00	0.15	90.00	
								<u>690.00</u>	
1240	11/01/19	12/01/19	Brian Busch D3signTech LLC	Net 30	Services 11/01/2019 Machining Services / Spencer Kuhl: 1752 Calibration Plate 2 pcs MIC-6-September 2019	1,053.00	1.00	1,053.00	Protostudios was billed for 13.5 hrs at a cost of \$1,053.00.
					Protostudios Service Fee (15%)	1,053.00	0.15	157.95	
								<u>1,210.95</u>	

Report on Special Investigation of the
University of Iowa Department of Physics Machine Shop

Diverted Revenue Through Protostudios
For the Period July 1, 2017 through September 30, 2021

Per Xometry Records				Per RT System		
Xometry Job	Accepted Date	Shipped Date	Amount		Job Number	Hours
J0018FD2	10/02/19	10/22/19	3,250.00	Protostudios job - Stansberry had 12.0 hours to the job. RT job created by Busch. Xometry Spec Drawings included on the RT system as an attachment.	1792	12.00
J0019434	10/09/19	10/18/19	1,875.00	Protostudios job - Stansberry had 10.0 hours to the job. RT job created by Busch. Xometry Spec Drawings included on the RT system as an attachment.	1797	10.00

Per Protostudios Invoices

Invoice Number	Invoice Date	Due Date	Bill To	Terms	Activity	Rate	Qty	Amount	Notes
1252	11/08/19	12/08/19	Brian Busch D3signTech LLC	Net 30	Product [ExGen] Machining Services 11/08/2019 - Machining Services / Spencer Kuhl: 1792 - (3) Plates anodize, bag & tag 10/10/19	936.00	1.00	936.00	Protostudios was billed for 12.0 hrs at a cost of \$936.00. In texts between Busch and a student employee, Busch asks the employee if he is working this weekend, the employee confirms, and Busch responds with "I put the job in ur queue please limit charged hours to 12. I can't imagine u would have more actual **Redacted** time in them...machine run time I'm sure u will. The employee responds with ok and asks if he were to work 18 hrs this weekend what should I put the other 6 hrs towards? Busch Responds with "Shop time just do some cleaning and organizing while things are running. Point I am trying to make is I don't super care as long as things get done and we can charge 80 percent of ur time weekly". Pic of Part is also included.
					Protostudios Service Fee (15%) Protostudios Service Fee (15%) for [ExGen] Machining Services - 11/08/2019 - Machining Services / Spencer Kuhl: 1792 (3) Plates anodize, bag & tag - 10/10/19	936.00	0.15	8.00	
					Product [ExGen] Machining Services - 11/08/2019 Machining Services / Spencer Kuhl: 1797 (3) Plates anodize, bag & tag - 10/15/19	780.00	1.00	780.00	Protostudios was billed for 10.0 hrs at a cost of \$780.00. In Text messages between Busch and a student employee. <i>Employee</i> to Busch "How many hours should I put on this job?", Busch responds with 10. Employee confirms.

Report on Special Investigation of the
University of Iowa Department of Physics Machine Shop

Diverted Revenue Through Protostudios
For the Period July 1, 2017 through September 30, 2021

Per Xometry Records				Per RT System		
Xometry Job	Accepted Date	Shipped Date	Amount		Job Number	Hours
J00196AB	10/14/19	10/22/19	3,500.00	Protostudios job - Stansberry had 12.0 hours to the job. RT job created by Stansberry.	1809	12.00

Per Protostudios Invoices

Invoice Number	Invoice Date	Due Date	Bill To	Terms	Activity	Rate	Qty	Amount	Notes
					Protostudios Service Fee (15%) Protostudios Service Fee (15%) for [ExGen] Machining Services - 11/08/2019 - Machining Services / Spencer Kuhl: 1797 (3) Plates anodize, bag & tag - 10/15/19	780.00	0.15	117.00	
					Product [ExGen] Machining Services - 11/08/20 19 Machining Services / Spencer Kuhl: 1809 ProtoStudios ball parts - 10/27/19	936.00	1.00	936.00	RT job name "Protostudios Ball Parts". Picture of part in text messages between Busch and a student employee. The employee asked Busch if there was anything he could work on for 5 hrs tomorrow evening, Busch responded with yes and provided a picture of this part. After a picture of the completed parts was sent by the employee to Busch, the employee asked if there was a ticket for this job. Busch responded with "sorry no just make on call protostudios ball parts".
					Protostudios Service Fee (15%) Protostudios Service Fee (15%) for [ExGen] Machining Services - 11/08/2019 Machining Services / Spencer Kuhl: 1809 - ProtoStudios ball parts - 10/27/19	936.00	0.15	140.40	
								<u>2,917.40</u>	

Report on Special Investigation of the
University of Iowa Department of Physics Machine Shop

Diverted Revenue Through Protostudios
For the Period July 1, 2017 through September 30, 2021

Per Xometry Records				Per RT System		
Xometry Job	Accepted Date	Shipped Date	Amount		Job Number	Hours
J0019C3F	10/23/19	11/07/19	1,412.59	Protostudios job - Stansberry had 8.0 hours to the job. RT job created by Stansberry.	1829	8.00
J001A3BB	11/05/19	11/12/19	1,400.00	Protostudios job - Stansberry had 17.0 hours to the job, however these hours were deleted and moved to job 1841. RT job 1840 created by Stansberry.	1840	- ~
J001A377	11/06/19	11/23/19	4,250.00	Protostudios job - Busch had 16.0 hours to the job and Stansberry had 20.0 hours to the job. RT job 1841 created by Busch.	1841	36.00

Per Protostudios Invoices

Invoice Number	Invoice Date	Due Date	Bill To	Terms	Activity	Rate	Qty	Amount	Notes
1286	01/31/20	03/01/20	Brian Busch D3signTech LLC	Net 30	Product [ExGen] Machining Services - 12/20/2019 - Machining Services / Spencer Kuhl: [ExGen] Machining Services - 11/03/2019 - Machining Services / Spencer Kuhl: 1829 fiberglass disks qty4	624.00	1.00	624.00	RT job name "fiberglass disks qty 4". Per the purchase order and drawings this was for 4 garolite disks. Garolite is fiberglass. Protostudios was billed for 8.0 hrs at a cost of \$624.00. In texts between Busch and a student employee, Busch "How many **REDACTED** hours you suppose?". The employee responds with "It'll probably take about 8 hours to do those fiber glass things and I was planning on working 12 hours total".
						624.00			Protostudios was billed for 36.0.0 hrs at a cost of \$2,808.00 - D3signtech was billed by Protostudios for \$3,229.20. Picture of part in texts between Busch and a student employee.
1255	11/25/19	12/25/19	Brian Busch D3signTech LLC	Net 30	Product [ExGen] Machining Services - 11/25/2019 - Machining Services / Spencer Kuhl: 1841 - ProtoStudios Parts - 11/11/19 - including: 012801C_r_drawing_d_0_r_0qty3, 012800C_r_drawing_d_0_r_0qty1, transreceiver qty1, Mirror swing	2,808.00	1.00	2,808.00	Protostudios was billed for 36.0.0 hrs at a cost of \$2,808.00. Picture of part in texts between Busch and a student employee.

Report on Special Investigation of the
University of Iowa Department of Physics Machine Shop

Diverted Revenue Through Protostudios
For the Period July 1, 2017 through September 30, 2021

Per Xometry Records				Per RT System		
Xometry Job	Accepted Date	Shipped Date	Amount		Job Number	Hours
J001A88B	11/14/19	12/23/19	9,750.00	# Protostudios job - Stansberry had 100.0 hours to the job and 25.0 hours to unbilled time. RT job created by Busch.	1848	100.00

Per Protostudios Invoices

Invoice Number	Invoice Date	Due Date	Bill To	Terms	Activity	Rate	Qty	Amount	Notes
					Protostudios Service Fee (15%) Protostudios service fee (15%) [ExGen] Machining Services - 11/25/2019 - Machining Services / Spencer Kuhl: 1841 - ProtoStudios Parts - 11/11/19 - including: 012801C_r_drawing_d_O_r_Oqty3, 012800C_r_draviing_d_O_r_Oqty1, transreceiver qty1, Mirror swing	2,808.00	0.15	421.20	
					Product (ExGen) Machining Services - 11/29/2019 - Machining Services / Spencer Kuhl: 1819 - (10 pcs) drain valve - 10/28/19	936.00	1.00	936.00	
					Protostudios Service Fee (15%) Protostudios service fee (15%) [ExGen] Machining Services - 11/29/2019 - Machining Services / Spencer Kuhl: 1819 - (10 pcs) drain valve - 10/28/19	936.00	0.15	140.40	
								<u>4,305.60</u>	
1303	03/03/20	04/02/20	Brian Busch D3signTech LLC	Net 30	Product (ExGen) Machining Services 02/04/2020 Protostudios Membership / Spencer Kuhl: Protostudios Membership Protostudios membership from 12/13/19 3/13/19	75.00	3.00	225.00	Protostudios was billed for 100.0 hrs at a cost of \$7,800.00. In texts between Busch and a student employee.

Report on Special Investigation of the
University of Iowa Department of Physics Machine Shop

Diverted Revenue Through Protostudios
For the Period July 1, 2017 through September 30, 2021

Per Xometry Records				Per RT System		
Xometry Job	Accepted Date	Shipped Date	Amount		Job Number	Hours
J0028281	10/20/20	10/29/20	6,600.00	Protostudios job - Crile had 20.0 hours to the job. RT job created by Crile.	2369	20.00
J0028281_1	10/20/20	10/29/20	-	Protostudios job - Crile had 20.0 hours to the job. RT job created by Crile.	2369	20.00
J0028281_2	10/20/20	10/29/20	4,422.00	Protostudios job - Crile had 20.0 hours to the job. RT job created by Crile.	2369	20.00
J0029D31	11/18/20	12/04/20	1,500.00	Protostudios job - Pestalozzi had 13.0 hours to the job. Busch had an adjustment of (5.0) hours to the job. RT job created by Busch.	2415	8.00 ~

Per Protostudios Invoices

Invoice Number	Invoice Date	Due Date	Bill To	Terms	Activity	Rate	Qty	Amount	Notes
					Product [ExGen] Machining Services 02/28/2020	3,978.00	1.00	3,978.00	
					Machining Services / Spencer Kuhl: 1848 Large Monolithic Structure				
					Protostudios Service Fee (15%)	3,978.00	0.15	596.70	
								<u>4,799.70</u>	
1401	12/16/20	01/15/21	Brian Busch D3signTech LLC	Net 30	Service [ExGen] Machining Services - 11/23/2020 - Water Jetting / Dean Farwell: [11:00am 11:20am] Cut 10 brackets out of stainless	75.00	0.50	37.50	Protostudios was billed for 20.0 hrs at a cost of \$1,560.00.
					Service [ExGen] Machining Services - 11/23/2020 - Laser Cutting / Dean Farwell: [12:00pm - 1:00pm] Annealed Part numbers onto 10 Stainless Steel Brackets	75.00	1.00	75.00	Protostudios was billed for 20.0 hrs at a cost of \$1,560.00.
					Product [ExGen] Machining Services - 11/04/2020 - Machining Services / Spencer Kuhl: 2369 Protostudios Delrin Parts	1,560.00	1.00	1,560.00	Protostudios was billed for 20.0 hrs at a cost of \$1,560.00.
					Protostudios Service Fee (15%) Service fee for machining services	1,560.00	0.15	234.00	
								<u>1,906.50</u>	
									Protostudios was billed for 8.0 hrs at a cost of \$624.00.

Report on Special Investigation of the
University of Iowa Department of Physics Machine Shop

Diverted Revenue Through Protostudios
For the Period July 1, 2017 through September 30, 2021

Per Xometry Records				Per RT System		
Xometry Job	Accepted Date	Shipped Date	Amount		Job Number	Hours
J0029D31_1	11/18/20	12/04/20	1,900.00	Protostudios job - Pestalozzi had 13.0 hours to the job. Busch had an adjustment of (5.0) hours to the job. RT job created by Busch.	2415	8.00 ~
J002A179	11/22/20	12/02/20	1,400.00	Protostudios job - Pestalozzi had 12.0 hours to the job. RT job created by Stansberry.	2418	12.00 ~
J002B2E8	12/11/20	12/15/20	3,200.00	Protostudios job - Stansberry had 30.0 hours to the job and 5.0 hours to unbilled time. RT job created by Stansberry.	2451	30.00 ~
J0035D91	05/19/21	05/25/21	2,900.00	Protostudios job - Busch had 8.0 hours to the job. RT job created by Busch.	2751	8.00
Total			<u>\$ 71,673.87</u>			

NOTE: Auditor's notations are italics.

^ - Accepted and Shipped Dates not provided by Xometry, but based on purchase order date, it is properly placed in chronological order.

~ - Job was noted as a Protostudios Job on the RT system, however, it was not billed to Brian Busch/D3signtech.

- Amount paid was less than the amount listed on the Purchase Order due to credits/advances applied per Xometry's payment records.

Per Protostudios Invoices

Invoice Number	Invoice Date	Due Date	Bill To	Terms	Activity	Rate	Qty	Amount	Notes
									Protostudios was billed for 8.0 hrs at a cost of \$624.00.
									Protostudios was billed for 12.0 hrs at a cost of \$936.00
									Protostudios was billed for 30.0 hrs at a cost of \$2,340.00. Picture of Part in text messages between Busch and a student employee.
1510	06/09/21	07/09/21	Brian Busch D3signTech LLC	Net 30	Product [ExGen] Machining Services - 05/12/2021 - Machining Services / Spencer Kuhl: 2751 Protostudios G10 Part	624.00	1.00	624.00	The RT name of the job was Protostudios G10 part (Charge This). G10 is garolite which is the material used for this job. Protostudios was billed for 8.0 hrs at a cost of \$624.00.
								624.00	
								\$ 21,212.98	

**Report on Special Investigation
of the
University of Iowa
Department of Physics and Astronomy – Machine Shop**

Report on Special Investigation of the
University of Iowa Department of Physics Machine Shop

Payments from Brian Busch to Protostudios
For the Period July 1, 2017 through September 30, 2021

Check Date	Check Number	Payee	Description	Check Memo	Amount
12/14/18	100	Protostudios	-	Membership	\$ 225.00
06/12/19	1158	Protostudios	-	1160/1178/1174	2,261.65
11/05/19	1190	Protostudios	-	Rent Payments	3,408.03
01/30/20	1997	Protostudios	-	Labor	4,259.85
12/04/19	1944	Protostudios	-	Labor	4,305.60
06/16/20	2008	Protostudios	-	Invoice# 128621303	5,423.00
08/24/21	##	##	Bill Pay Protostudios on-Line Xxxxxntech 08-24	1350	125.50
12/23/20	##	##	Bill Pay Protostudios on-Line Xxxxxntech 12-23	1361	75.00
12/23/20	##	##	Bill Pay Protostudios on-Line Xxxxxntech 12-23	Invoice 1379	112.50
12/23/20	##	##	Bill Pay Protostudios on-Line Xxxxxntech 12-23	1401	1,906.50
07/15/21	##	##	Bill Pay Protostudios on-Line Xxxxxntech 07-15	Invoice 1475	75.00
07/15/21	##	##	Bill Pay Protostudios on-Line Xxxxxntech 07-15	Invoice 1490	877.07
07/15/21	##	##	Bill Pay Protostudios on-Line Xxxxxntech 07-15	Invoice 1510	624.00
Total					<u>\$ 23,678.70</u>

- The disbursement was a withdrawal from the City's bank account. The date of the withdrawal is shown rather than a check date.

Exhibit E

Report on Special Investigation of the
University of Iowa Department of Physics Machine Shop

Diverted Revenues – Unmatched to a Specific Xometry Job
For the Period July 1, 2017 through September 30, 2021

Per Xometry Records				Month
Xometry Job	Accepted Date	Shipped Date	Amount	
J0010F98	11/26/18	01/10/19	4,250.00	November 2018
Subtotal			4,250.00	
J00113FE	12/11/18	12/24/18	1,250.00	December 2018
J0011573_1	12/16/18	12/24/18	625.00	
J001175E_2	12/24/18	01/02/19	565.00	
Subtotal			2,440.00	
J0011A57	01/08/19	01/18/19	1,450.00	
J0011BAE	01/11/19	01/15/19	525.00	January 2019
J0011FAC	01/23/19	02/11/19	4,250.00	
J001200B	-	-	914.32 ^	
J0011FE1	01/25/19	01/30/19	275.00	
J0012128	01/29/19	02/05/19	709.02	
J0012230	01/30/19	02/01/19	375.00	
J00121C6	01/30/19	02/05/19	604.35	
Subtotal			9,102.69	
-	-	-	-	February 2019
-	-	-	-	March 2019
J0014073	04/24/19	05/13/19	2,000.00	April 2019
Subtotal			2,000.00	
J0014CB8	05/25/19	06/15/19	518.93	May 2019
J0014C54	05/28/19	06/17/19	765.00	
J0014CFB	05/28/19	06/18/19	1,250.00	
Subtotal			2,533.93	
J0015400	06/11/19	06/23/19	799.49	June 2019
J001568F	06/17/19	06/18/19	502.00	
J0015A0B	06/21/19	07/05/19	950.00	
J0015A2A	06/24/19	07/09/19	500.00	
J0015A6E	06/25/19	06/30/19	647.50	
Subtotal			3,398.99	

Report on Special Investigation of the
University of Iowa Department of Physics Machine Shop

Diverted Revenues – Unmatched to a Specific Xometry Job
For the Period July 1, 2017 through September 30, 2021

Per Xometry Records				Month
Xometry Job	Accepted Date	Shipped Date	Amount	
J0015E85	07/02/19	07/10/19	436.03	July 2019
J00160F6	07/09/19	07/15/19	525.00	
J001616F	07/10/19	07/17/19	825.00	
J0016271	07/12/19	07/17/19	375.00	
J00162BD	07/12/19	07/18/19	425.00	
J00164EF	07/18/19	07/25/19	800.00	
J0016B68	07/30/19	08/13/19	2,275.00	
J0016BE7	-	-	1,600.00 ^	
Subtotal			7,261.03	
J0016FE8	08/07/19	08/15/19	2,000.00	August 2019
J0016FE5	08/08/19	08/23/19	615.86	
J0016FE6	08/09/19	08/19/19	1,525.00	
J0017457	08/16/19	08/30/19	172.37 #	
J0017759	08/22/19	08/29/19	750.00	
J00177CB	08/23/19	09/11/19	825.00	
J00177BC	08/23/19	09/20/19	4,250.00	
J00178FB	08/26/19	09/03/19	1,152.80	
J0017A72	08/28/19	09/09/19	503.62	
J0017B78	08/30/19	09/05/19	3,250.00	
J0017BE4	08/30/19	09/09/19	1,088.97 #	
Subtotal			16,133.62	
J0017E6D	09/05/19	09/10/19	1,250.00	September 2019
J0017F00	09/09/19	09/20/19	1,275.00	
J001828D	09/12/19	09/27/19	6,221.18	
J00182DB	09/13/19	09/20/19	3,250.00	
J00184B8	09/17/19	10/11/19	6,750.00	
J0018BC4	09/23/19	09/30/19	2,625.00	
J0018E2C	09/27/19	10/08/19	2,875.00	
Subtotal			24,246.18	

Exhibit E

Report on Special Investigation of the
University of Iowa Department of Physics Machine Shop

Diverted Revenues – Unmatched to a Specific Xometry Job
For the Period July 1, 2017 through September 30, 2021

Per Xometry Records				Month
Xometry Job	Accepted Date	Shipped Date	Amount	
J0018FD1	10/01/19	10/09/19	1,875.00	October 2019
J001919F	10/04/19	10/09/19	375.00	
J00191AB	10/04/19	10/12/19	530.66	
J00193EE	10/09/19	10/18/19	2,053.79	
J001946A	10/10/19	10/18/19	666.50 !	
J00195CE_2	10/11/19	11/06/19	1,100.00	
J0019A00	10/18/19	10/24/19	500.00	
J0019B8B	-	-	800.00 ^	
J0019DE1	10/25/19	11/09/19	1,250.00	
J0019EF4	10/30/19	11/07/19	2,392.25	
Subtotal			11,543.20	
J001A24E	11/01/19	11/07/19	456.04	November 2019
J001A544	11/08/19	11/19/19	2,250.00	
J001A95A	11/15/19	11/27/19	750.00	
J001AAF6	11/18/19	11/27/19	3,000.00	
J001AA06	11/19/19	12/03/19	2,575.00	
J001AB68	11/21/19	12/03/19	2,750.00	
Subtotal			11,781.04	
J001B179	12/03/19	12/09/19	3,625.00	December 2019
J001B1EF	12/03/19	12/10/19	500.00	
J001B425	12/07/19	12/20/19	2,350.00	
J001B51F_1	12/10/19	01/08/20	3,500.00	
J001B536_1	12/11/19	12/17/19	3,209.18	
J001B6A4	12/11/19	12/17/19	1,150.00	
J001BC2F	12/20/19	01/02/20	1,500.00	
J001BDB6_1	12/24/19	01/08/20	2,675.00	
Subtotal			18,509.18	
J001C059	01/03/20	01/23/20	5,750.00	
J001C162	01/07/20	01/15/20	250.00	
J001C15F	01/07/20	02/10/20	1,550.00	

Report on Special Investigation of the
University of Iowa Department of Physics Machine Shop

Diverted Revenues – Unmatched to a Specific Xometry Job
For the Period July 1, 2017 through September 30, 2021

Per Xometry Records				Month
Xometry Job	Accepted Date	Shipped Date	Amount	
J001C3F5	01/12/20	01/15/20	500.00	January 2020
J001C57E	01/14/20	01/28/20	450.00	
J001C67A	01/16/20	01/21/20	1,850.00	
J001C982	01/22/20	01/29/20	1,875.00	
J001CA44	01/23/20	02/07/20	3,950.00	
J001CC03	01/26/20	02/05/20	2,400.00	
J001CC9E	01/27/20	02/11/20	4,700.00	
J001CF7C	01/30/20	02/18/20	250.00	
Subtotal			23,525.00	
J001D15C	02/04/20	02/10/20	2,400.00	February 2020
J001D2E9	02/05/20	02/13/20	3,250.00	
J001D511	02/07/20	02/14/20	2,500.00	
J001D516	02/07/20	02/18/20	2,450.00	
J001D72B	02/12/20	02/25/20	2,150.00	
J001D85C	02/13/20	02/26/20	4,200.00	
J001D82B_1	-	-	200.00 ^	
J001D8BA	02/14/20	03/03/20	800.00	
J001D945	02/14/20	03/24/20	13,900.00	
J001D999	02/17/20	03/02/20	1,000.00	
J001D991	02/17/20	03/03/20	800.00	
J001DD35	02/21/20	03/02/20	1,450.00	
J001DD8D	02/24/20	03/03/20	1,046.93	
J001E09A	02/26/20	03/04/20	1,600.00	
J001E2D0	02/28/20	03/09/20	1,900.00	
J001E430	02/29/20	03/05/20	1,800.00	
J001E3E3	02/29/20	03/19/20	2,900.00	
Subtotal			44,346.93	
J001E521	03/04/20	03/10/20	2,033.69	
J001E725	03/04/20	03/18/20	1,500.00	
J001E8C3_2	03/06/20	03/26/20	3,500.00	
J001ED20	03/12/20	03/31/20	1,800.00	

Exhibit E

Report on Special Investigation of the
University of Iowa Department of Physics Machine Shop

Diverted Revenues – Unmatched to a Specific Xometry Job
For the Period July 1, 2017 through September 30, 2021

Per Xometry Records				Month
Xometry Job	Accepted Date	Shipped Date	Amount	
J001EE26	03/13/20	03/23/20	1,122.27 #	
J001EED6	03/16/20	03/20/20	800.00	
J001F06F	03/17/20	03/24/20	1,250.00	
J001F2CF	03/19/20	03/31/20	500.00	
J001F2DE	03/19/20	04/02/20	450.00	
J001F31E	03/20/20	04/14/20	4,000.00	
J001F4B5	03/23/20	03/31/20	500.00	
J001F4B6	03/23/20	04/02/20	3,000.00	
J001F5E0	03/25/20	03/31/20	240.93	
J001F7CB	03/30/20	04/10/20	1,700.00	
Subtotal			22,396.89	March 2020
J001F9A9	04/01/20	04/23/20	3,980.00	
J001F9EB	04/02/20	04/17/20	2,422.12 #	
J001FBDD	04/07/20	04/22/20	1,967.51	
J001FF51	04/13/20	04/14/20	63.69	
J001FF8F	04/14/20	04/21/20	195.79	
J001FFBF	04/14/20	04/27/20	105.00	
J001FFF0	04/15/20	04/30/20	1,805.00	
J0020253	04/17/20	04/22/20	250.00	
J0020383	04/21/20	04/27/20	1,800.00	
J00204A8	04/22/20	04/24/20	7,000.00	
J0020452	04/22/20	04/29/20	155.00	
J0020516	04/23/20	04/29/20	93.99	
J0020579	04/24/20	04/30/20	1,500.00	
J00205F6	04/24/20	05/05/20	1,800.00	
J0020646	04/25/20	04/30/20	900.00	
J002072A	-	-	333.93 ^	
J0020838	04/28/20	05/20/20	2,300.00	
J00207F6	04/29/20	05/06/20	101.85	

Report on Special Investigation of the
University of Iowa Department of Physics Machine Shop

Diverted Revenues – Unmatched to a Specific Xometry Job
For the Period July 1, 2017 through September 30, 2021

Per Xometry Records				Month
Xometry Job	Accepted Date	Shipped Date	Amount	
J0020919	04/29/20	05/15/20	1,600.00	April 2020
J0020938	04/30/20	05/04/20	165.00	
J00209DB	04/30/20	05/18/20	1,600.00	
Subtotal			30,138.88	
J0020AE4	05/02/20	05/04/20	245.00	
J0020BC5	05/04/20	05/05/20	400.00	
J0020B71	05/04/20	05/12/20	350.00	
J0020C14	05/05/20	05/05/20	136.88	
J0020C47	05/05/20	05/05/20	149.74	
J0020C3E	05/05/20	05/06/20	190.00	
J0020B79	05/05/20	05/08/20	273.00	
J0020C3D	05/05/20	05/22/20	975.00	
J0020CC4	05/06/20	05/13/20	400.00	
J0020DAC	05/07/20	05/13/20	5,500.00	
J0020EAC	05/08/20	05/13/20	305.55	
J0020F68	05/10/20	05/11/20	250.00	
J0021082	05/12/20	05/15/20	300.00	
J0021092	05/12/20	05/15/20	206.60	
J00210FA	05/12/20	05/28/20	125.00	
J00211ED	05/14/20	05/18/20	250.00	
J00211EE	05/14/20	05/26/20	1,000.00	
J002150A	05/19/20	05/29/20	210.95	
J002150A_1	05/19/20	05/29/20	450.00	
J00214AA	05/19/20	06/09/20	421.72	
J00215F3	05/20/20	06/05/20	2,495.00	
J002174A	05/22/20	05/28/20	70.99	
J0021796	05/23/20	06/08/20	1,250.00	
J00217D5	05/26/20	05/28/20	58.00	
J0021851	05/26/20	06/03/20	205.97	
J002183C	05/26/20	06/08/20	369.88	
J00219BE	05/28/20	06/01/20	900.00	

Exhibit E

Report on Special Investigation of the
University of Iowa Department of Physics Machine Shop

Diverted Revenues – Unmatched to a Specific Xometry Job
For the Period July 1, 2017 through September 30, 2021

Per Xometry Records				Month
Xometry Job	Accepted Date	Shipped Date	Amount	
J00219F8	05/28/20	06/09/20	3,500.00	May 2020
J0021ABA	05/29/20	06/04/20	700.00	
J0021AB4	05/29/20	06/15/20	144.41	
Subtotal			21,833.69	
J0021BD6	06/02/20	06/02/20	79.00	May 2020
J0021C87	06/02/20	06/08/20	800.00	
J0021D02	06/03/20	06/03/20	150.83	
J0021DA9	06/04/20	06/11/20	205.00	
J0021DAA	06/04/20	06/12/20	900.00	
J0021E08	06/05/20	06/22/20	1,400.00	
J00220DC	06/09/20	06/11/20	124.41	
J00220EA	06/09/20	06/11/20	100.00	
J0022108	06/09/20	06/17/20	1,377.69	
J0022108_1	06/09/20	06/17/20	1,800.00	
J0022154	06/09/20	06/24/20	2,133.09	
J0022154_1	06/09/20	06/24/20	3,300.00	
J0022395	06/12/20	06/16/20	115.92	
J0022572	06/16/20	06/16/20	200.00	
J0022575	06/16/20	06/18/20	150.00	
J0022574	06/16/20	06/25/20	900.00	
J0022573	06/16/20	06/30/20	1,650.00	
J0022829	06/18/20	06/25/20	1,500.00	
J0022757	06/18/20	06/26/20	800.00	
J0022878	06/19/20	06/23/20	126.75	
J00228C1	06/19/20	06/25/20	71.88	
J00228FF	06/19/20	06/25/20	109.19	
J0022939	06/20/20	07/06/20	175.00	
J0022970	06/22/20	06/23/20	90.56	
J002295A	06/22/20	06/25/20	159.01	
J002295B	06/22/20	06/25/20	132.96	
J0022A0F	06/22/20	06/29/20	2,206.88	

Report on Special Investigation of the
University of Iowa Department of Physics Machine Shop

Diverted Revenues – Unmatched to a Specific Xometry Job
For the Period July 1, 2017 through September 30, 2021

Per Xometry Records				Month
Xometry Job	Accepted Date	Shipped Date	Amount	
J0022994	06/22/20	07/02/20	13,000.00	June 2020
J0022B9F	06/24/20	06/25/20	650.00	
J0022C68	06/24/20	07/02/20	67.39	
J0022B9E	06/24/20	08/20/20	6,000.00	
J0022C8E	06/25/20	07/02/20	750.00	
J0022D3B	06/25/20	07/10/20	492.93	
J0022F43	06/30/20	07/15/20	500.00	
Subtotal			42,218.49	
J00230FF	07/02/20	07/09/20	337.79	
J00230FF_1	07/02/20	07/09/20	700.00	
J0023246	07/03/20	07/15/20	2,000.00	
J0023244	07/03/20	07/16/20	600.00	
J0023244_1	07/03/20	07/16/20	900.00	
J002327A	07/06/20	07/15/20	700.00	
J002327A_1	07/06/20	07/15/20	700.00	
J002327A_2	07/06/20	07/15/20	1,100.00	
J002358A	07/09/20	07/20/20	925.00	
J0023723	07/10/20	07/15/20	192.25	
J00237C8	07/13/20	07/20/20	780.73	
J00237D2	07/13/20	07/25/20	333.53	
J002377F	07/14/20	07/17/20	300.00	
J00238D9	07/14/20	07/25/20	525.00	
J00238FC	07/14/20	07/25/20	500.00	
J0023923	07/15/20	08/10/20	3,800.00	
J0023923_1	07/15/20	08/10/20	3,800.00	
J0023923_2	07/15/20	08/10/20	4,300.00	
J0023923_3	07/15/20	08/10/20	5,600.00	
J0023DDE	07/22/20	07/31/20	1,000.00	
J0023EC0	07/23/20	08/13/20	14,300.00	
J002408C	07/26/20	07/30/20	550.00	
J002408D	07/26/20	07/30/20	500.00	

Exhibit E

Report on Special Investigation of the
University of Iowa Department of Physics Machine Shop

Diverted Revenues – Unmatched to a Specific Xometry Job
For the Period July 1, 2017 through September 30, 2021

Per Xometry Records				Month
Xometry Job	Accepted Date	Shipped Date	Amount	
J00242E1	07/29/20	08/06/20	300.00	July 2020
J00242E2	07/29/20	08/06/20	290.00	
J00242E0	07/29/20	08/18/20	300.00	
J002441E	07/30/20	08/10/20	330.00	
J0024425	07/30/20	08/10/20	1,500.00	
J00244BE	07/31/20	08/13/20	4,200.00	
Subtotal			51,364.30	
J0024631	08/03/20	08/18/20	3,000.00	August 2020
J0024631_1	08/03/20	08/18/20	3,500.00	
J002472B	08/04/20	08/13/20	39.26	
J002472B_1	08/04/20	08/13/20	80.00	
J00247CE	08/05/20	09/01/20	3,400.00	
J0024AFE	08/09/20	08/21/20	3,500.00	
J0024CE4	08/12/20	08/26/20	1,200.00	
J0024DC7	08/13/20	08/18/20	2,200.00	
J0024F71	08/15/20	08/19/20	750.00	
J0024F7D	08/15/20	08/19/20	350.00	
J0024F72	08/15/20	09/04/20	1,100.00	
J002519E	08/19/20	08/24/20	1,200.00	
J002519D	08/19/20	09/09/20	2,300.00	
J00252CF	08/20/20	08/21/20	500.00	
J00252D0	08/20/20	09/16/20	3,000.00	
J00252D0_1	08/20/20	09/16/20	3,316.00	
J0025621	08/25/20	08/25/20	160.00	
J0025A21	08/28/20	09/03/20	410.00	
J0025A26	08/28/20	09/10/20	1,100.00	
J0025A44	08/29/20	09/04/20	630.00	
J0025B67	08/31/20	09/08/20	800.00	
Subtotal			32,535.26	
J0025CBA	09/02/20	09/10/20	650.00	
J0025D60	09/03/20	09/06/20	152.60	

Report on Special Investigation of the
University of Iowa Department of Physics Machine Shop

Diverted Revenues – Unmatched to a Specific Xometry Job
For the Period July 1, 2017 through September 30, 2021

Per Xometry Records				Month
Xometry Job	Accepted Date	Shipped Date	Amount	
J0025FEF	09/08/20	09/21/20	1,300.00	
J0026142	09/09/20	09/12/20	844.07	
J0026142_1	09/09/20	09/12/20	1,250.00	
J0026117	09/09/20	09/14/20	125.00	
J0025F8F	09/09/20	09/15/20	265.58	
J0025F8F_1	09/09/20	09/15/20	600.00	
J002641E	09/11/20	09/24/20	5,000.00	
J0026670	09/15/20	09/23/20	900.00	
J0026586	09/15/20	09/25/20	600.00	
J0026586_1	09/15/20	09/25/20	900.00	
J0026585	09/15/20	09/28/20	900.00	
J0026A52	09/21/20	10/08/20	204.60	
J0026A52_1	09/21/20	10/08/20	360.00	
J0026AF7	09/22/20	10/05/20	203.55	
J0026AF7_1	09/22/20	10/05/20	430.00	
J0026BB2	09/22/20	10/05/20	630.45	
J0026BB2_1	09/22/20	10/05/20	780.00	
J0026CEA	09/23/20	09/29/20	800.00	
J0026C58	09/23/20	10/11/20	206.38	
J0026C58_1	09/23/20	10/11/20	430.00	
J0026DF6	09/24/20	10/15/20	1,550.00	
J0026E89	09/25/20	10/02/20	850.00	
J0026E8A	09/25/20	10/15/20	1,600.00	
J0026FDE	09/27/20	09/29/20	1,000.00	
J0026FDD	09/27/20	10/05/20	640.00	
J0026FB3	09/28/20	10/02/20	700.00	
J0026FCE	09/28/20	10/16/20	1,264.73	
J0026FCE_1	09/28/20	10/16/20	2,000.00	
J0027180	09/29/20	10/13/20	800.00	
J00270E4	09/29/20	10/19/20	3,200.00	
J00270E4_1	09/29/20	10/19/20	3,200.00	

Exhibit E

Report on Special Investigation of the
University of Iowa Department of Physics Machine Shop

Diverted Revenues – Unmatched to a Specific Xometry Job
For the Period July 1, 2017 through September 30, 2021

Per Xometry Records				Month
Xometry Job	Accepted Date	Shipped Date	Amount	
J00272D2	09/30/20	10/07/20	1,710.57	September 2020
Subtotal			36,047.53	
J0027351	10/01/20	10/07/20	1,000.00	September 2020
J0027350	10/01/20	10/09/20	980.00	
J0027453	10/02/20	11/05/20	5,500.00	
J0027574	10/03/20	10/08/20	650.00	
J00275A1	10/05/20	10/12/20	135.12	
J00275A1_1	10/05/20	10/12/20	260.00	
J0027518	10/05/20	10/22/20	76.07	
J0027518_1	10/05/20	10/22/20	130.00	
J0027937	10/08/20	10/13/20	2,050.00	
J0027AA5	10/12/20	10/20/20	2,500.00	
J0027AA6	10/12/20	10/20/20	2,000.00	
J0027E49	10/15/20	10/22/20	1,000.00	
J002803E	10/16/20	10/23/20	1,250.00	
J0028408	10/21/20	10/28/20	1,200.00	
J002840A	10/21/20	11/01/20	1,030.00	
J0028845	10/24/20	11/11/20	1,800.00	
J00288B6	10/26/20	10/29/20	500.00	
J002897C	10/27/20	11/02/20	3,000.00	
J0028DBC	10/30/20	11/04/20	630.45	
J0028DBC_1	10/30/20	11/04/20	1,000.00	
J0028D6F	10/30/20	11/12/20	1,300.00	
J0028E6A	10/30/20	11/15/20	1,500.00	
Subtotal			29,491.64	
J0028FD1	11/03/20	11/05/20	412.03	October 2020
J0029086	11/03/20	11/19/20	2,300.00	
J002950B	11/07/20	11/11/20	700.00	
J0029513	11/08/20	11/11/20	500.00	
J0029514	11/08/20	12/16/20	3,300.00	
J0029514_1	11/08/20	12/16/20	3,900.00	

Report on Special Investigation of the
University of Iowa Department of Physics Machine Shop

Diverted Revenues – Unmatched to a Specific Xometry Job
For the Period July 1, 2017 through September 30, 2021

Per Xometry Records				Month
Xometry Job	Accepted Date	Shipped Date	Amount	
J00299E9	11/13/20	11/28/20	500.00	November 2020
J0029A97	11/13/20	11/30/20	1,700.00	
J0029C1C	11/16/20	11/19/20	850.00	
J0029B26	11/16/20	11/20/20	700.00	
J0029B5A	11/16/20	11/23/20	600.00	
J0029FEA	11/19/20	12/07/20	700.00	
J0029FEA_1	11/19/20	12/07/20	1,100.00	
J002A09A	11/20/20	12/15/20	1,600.00	
J002A09A_1	11/20/20	12/15/20	2,000.00	
J002A17B	11/22/20	11/28/20	700.00	
J002A17A	11/22/20	11/30/20	500.00	
J002A3F6	11/24/20	11/30/20	1,600.00	
J002A25D	11/24/20	12/02/20	1,600.00	
J002A40A	11/24/20	12/02/20	900.00	
Subtotal			26,162.03	
J002A74E	12/01/20	12/08/20	700.00	
J002A7CD	12/01/20	12/08/20	500.00	
J002A8AA	12/02/20	12/08/20	350.00	
J002A9E6	12/02/20	12/15/20	700.00	
J002A8AF	12/02/20	12/16/20	650.00	
J002A8AF_1	12/02/20	12/16/20	1,000.00	
J002A9E1	12/02/20	12/18/20	600.00	
J002AB05	12/03/20	12/17/20	500.00	
J002AB09	12/03/20	12/17/20	500.00	
J002AB55	12/03/20	12/31/20	22,000.00	
J002BA8F	12/20/20	12/29/20	300.00	
J002BA91	12/20/20	12/30/20	600.00	
J002BA8E	12/20/20	01/06/21	1,200.00	
J002BA90	12/20/20	01/06/21	600.00	
J002BA8D	12/20/20	01/15/21	2,000.00	
J002BA8D_1	12/20/20	01/15/21	-	

Exhibit E

Report on Special Investigation of the
University of Iowa Department of Physics Machine Shop

Diverted Revenues – Unmatched to a Specific Xometry Job
For the Period July 1, 2017 through September 30, 2021

Per Xometry Records				Month
Xometry Job	Accepted Date	Shipped Date	Amount	
J002BBED	12/22/20	01/13/21	800.00	December 2020
J002BE35	12/23/20	12/31/20	2,000.00	
J002BCED	12/23/20	01/12/21	1,000.00	
J002BE52	12/24/20	01/05/21	2,000.00	
J002BEC6	12/27/20	01/11/21	700.00	
J002BEE9	12/28/20	01/04/21	89.18	
J002BEE9_1	12/28/20	01/04/21	160.00	
J002C101	12/30/20	01/08/21	1,100.00	
J002C1E3	12/31/20	01/13/21	2,500.00	
Subtotal			42,549.18	
J002C3AC	01/05/21	01/15/21	1,000.00	
J002C4F3	01/06/21	01/19/21	1,200.00	
J002C55B	01/07/21	01/13/21	800.00	
J002C5D1	01/07/21	01/18/21	700.00	
J002C712	01/09/21	01/21/21	1,350.00	
J002C772	01/11/21	01/25/21	900.00	
J002C8CD	01/12/21	01/20/21	800.00	
J002C8E9	01/12/21	01/29/21	500.00	
J002C8E9_1	01/12/21	01/29/21	-	
J002CC42	01/15/21	01/21/21	1,000.00	
J002CD21	01/15/21	01/23/21	1,200.00	
J002CDD0	01/18/21	02/10/21	600.00	
J002CDD0_1	01/18/21	02/10/21	700.00	
J002CDD0_2	01/18/21	02/10/21	600.00	
J002CDD0_3	01/18/21	02/10/21	600.00	
J002CDD0_4	01/18/21	02/10/21	600.00	
J002D29E	01/21/21	02/09/21	1,600.00	
J002D2B2	01/22/21	01/28/21	1,000.00	
J002D321	01/22/21	02/01/21	1,100.00	
J002D501	-	-	3,000.00	
J002D889	01/28/21	02/01/21	1,100.00	

Report on Special Investigation of the
University of Iowa Department of Physics Machine Shop

Diverted Revenues – Unmatched to a Specific Xometry Job
For the Period July 1, 2017 through September 30, 2021

Per Xometry Records				Month
Xometry Job	Accepted Date	Shipped Date	Amount	
J002D94E	01/28/21	02/03/21	1,250.00	January 2021
J002D9BE	01/29/21	02/03/21	650.00	
J002DB5A	01/31/21	02/08/21	350.00	
Subtotal			22,600.00	
J002DCDB	02/02/21	02/09/21	2,000.00	February 2021
J002DCDE	02/02/21	02/10/21	2,200.00	
J002DCDE_1	02/02/21	02/10/21	2,200.00	
J002F24C	02/22/21	03/09/21	900.00	
J002F711	02/24/21	03/08/21	3,500.00	
J002F711_1	02/24/21	03/08/21	3,500.00	
J002F8B1	02/25/21	03/04/21	4,000.00	
J002F7B8	02/25/21	03/10/21	1,000.00	
Subtotal			19,300.00	
J003009A	03/05/21	03/10/21	1,617.37	
J003009C	03/05/21	03/12/21	1,705.01	
J0034440	03/05/21	05/11/21	1,800.00	
J0030354	03/08/21	03/17/21	1,223.77	
J0030496	03/09/21	03/15/21	200.00	
J0030523	03/10/21	03/23/21	2,000.00	
J00308C4	03/12/21	03/16/21	225.00	
J0030915	03/12/21	03/19/21	447.40	
J0030911	03/12/21	03/30/21	163.65	
J0030B3E	03/15/21	04/15/21	3,600.00	
J0030B3E_1	03/15/21	04/15/21	3,600.00	
J0030B3E_2	03/15/21	04/15/21	3,600.00	
J0030C3A	03/16/21	03/18/21	250.00	
J0031056	03/18/21	05/24/21	5,500.00	
J0031056_1	03/18/21	05/24/21	5,500.00	
J0031056_2	03/18/21	05/24/21	6,300.00	
J0031560	03/23/21	04/05/21	329.92	
J00317BD	03/25/21	03/30/21	1,250.00	

Exhibit E

Report on Special Investigation of the
University of Iowa Department of Physics Machine Shop

Diverted Revenues – Unmatched to a Specific Xometry Job
For the Period July 1, 2017 through September 30, 2021

Per Xometry Records				Month
Xometry Job	Accepted Date	Shipped Date	Amount	
J0031B9C	03/29/21	04/02/21	525.00	March 2021
J003193D	03/30/21	04/02/21	975.00	
J0031C31_1	03/31/21	04/13/21	1,100.00	
Subtotal			41,912.12	
J0032195	04/02/21	04/07/21	837.37	March 2021
J0032056	04/03/21	04/07/21	750.00	
J00323F2	04/05/21	04/12/21	815.41	
J00323F2_1	04/05/21	04/12/21	815.41	
J00323DB	04/06/21	04/15/21	450.00	
J00323DB_1	04/06/21	04/15/21	450.00	
J00325DC	04/07/21	04/12/21	2,500.00	
J00325DC_1	04/07/21	04/12/21	2,500.00	
J00327E6	04/09/21	04/27/21	1,250.00	
J0032A5D	04/09/21	04/28/21	1,753.00	
J0032AF7	04/12/21	04/22/21	925.00	
J0032D87	04/13/21	04/17/21	475.00	
J0032F51	04/14/21	04/14/21	300.00	
J0032F26	04/14/21	04/21/21	1,900.00	
J0033223	04/16/21	04/21/21	135.00	
J003335F	04/16/21	04/28/21	3,250.00	
J0033505	04/19/21	04/27/21	600.00	
J0033641	04/20/21	04/25/21	625.00	
J003398C	04/21/21	04/27/21	2,250.00	
J0033A87	04/22/21	04/24/21	625.00	
J00337E0	04/22/21	04/26/21	475.00	
J00336D1	04/22/21	04/29/21	750.00	
J0033ECB	04/26/21	04/30/21	850.00	
J0033D90	04/26/21	05/05/21	800.00	
J0033E7F	04/27/21	05/03/21	500.00	
J0033F39	04/27/21	05/03/21	600.00	
J0034091	04/27/21	05/05/21	900.00	

Report on Special Investigation of the
University of Iowa Department of Physics Machine Shop

Diverted Revenues – Unmatched to a Specific Xometry Job
For the Period July 1, 2017 through September 30, 2021

Per Xometry Records				Month
Xometry Job	Accepted Date	Shipped Date	Amount	
J00341C8	04/28/21	05/05/21	646.91	
J0034461	04/30/21	05/11/21	500.00	
Subtotal			29,228.10	April 2021
J0034870	05/03/21	05/06/21	500.00	
J003465C	05/03/21	05/15/21	1,500.00	
J00347BB	05/03/21	05/17/21	1,750.00	
J0034771	05/04/21	06/03/21	5,500.00	
J0034BBD	05/05/21	05/13/21	1,200.00	
J0034BBD_1	05/05/21	05/13/21	1,200.00	
J0034AF5	05/05/21	05/20/21	6,000.00	
J0034AF5_1	05/05/21	05/20/21	6,000.00	
J0034C6E	05/06/21	05/12/21	350.00	
J0034AF7	05/06/21	05/13/21	925.00	
J0034E2A	05/07/21	05/12/21	575.00	
J0034D2C	05/07/21	05/14/21	800.00	
J0034D2C_1	05/07/21	05/14/21	800.00	
J0034F35	05/07/21	05/20/21	9,500.00	
J0034F35_1	05/07/21	05/20/21	9,500.00	
J0034F35_2	05/07/21	05/20/21	5,777.18	
J0034D2A	05/07/21	05/27/21	1,200.00	
J0034D24	05/08/21	05/17/21	1,200.00	
J0034D24_1	05/08/21	05/17/21	1,200.00	
J0034E0B	05/10/21	05/12/21	750.00	
J00350F8	05/10/21	05/18/21	500.00	
J003525F	05/10/21	06/01/21	547.88	
J003554F	05/12/21	05/25/21	900.00	
J00359FA	05/14/21	05/19/21	1,000.00	
J0035AD8	05/19/21	05/20/21	600.00	
J0035A46	05/19/21	05/27/21	1,200.00	
J00360E9	05/22/21	06/05/21	1,250.00	
J00365F7	05/25/21	06/01/21	800.00	

Exhibit E

Report on Special Investigation of the
University of Iowa Department of Physics Machine Shop

Diverted Revenues – Unmatched to a Specific Xometry Job
For the Period July 1, 2017 through September 30, 2021

Per Xometry Records				Month
Xometry Job	Accepted Date	Shipped Date	Amount	
J0036487	05/26/21	06/05/21	900.00	May 2021
J0036AEB	05/28/21	06/01/21	905.00	
J0036BBD	05/31/21	06/16/21	1,174.00	
Subtotal			66,004.06	
J0036EE1	06/03/21	06/08/21	826.60	June 2021
J0036E4D	06/03/21	06/25/21	3,438.75	
J0037652	06/09/21	07/16/21	5,551.36	
J0037861	06/10/21	06/21/21	900.00	
J00377AB	06/11/21	06/24/21	1,200.00	
J0037929	06/12/21	06/17/21	1,200.00	
J00379BD	06/13/21	06/17/21	900.00	
J0037FAE	06/17/21	06/30/21	900.00	
J003822F	06/21/21	06/25/21	1,800.00	
J00382AC	06/21/21	07/08/21	900.00	
J00383AF	06/22/21	07/08/21	300.00	
J0038686	06/23/21	07/14/21	1,500.00	
J0038974	06/25/21	07/13/21	1,975.00	
J0038974_1	06/25/21	07/13/21	1,975.00	
Subtotal			23,366.71	
J003A810	07/22/21	07/28/21	450.00	July 2021
J003A7AE	07/22/21	08/04/21	3,000.00	
J003AA35	07/23/21	07/28/21	900.00	
J003A7EC	07/23/21	07/30/21	1,350.00	
J003A939	07/23/21	08/02/21	150.00	
J003AA17	07/23/21	08/03/21	600.00	
J003ACAD	07/27/21	08/12/21	1,700.00	
J003AF91	07/29/21	08/02/21	500.00	
J003AF42	07/29/21	08/20/21	1,900.00	
J003AF42_1	07/29/21	08/20/21	1,900.00	
Subtotal			12,450.00	

Report on Special Investigation of the
University of Iowa Department of Physics Machine Shop

Diverted Revenues – Unmatched to a Specific Xometry Job
For the Period July 1, 2017 through September 30, 2021

Per Xometry Records				Month
Xometry Job	Accepted Date	Shipped Date	Amount	
J003B438	08/02/21	08/12/21	128.72	August 2021
J003B526	08/03/21	08/09/21	250.00	
J003B91E	08/05/21	08/18/21	2,699.63	
J003B83A	08/06/21	08/09/21	750.00	
J003BC27	08/09/21	08/17/21	1,100.00	
J003BD48	08/10/21	08/13/21	2,500.00	
J003C43D	08/13/21	08/23/21	600.00	
J003C435	08/13/21	08/29/21	575.00	
J003C622	08/17/21	08/23/21	600.00	
J003CC83	08/19/21	08/30/21	600.00	
J003CA4E	08/19/21	09/09/21	885.00	
J003CFA7	08/23/21	09/16/21	4,800.00	
J003D222	08/24/21	09/14/21	1,814.06	
J003D222_1	08/24/21	09/14/21	1,814.06	
J003D001	08/25/21	08/31/21	449.23	
J003D2A5	08/26/21	09/11/21	550.00	
J003D6B9	08/26/21	09/12/21	2,250.00	
J003D74A	08/27/21	09/07/21	400.00	
J003D808	08/27/21	09/14/21	500.00	
J003D806	08/27/21	09/22/21	2,650.00	
J003D8B9	08/30/21	09/07/21	350.00	
J003DB13	08/31/21	09/09/21	1,150.00	
Subtotal			27,415.70	
J003DDA4	09/02/21	09/14/21	1,200.00	
J003E1E7	09/07/21	09/16/21	1,900.00	
J003F47D	09/21/21	09/27/21	600.00	
J003F4F8	09/21/21	10/05/21	2,000.00	
J003F4F8_1	09/21/21	10/05/21	2,000.00	
J003F4F8_2	09/21/21	10/05/21	2,200.00	
J003F60D	09/22/21	09/29/21	950.00	
J003F704	09/22/21	10/07/21	700.00	

Exhibit E

Report on Special Investigation of the
University of Iowa Department of Physics Machine Shop

Diverted Revenues – Unmatched to a Specific Xometry Job
For the Period July 1, 2017 through September 30, 2021

Per Xometry Records				Month
Xometry Job	Accepted Date	Shipped Date	Amount	
J003FA0E	09/24/21	10/07/21	250.00	September 2021
J003FA0F	09/24/21	10/07/21	251.00	
J003FE6C	09/28/21	09/29/21	400.00	
Subtotal			12,451.00	
Total			<u><u>\$ 770,537.37</u></u>	

^ - Accepted and Shipped Dates not provided by Xometry, but based on purchase order date, it is properly placed in chronological order.

- Amount paid was less than the amount listed on the Purchase Order due to credits/advances applied per Xometry's payment records.

! - Amount paid was more than the amount listed on the Purchase Order per Xometry's payment records (less than \$1.00).

Report on Special Investigation of the
University of Iowa Department of Physics Machine Shop

Personal Procurement Card Purchases
For the Period July 1, 2017 through September 30, 2021

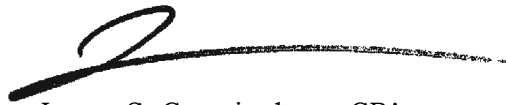
Per Credit Card Statement		
Date	Description	Amount
06/05/18	PP*ITUNES.COM/BILL	\$ 12.99
07/09/18	PP*ITUNES.COM/BILL	12.99
10/01/18	PAYPAL *LIU PING	781.00
10/22/18	PAYPAL *SHARSTOOLCO	56.80
10/22/18	PAYPAL *SHANGHAIXIA	361.90
12/03/18	PAYPAL *GUNDOGAN98	2,999.00
04/03/19	PROFESSIONAL PLASTICS	1,140.78
08/07/19	MCMASTER-CARR	418.61
10/21/19	EBAY O*16-04016-97647	149.55
03/10/20	XOMETRY, INC.	190.80
04/29/20	MCMASTER-CARR	116.91
11/30/20	THE DEPOT EXPRESS #10	2.71
12/15/20	HY-VEE CORALVILLE 1085	16.77
05/19/21	PHILLIPS 66 - FAST BREAK	52.58
Total		<u>\$ 6,313.39</u>

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Staff

This review was performed by:

Melissa J. Finestead, CFE, Deputy
Ryan T. Jelsma, CFE, Manager
Julius O. Cooper, Staff Auditor
Gono Quaye, Staff Auditor

A handwritten signature in black ink, appearing to read 'James S. Cunningham', with a long horizontal stroke extending to the right.

James S. Cunningham, CPA
Chief Deputy Auditor of State

Appendices

**Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop**

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Xometry Website – SUI Search






University of Iowa



Results for Univeristy of Iowa

Displaying 1 Result [Filter Results](#)

D3signTech

 Williamsburg, IA •  2008 •  1-10

At D3SignTech (D3T). The person you communicate with and pay your hard earned money to and put your trust in is the person who is making or designing your solution. This person will have more than 15 years of actual design and build experi...

[Privacy Policy](#)

[ITAR Registered](#)

[ISO 9001:2015 and AS9100D Certified](#)

[Customer Service Agreement](#)

[General Terms and Conditions](#)

[Partner Terms and Conditions](#)



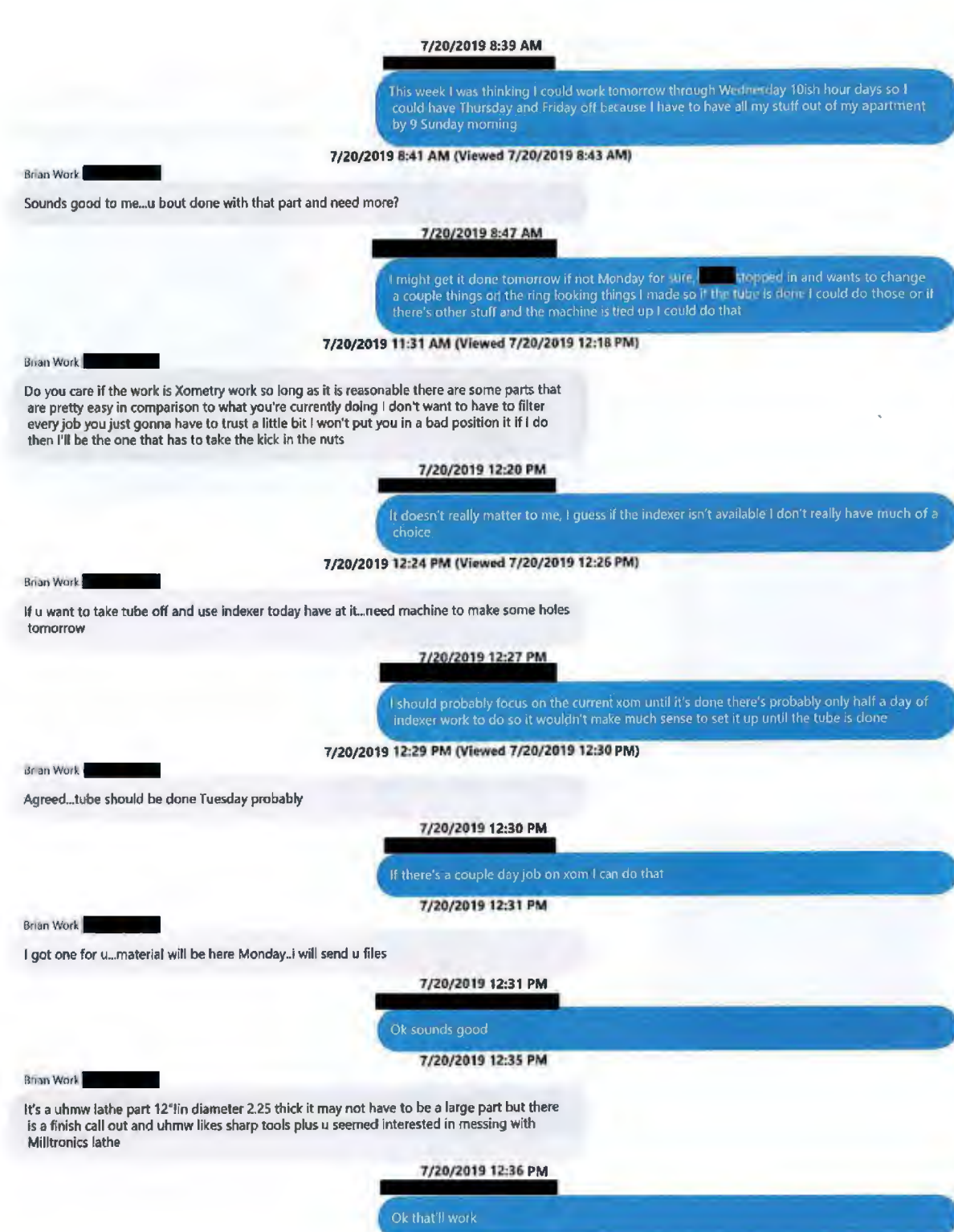
Discover



Sign In

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Text Messages from Brian Busch to Employee – Management Awareness




Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Text Messages from Brian Busch to Employee – Management Awareness

7/20/2019 12:41 PM (Viewed 7/20/2019 12:42 PM)

Brian Work [REDACTED]



7/20/2019 12:42 PM

Brian Work [REDACTED]

Just 1 due in 14 days and should take 6-8 hours give or take a few

7/20/2019 12:45 PM

[REDACTED]

That looks good just be sure and order the material thick enough so there's something to hold onto in the chuck

7/20/2019 2:32 PM

Brian Work [REDACTED]

I can only get it 2.5 square that large so u will probably need to fixture it to something else but potentially milling it is the best solution

7/20/2019 2:39 PM

[REDACTED]

That'll work if the part is 2.25 thick you could order the material 3.5 thick and slug it out on the water jet to 14" diameter then I could still turn it on the lathe and use tabs to hold it on the will to bring it into height and finish it out

7/20/2019 2:39 PM

Brian Work [REDACTED]

Sorry man 2.5 is what u got

7/20/2019 2:39 PM

Brian Work [REDACTED]

U have time though

7/20/2019 2:40 PM

Brian Work [REDACTED]

Since it's square u have a ton of room for holes to bolt it to something though

7/20/2019 2:41 PM

[REDACTED]

Yeah I'll have to look at it Monday

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Text Messages from Brian Busch to Employee – Management Awareness

7/20/2019 2:44 PM
[Redacted]

I have a plan in mind

7/20/2019 2:45 PM
[Redacted]

Do we have machinable jaws for the 12" chuck?

7/20/2019 2:55 PM
[Redacted]

Brian Work [Redacted]
Should in that lathe cabinet

7/20/2019 2:56 PM
[Redacted]

Ok I've never really looked

7/20/2019 2:56 PM
[Redacted]

Brian Work [Redacted]
I'll make job ticket and put files in it for u. Will bill this through protostudios...throw Spencer a bone

7/20/2019 2:58 PM
[Redacted]

Ok

7/21/2019 6:46 PM
[Redacted]

So if I finish up that bracket in 24hrs is there a bottle o scotch in it for me considering it was quoted for 30?


7/21/2019 6:50 PM (Viewed 7/21/2019 6:52 PM)
[Redacted]

Brian Work [Redacted]
30 I gotta find where I said 30 I'm pretty sure it was 3 day or 24 hours if u will. I'll buy u Guinness this is a University part maybe Tom will get ya the scotch

7/21/2019 6:53 PM
[Redacted]

Oh well all I got to say is....

7/21/2019 6:53 PM
[Redacted]



Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Text Messages from Brian Busch to Employee – Management Awareness

7/21/2019 6:53 PM
[Redacted]

Boom shakalaka

7/21/2019 6:55 PM (Viewed 7/21/2019 6:56 PM)

Brian Work [Redacted]



7/21/2019 6:58 PM (Delivered 7/21/2019 6:59 PM)

[Redacted]

It actually turned out better than I expected

7/21/2019 6:59 PM (Viewed 7/21/2019 7:03 PM)

Brian Work [Redacted]

U set a lofty standard my friend

7/21/2019 7:04 PM

[Redacted]

Just wait till we get those new machines shit will be getting real then

7/21/2019 7:20 PM

Brian Work [Redacted]

I'm almost scared cuz [Redacted] and I r gonna need some training wheels

7/21/2019 7:21 PM

[Redacted]

There's a distance to go screen and 5% rapid

7/21/2019 7:22 PM (Viewed 7/21/2019 7:23 PM)

Brian Work [Redacted]

Ima be ok as I'm sitting in front of one right now running a 3/4 inch cutter 7.5 stickout holding onto less that 1/2 inch

7/21/2019 7:23 PM

[Redacted]

Oh jeez

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Text Messages from Brian Busch to Employee – Management Awareness

Brian Work [REDACTED] 7/22/2019 7:43 PM



Brian Work [REDACTED] 7/22/2019 7:44 PM

Says air alone for tight tolerance is best

[REDACTED] 7/22/2019 7:44 PM

Maybe just air would be better than

Brian Work [REDACTED] 7/22/2019 9:51 PM

I do have a part u can finish tomorrow night... I will just pay the 100/hr for u to do it as it needs done and I'm outa time

Brian Work [REDACTED] 7/22/2019 9:51 PM

This one u can get the scotch for

[REDACTED] 7/22/2019 9:57 PM

As long as your boss is ok with it it doesn't really matter to me what I do

Brian Work [REDACTED] 7/22/2019 10:01 PM (Viewed 7/22/2019 10:04 PM)

Boss don't care as long as I pay

[REDACTED] 7/22/2019 10:05 PM

Ok what is it?

[REDACTED] 7/23/2019 6:33 AM (Viewed 7/23/2019 8:21 AM)

Brian Work [REDACTED]

A big box...will send u model and pdf. Needs holes put in 4 sides holes tapped and radio added to edges

Brian Work [REDACTED] 7/23/2019 8:23 AM

Can u do the inspection in the bracket u made please. I printed off the pdf and put it under the part. Just mark yo the pdf. Also be sure part is fully debured and clean and I will send out tomorrow

[REDACTED] 7/23/2019 8:25 AM

Yeah, do they want numbers for every dimension on the print?

Brian Work [REDACTED] 7/23/2019 8:26 AM

Measure what they have on the print unless it is gd&t

[REDACTED] 7/23/2019 8:27 AM

Ok

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Text Messages from Brian Busch to Employee – Management Awareness

6/22/2020 9:09 PM

Was there any word on when the haas was supposed to be fixed I was hoping Friday to do a little demo for [REDACTED] and rich if there around

6/22/2020 9:22 PM (Viewed 6/22/2020 9:23 PM)

Brian Work [REDACTED]

There not really around but we could take videos fir them...I think it will work as is though just be slow on toolchanges for now still I anticipate it being fixed by Thursday at latest

6/22/2020 9:24 PM

Ok, I was planning on taking the the next 3 days off then coming in Friday and Saturday to make up the hours anyway

6/22/2020 9:24 PM (Viewed 6/22/2020 9:29 PM)

Brian Work [REDACTED]

Coolio

6/22/2020 9:24 PM (Viewed 6/22/2020 9:29 PM)

Brian Work [REDACTED]

Thanks again for fixin those parts

6/22/2020 9:31 PM

Hopefully there right lol

6/26/2020 9:10 AM

Do you know why the work light won't turn on and there's no power to the outlets on the back of the haas?

6/26/2020 9:40 AM (Viewed 6/26/2020 9:45 AM)

Brian Work [REDACTED]

No just idea probably blown fuse

6/26/2020 9:44 AM (Viewed 6/26/2020 9:45 AM)

Brian Work [REDACTED]

Somone probably plugged in vacuum or grinder etc and blew it

6/26/2020 9:46 AM

Do you know where the key is to open the back of the machine I can look to see if a breaker is tripped

6/26/2020 9:49 AM (Viewed 6/26/2020 9:50 AM)

Brian Work [REDACTED]

Also haas leaving soon. Really wish u and [REDACTED] wouldn't have told everyone about me owning it. Especially since my supervisor approved it. U guys just made having nice things harder. Really just need to talk tho ha out between us in the shop. Everyone would be better off if we just stayed united. What you guys think u know u may not. Ur a good guy just sorry u guys feel like it's necessary to do those things but I get it

6/26/2020 9:50 AM (Viewed 6/26/2020 9:51 AM)

Brian Work [REDACTED]

If it's just the outlet on machine itself it's a fuse

6/26/2020 9:51 AM

Brian Work [REDACTED]

If it's an outlet on the wall is a breaker

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Text Messages from Brian Busch to Employee – Management Awareness

6/26/2020 9:51 AM
Brian Work [REDACTED]
Only maintenance has those keys we can't get in

6/26/2020 9:52 AM
[REDACTED]
It's the outlet on the back of the machine

6/26/2020 9:55 AM (Viewed 6/26/2020 9:56 AM)
Brian Work [REDACTED]
Then it's a fuse just run ext cord

6/26/2020 9:59 AM (Viewed 6/26/2020 10:00 AM)
Brian Work [REDACTED]
Basically if U and [REDACTED] want me out just say so or If something is bothering u. I'm not perfect and if u want me to do things better or differently let's have that discussion.. [REDACTED] and [REDACTED] don't really need to know how the sausage is made..

6/26/2020 10:04 AM
Brian Work [REDACTED]
It really sucks walking in and knowing people are talking shit especially when I give those people basically whatever they want

6/26/2020 11:04 AM (Viewed 6/26/2020 11:17 AM)
Brian Work [REDACTED]
Are u here?

6/26/2020 12:21 PM
[REDACTED]
How about we let the smack talking stay in the past and if problems arise again I'll say something instead of bottling it up

6/26/2020 12:22 PM (Viewed 6/26/2020 12:33 PM)
Brian Work [REDACTED]
That's all fine with me man I am as guilty as anybody and really just want to get along with people but sometimes trip on my own dick

6/26/2020 12:33 PM (Delivered 6/26/2020 12:34 PM)
[REDACTED]
That thing must be huge!

6/27/2020 11:57 AM
[REDACTED]
I got a job on xom, we'll need to order some material, it said 316/316L. We need one piece 12x12x0.375 and one piece 1.5x1x12 McMaster has both of those, there's one more piece that is 10x5.5x2 that I don't think they have. It wouldn't hurt to look at the job and make sure it doesn't have to be some crazy material. We should also get some 1/4 flute cutters coming and a pack of .031 carbide drills

6/27/2020 12:01 PM (Viewed 6/27/2020 12:03 PM)
Brian Work [REDACTED]
Go to Xometry Supplies they sell stainless steel pick out what you want we can actually charge that material to the job through Xometry it's pretty Baller

6/27/2020 12:05 PM
[REDACTED]
Ok but I'm not doing it till I'm at work on Monday

6/27/2020 12:38 PM
Brian Work [REDACTED]
All good but SS prolly won't be hereby then... what sizes u need?

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Text Messages from Brian Busch to Employee – Management Awareness

11/16/2020 5:10 PM (Viewed 11/16/2020 5:11 PM)

Brian Work [REDACTED]

If you drop the stipulation about Proto studios work it'll probably be easier to get work that doesn't suck

11/16/2020 5:36 PM

[REDACTED]

Speaking of protostudio did Spencer say something about wanting a couple more inserts made? He texted me this afternoon asking but didn't go much into detail

11/16/2020 5:37 PM

Brian Work [REDACTED]

He did say something today about more molds hopefully that comes to fruition so I guess we'll see but as you know I got to have work lined up because that's my job

11/16/2020 5:44 PM (Viewed 11/16/2020 5:45 PM)

Brian Work [REDACTED]

So the question remains then will you still just do the work or does it matter that much

11/16/2020 5:45 PM

Brian Work [REDACTED]

Obviously the priority is university work then universities amatory work then Proto studios work

11/16/2020 5:47 PM

Brian Work [REDACTED]

In other words Proto studios work would be the last resort if nothing else came along

11/16/2020 5:52 PM

[REDACTED]

That works for me, I'd actually rather make molds then anything else doing work for Spencer doesn't bother me. It was protostudio taking work from design tech then outsourcing it to the shop that seemed like a conflict of interest to me. Unless it's put in writing that the school's ok with it I'd rather not be involved.

11/16/2020 5:55 PM

Brian Work [REDACTED]

Long story short I'm at the end of my rope with it I don't need to put shit in writing for anybody you can ask [REDACTED] yourself if you'd like I'm not sure what else you need to hear it's legit anyone can do it if you have a source of work and are willing to pay Proto studios the overage then feel free if not then I suggest you just take the work given do it get a paycheck and be happy

11/16/2020 5:55 PM

Brian Work [REDACTED]

Like I said I will try to avoid that but if you want the hours and that's all there is then that's all there is

11/16/2020 5:57 PM

[REDACTED]

Works for me

11/16/2020 5:58 PM (Viewed 11/16/2020 6:10 PM)

Brian Work (3193256772)

Sorry I'm not trying to be a dick but let's not make waves again you can ask [REDACTED] if you want truly not a good time to make waves

11/16/2020 6:15 PM (Viewed 11/16/2020 6:16 PM)

Brian Work [REDACTED]

Also remember that I am not your enemy. I want you to have the path of least resistance to ur money that U earn while going to school. I am the one person in our shop who honestly cares if you have work or not. I'm not sure where you got the idea of anything different: I went to bat for you to make what you do...I was upset they hired another idiot instead of giving u a chance. We're not enemies... Please stop thinking that way: We may not be friends but I am still in ur corner.

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Text Messages from Brian Busch to Employee – Management Awareness

11/16/2020 6:23 PM

I'm not trying to stir the pot either, I know shits all screwed up with not having any work and I realize towards the end of the semester I'm moody I wasn't trying to insinuate anything with making a checklist earlier if there's jobs on there that has those specifications that seems to have the best outcome

11/16/2020 6:26 PM (Viewed 11/16/2020 7:25 PM)

Brian Work

Granted we're good. You just got the wrong idea of things. I promise I'm doing what I think is the best to make sure we all have work. I'd honestly rather work 50 percent than lay anybody off. I appreciate your abilities and I get it when ur moody cuz I'm also a mood prick. Just take shit as it comes in the shop don't stress I'll take care of that

11/17/2020 3:15 PM (Viewed 11/17/2020 3:25 PM)

Brian Work

There is a job for u to take a look at before I take it. 29ab6 on u of I account

11/17/2020 3:29 PM

I'm not sure where it's at, is it saved somewhere?

11/17/2020 3:32 PM

Brian Work

It's gone...nbd

11/17/2020 3:34 PM

Ok, honestly the last couple you picked out worked out pretty well I got faith in yal

11/17/2020 3:46 PM

Brian Work

I asked cuz this one was more involved but it'd been one job gets all ur hours sort of thing

11/17/2020 3:47 PM

That's cool I do appreciate you asking

11/17/2020 3:53 PM

Brian Work

I'll keep looking

11/17/2020 3:53 PM

I really wasn't trying to be a dick yesterday with the xom checklist thing, I was more trying to acknowledge that if I want hours I'm going to have to do it. I do realize in the eyes of the budget people I'm just costing them money and taking work from the full time guys which it probably looks that way on paper so when you do stick up for me I do appreciate that as well

11/17/2020 3:54 PM

I can definitely tell [REDACTED] doesn't want me here lol

11/17/2020 3:54 PM (Viewed 11/17/2020 3:55 PM)

Brian Work

It's all good..I'm pretty sure [REDACTED] doesn't want me there most of the time either

11/17/2020 3:55 PM

Lol yeah there's been times where we'd all be standing there talking and he wouldn't even look at me

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Text Messages from Brian Busch to Employee – Management Awareness

11/17/2020 3:57 PM
Brian Work [REDACTED]
It'll all make sense when we are in a project...I try to tell [REDACTED] about how good u are at stuff also. Don't read much into that he's just kinda a dick and loves [REDACTED] and nobody else but it is what it is. I don't think he dislikes you in any way either

11/17/2020 3:58 PM
[REDACTED]
Do you know if there's a time frame on this potential probe? I do kinda miss it

11/17/2020 3:59 PM (Viewed 11/17/2020 4:01 PM)
Brian Work [REDACTED]
it'll be a few weeks yet

11/17/2020 4:02 PM
[REDACTED]
Does it come with the zeroing ring and the dowel tool looking thing for calibration?

11/17/2020 4:19 PM (Viewed 11/17/2020 4:33 PM)
Brian Work [REDACTED]
Don't think so

11/17/2020 7:56 PM (Viewed 11/17/2020 8:04 PM)
Brian Work [REDACTED]
Xometry's board is fucked up right now ... there's jobs I'd take but can't get it to work

11/18/2020 7:20 PM
[REDACTED]
I haven't had a chance to look getting the exams, lab reports and homework done before the break I've been pretty busy

11/18/2020 7:21 PM (Viewed 11/18/2020 7:22 PM)
Brian Work [REDACTED]
All good just saying it's not going well but I'll figure it out

11/18/2020 7:24 PM
[REDACTED]
There's those molds Spencer wants to but from the sounds of it those wouldn't have to be done right away

11/18/2020 7:39 PM (Viewed 11/18/2020 7:44 PM)
Brian Work [REDACTED]
That would be great if he had them rty definitely do those first unless I find something to help

11/18/2020 7:46 PM
[REDACTED]
Ok, he wanted 2 8" blanks and 2 spacers. I could probably get them done in 10-12 hrs but how many hours could I put on them?

11/18/2020 8:02 PM (Viewed 11/18/2020 8:03 PM)
Brian Work [REDACTED]
It takes what it takes just take ur time an be thorough

11/19/2020 4:11 PM
[REDACTED]
Hopefully Spencer gets me models tomorrow for those molds, I asked him today if there ready do h could get started on them tomorrow and he hasn't gotten back to me

11/19/2020 4:12 PM (Viewed 11/19/2020 4:16 PM)
Brian Work [REDACTED]
I ask him

Appendix 2

Report on Special Investigation of the University of Iowa Department of Physics and Astronomy – Machine Shop

Text Messages from Brian Busch to Employee – Management Awareness

Brian Work [REDACTED] 12/29/2020 10:52 AM (Viewed 12/29/2020 11:01 AM)

Unless u wanna chance it

12/29/2020 11:01 AM

Well he pretty much didn't give me a choice

12/29/2020 11:01 AM (Viewed 12/29/2020 11:02 AM)

Brian Work [REDACTED]

All good

12/29/2020 11:02 AM

Brian Work [REDACTED]

Just go

12/29/2020 1:21 PM

If those cutters get here by noon tomorrow I should still be able to get the parts out on time and I won't be to far over quote. I know [REDACTED] thinks I'm a financial burden but since March I've done mostly xom making \$60hr 100% of the time which is more than [REDACTED] and willy can say plus being outside work that's income that the shop wouldn't get if I didn't do. Instead of saying how I make to much he outta be buying me a steak dinner lol

12/29/2020 1:22 PM (Viewed 12/29/2020 1:27 PM)

Brian Work [REDACTED]

He's never said that and I make sure he knows it worth it. You don't ever have to justify it worth at the end of the day when we lose money it's my failure

12/29/2020 1:23 PM (Viewed 12/29/2020 1:27 PM)

Brian Work [REDACTED]

I agree with you,,just look at it for what's in it for you get through school and look back someday with happy thoughts

12/29/2020 1:27 PM (Delivered 12/29/2020 1:28 PM)

True that

12/29/2020 1:31 PM

On a good note I got a 3.6 gpa this semester

12/29/2020 1:31 PM (Viewed 12/29/2020 2:29 PM)

Brian Work [REDACTED]

That's awesome...I know u work ur ass off for it

12/30/2020 10:41 AM (Viewed 12/30/2020 10:47 AM)

Brian Work [REDACTED]

We're u able to make it in...I'm still digging out

12/30/2020 10:49 AM

Yeah, the dovetail cutter came in but the slot cutter didn't. I ground this one and I looked at it through the compairitor it seems like it would probably work but it's up to you if I should wait till the slot cutter comes in

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Text Messages from Brian Busch to Employee – Management Awareness

2/6/2021 2:28 PM

I guess there might be an instance where it would be easier to do something in the physics shop but I'm prob not going to be doing much handymen at IHR. Next weekend I'm going to bring my toolbox home

2/6/2021 2:33 PM

Brian Work [REDACTED]



2/8/2021 8:27 PM (Delivered 2/8/2021 9:01 PM)

I wish you would've been at work on Friday. I was feeling guilty about something [REDACTED] and [REDACTED] which I was going to talk to you about on Friday. I was asking [REDACTED] about making an exploded view of some stuff I made for [REDACTED]. I think accidentally stirred the pot asking about the relevance of throughput. I don't know if it's just [REDACTED] being [REDACTED] but I think I got him all peaced off at me. I just figured I'd let you know before you heard it someplace else. My bad I was honestly trying to help but I don't think he took it that way.

2/9/2021 5:08 AM (Viewed 2/9/2021 6:36 AM)

Brian Work [REDACTED]

Man just relax. But also what's up with [REDACTED]

2/9/2021 6:47 AM

I've heard grad students say that the shop is too expensive for them to have work done and when I told [REDACTED] was quitting he was really cool about it. He does it for the love of science. So when I was talking to [REDACTED] I suggested because throughout could approve on some stuff without costing anything and if it would help bring more work to the shop here's some ideas. Initially I wasn't going to say anything but I was really impressed by [REDACTED] mindset.

2/9/2021 6:53 AM (Viewed 2/9/2021 6:54 AM)

Brian Work [REDACTED]

He's right and if he had helped us out more as DEo and did anything like engineering with student fees etc it wouldn't be. The answer is always do more. It's frustrating to hear people say stuff when they don't produce a thing and suckle the tit even more than the shop ever could

2/9/2021 7:08 AM (Viewed 2/9/2021 7:15 AM)

Brian Work [REDACTED]

Human nature I guess or massive sense of entitlement. Idk physics shop turns out more work than when I started...not even close. It's also frustrating that it's even a conversation and if ur in it u should have our backs...regardless. [REDACTED] knows the reasons and he's part of them notice we only got new machines after his tenure was over. Yeah he's a nice guy I guess but I'm. It sure what grants he's brought in etc. the finger only ever gets pointed in one direction and that's at the people that actually take something and make it better...value add. There are about 3 people in physics that bring in all the money the rest "love science"

2/9/2021 7:25 AM

I'm not trying to say anyone is good or bad or right or wrong. I was just pointing out what I've seen is worse than that it could help out the shop in the long run. I'll just butt out then

2/9/2021 7:28 AM (Viewed 2/9/2021 7:37 AM)

Brian Work [REDACTED]

You don't know what you don't know. If we take outside work we get criticized if we don't we do. Nothing I can do about people internally not turning out work. There's so much political bs that goes on and it just is what it is. Wait until you get to the IHR and then tell me how much better they do things after you've been there a few years. No matter where you go at the u there is a ton of bs

2/9/2021 7:34 AM (Viewed 2/9/2021 7:37 AM)

Brian Work [REDACTED]

Unless you know of some secret source of work that allows us to stop and start whenever physics wants us to do work then there isn't a real solution to the problem

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Text Messages from Brian Busch to Employee – Management Awareness

2/9/2021 7:58 AM

When I say what I've seen I just mean manufacturing process that industry leading shops use. I'm not referring to policy's or work loads. I'm not trying to insinuate anything, just here's some tried and true machining techniques if there helpful

2/9/2021 8:02 AM (Viewed 2/9/2021 8:06 AM)

Brian Work

I always listen to that and you know it. You've definitely shown me some good shit. It all comes down to having enough work. Grad students are full of shit cuz we usually charge their stuff to education. Hood thought everything was expensive so there's that

2/9/2021 8:14 AM

Yeah I'll give you that you were definitely way more into learning new things than anyone else

2/25/2021 9:42 AM (Viewed 2/25/2021 9:43 AM)

Brian Work

I need the models you worked off of on the last set of 4 black anodized parts you worked on.

2/25/2021 9:43 AM

Brian Work

They are saying the engraving doesn't line up... I just need to give them what you worked from. I think from that things can work out

2/25/2021 9:52 AM

There in the "active job/Xometry folder" on the network I can't remember which job number it was but the folder the files are in will be named whatever the job number was. Matt might have to open the mastercam file and save the solid model as a step file. If I remember right there might be a sheet solid and a regular solid the regular solid is the one that the toolpaths were made from.

2/25/2021 12:48 PM (Viewed 2/25/2021 1:49 PM)

Brian Work

Found em

3/15/2021 11:15 AM (Viewed 3/15/2021 12:33 PM)

Brian Work

How are things going in I HR

**Report on Special Investigation
of the
University of Iowa
Department of Physics and Astronomy – Machine Shop**

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0010BE9

PURCHASE ORDER

 <small>2511 Cassin Street Madison, WI 53706 24hrs online</small>		P.O. No. J0010BE9			
		Date: 11/12/2018			
To: Design Tech [REDACTED] Williamsburg, IA 52381 United States [REDACTED]	Ship To: [REDACTED] [REDACTED] Kailua Kona, HI 96740 United States [REDACTED]	PO number should appear on all packages and correspondence. Please submit all invoices to: partnerinvoicing@xometry.com			
Partner Quote ID: N/A	Ship Date: 12/11/2018	Shipping Method: UPS 2 Day			
Requirements Standard Inspection					
Notes N/A					
Item	Qnty	Part ID	Order ID	Description	Qty
1	1000	0024C9E	08995-15008	280285-001_EFH3C HOUSING BASE_REV-STEP Material: Acrylic Finish: Standard Features: Threads/Tapped Holes: 3 Surface Roughness: finish 63uin(1.6um Ra), specific area Tolerances: precision +/-0.004(1/4)s(0.2mm), entire part Inspection Requirement: Standard Inspection Notes: N/A	1
2	1000	0004C9F	08995-15008	280387-001_EFH3C HOUSING FRAME_REV-STEP Material: Black Delrin (Acetal) Finish: Standard Features: Threads/Tapped Holes: 14 Surface Roughness: finish 32uin(0.8um Ra), specific area Tolerances: precision +/-0.004(1/4)s(0.2mm), entire part Inspection Requirement: Standard Inspection Notes: N/A	1

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0010BE9

Item	Code	Part ID**	Order ID	Description	Qty.
3	CNC-S	00BACA0	0B999-1500B	280388-001_EFH3C HOUSING COVER_REV-.STEP Material: Black Delrin (Acetal) Finish: Standard Features: Threads/Tapped Holes: 22 Surface Roughness: finish 32uin/0.8um Ra, specific area Tolerances: precision +/- .004*(+/- .102mm), entire part Inspection Requirement: Standard Inspection Notes: N/A	1
					</

* Ship Date refers to the date on which Xometry expects you to *ship* the parts. All shipments must receive an origin scan (e.g. they cannot be deposited in a drop box)

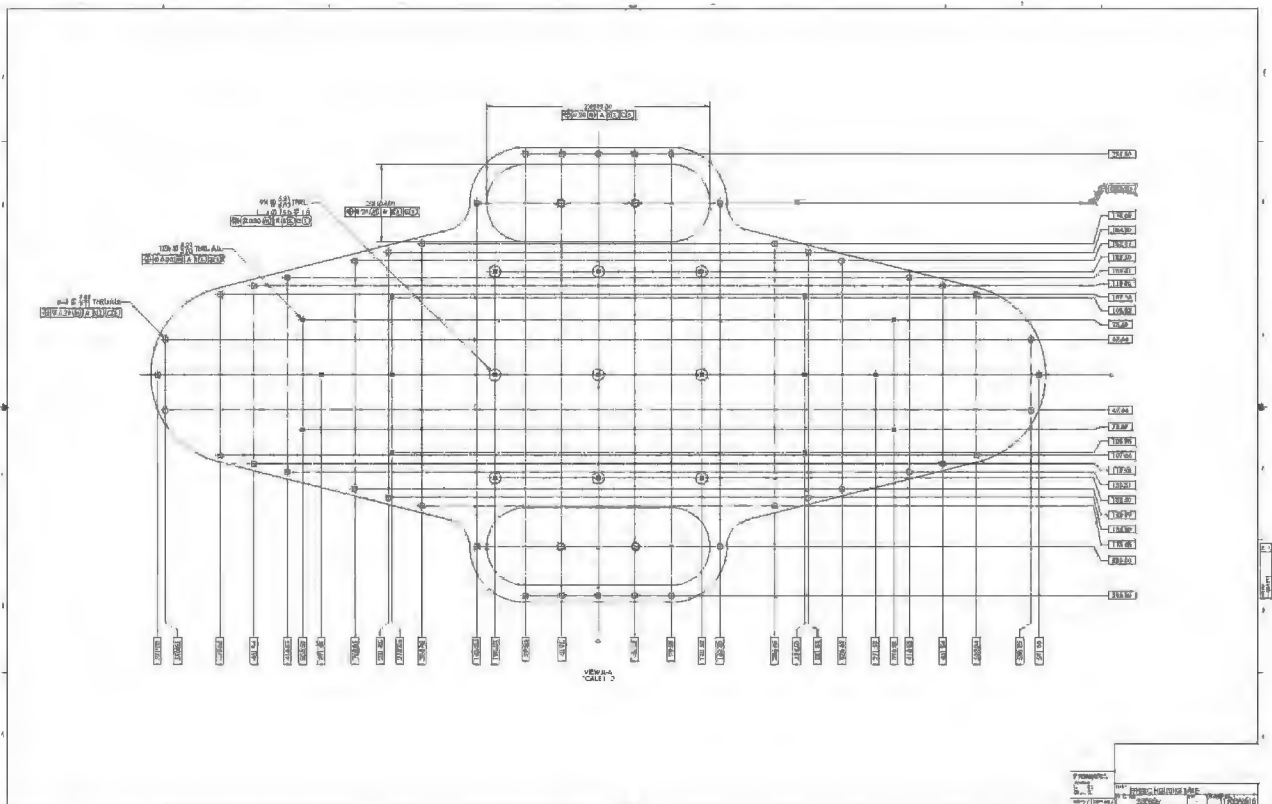
** The Xometry provided part ID and revision are equivalent to the part number and revision in the CAD or PDF file, unless stated otherwise.

Note: Please submit all invoices to partnerinvoices@xometry.com. For terms and conditions, please see the Partner Manufacturing Services Agreement: <https://www.xometry.com/vendor-terms-of-service/>.

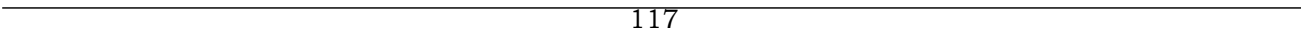
Approved By:	Date: 11/11/2018
---------------------	----------------------------

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0010BE9

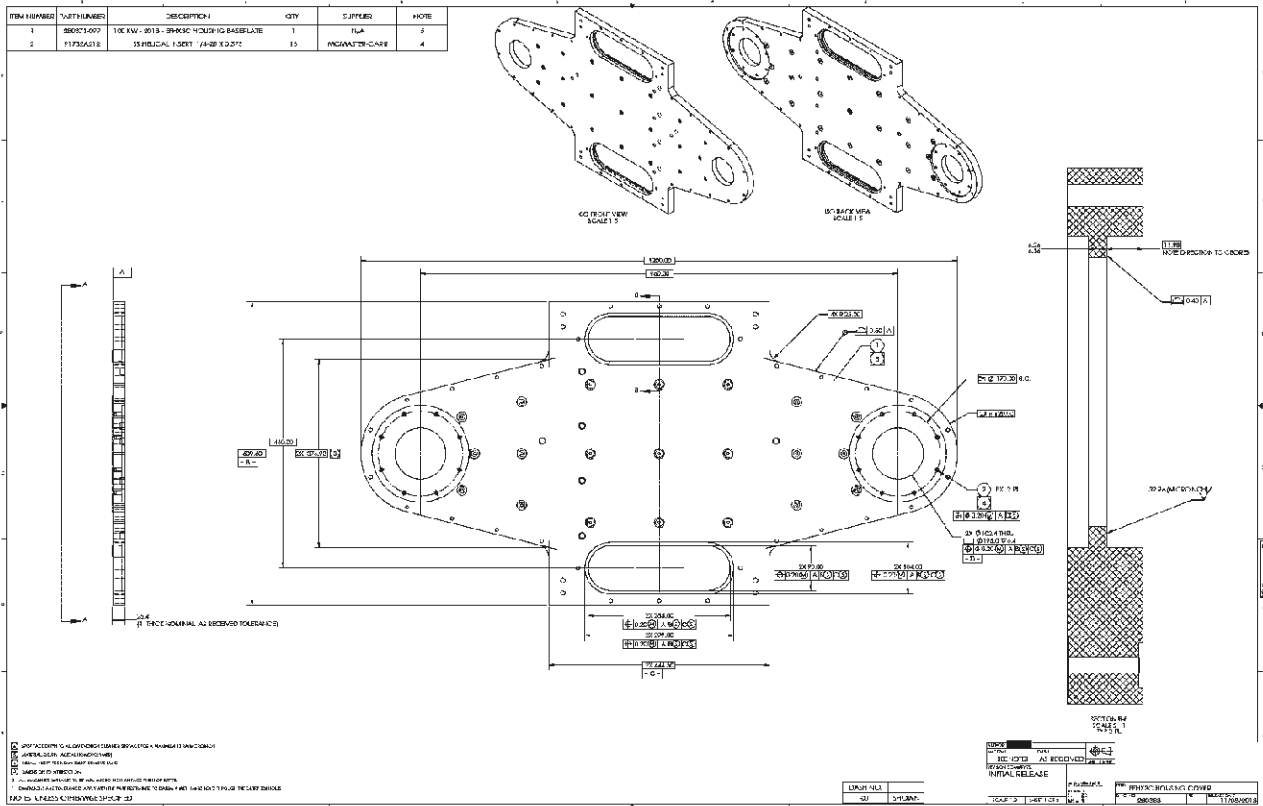


Copy of Purchase Order Number J0010BE9



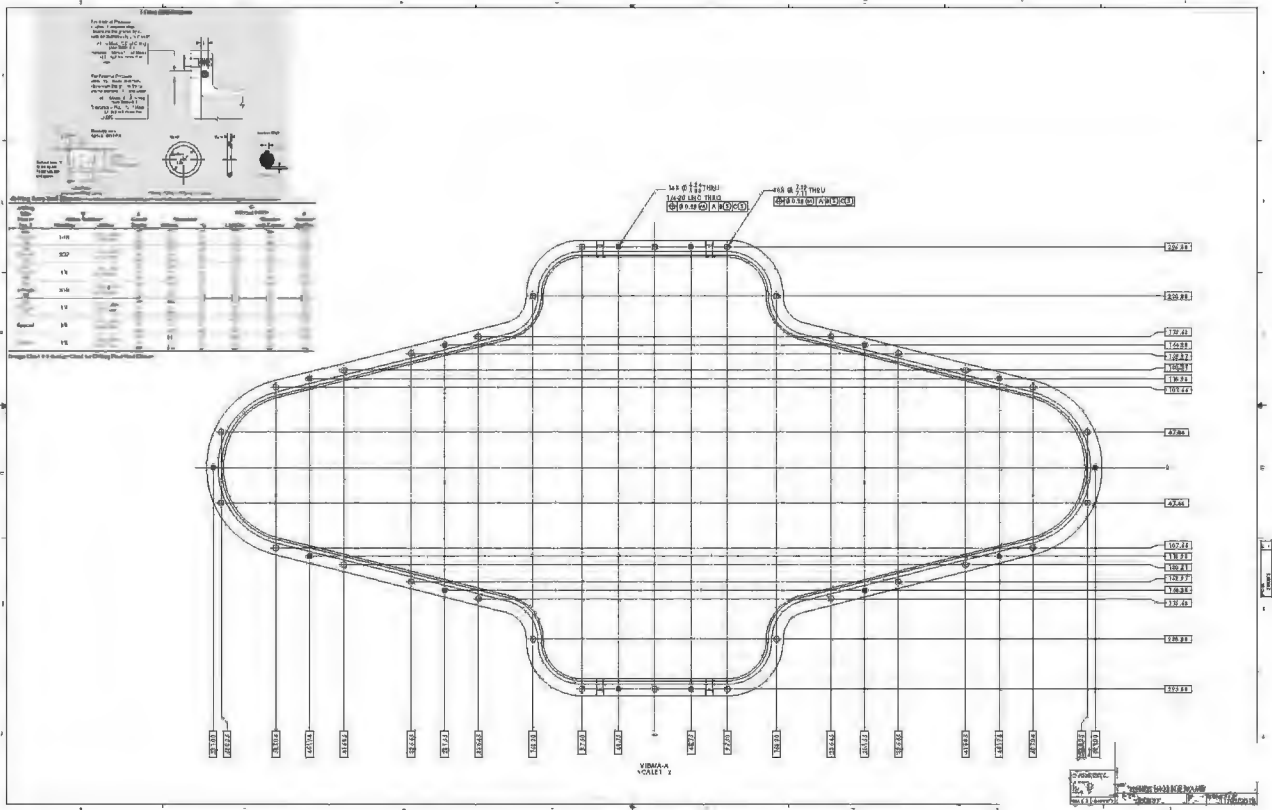
Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0010BE9



Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0010BE9



Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0010BE9



Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0010BE9



Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0010BE9



Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

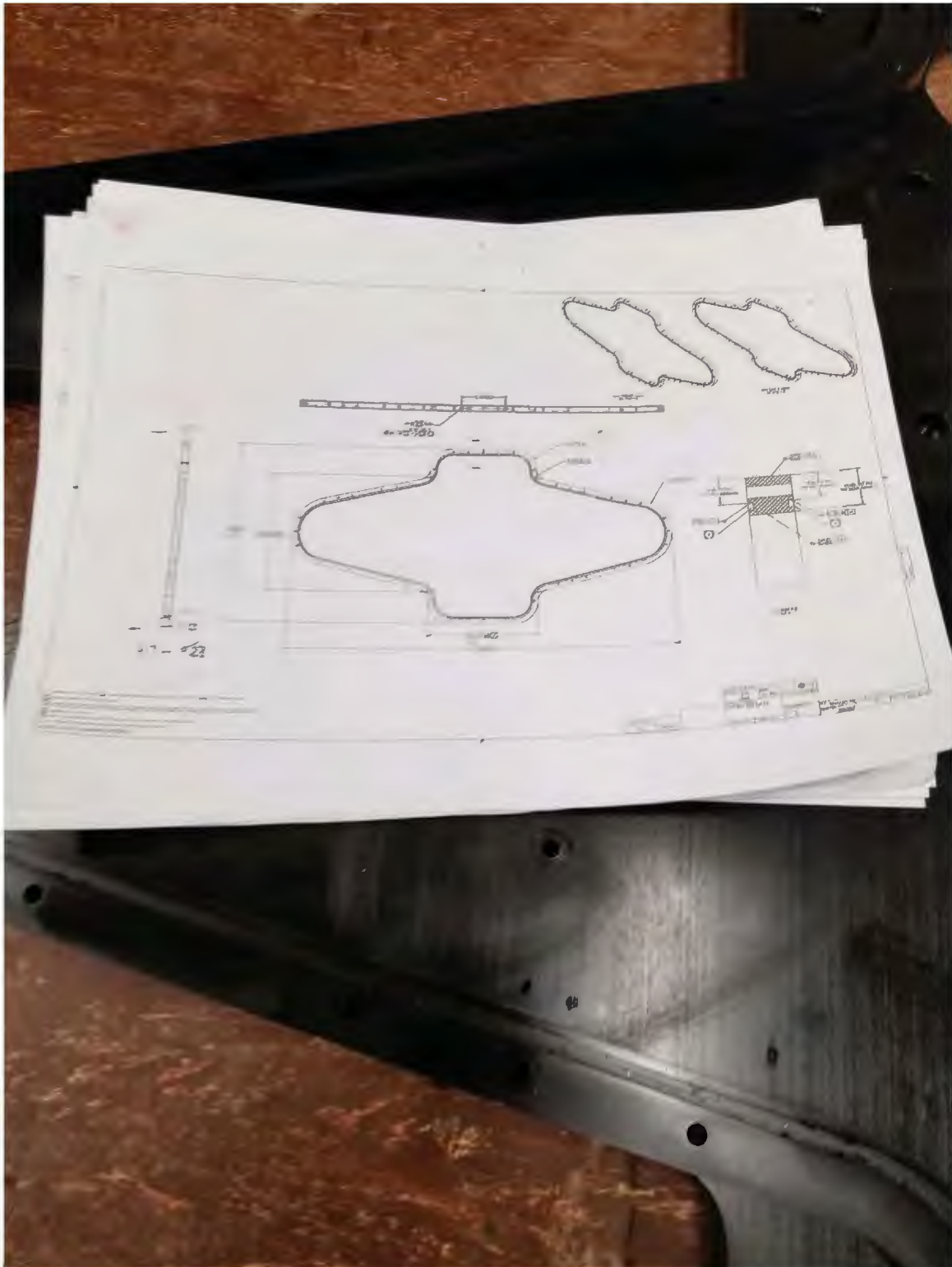
Copy of Purchase Order Number J0010BE9



Appendix 3

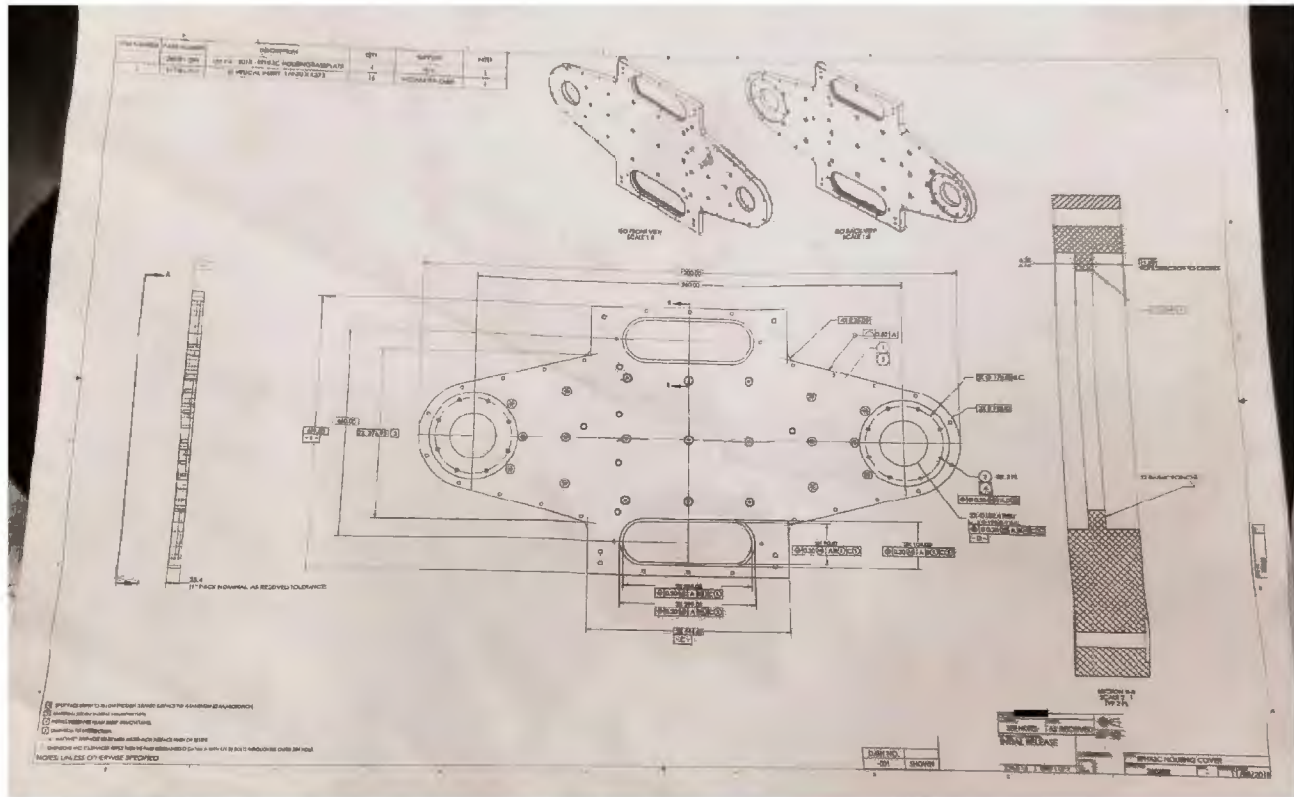
Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0010BE9



Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

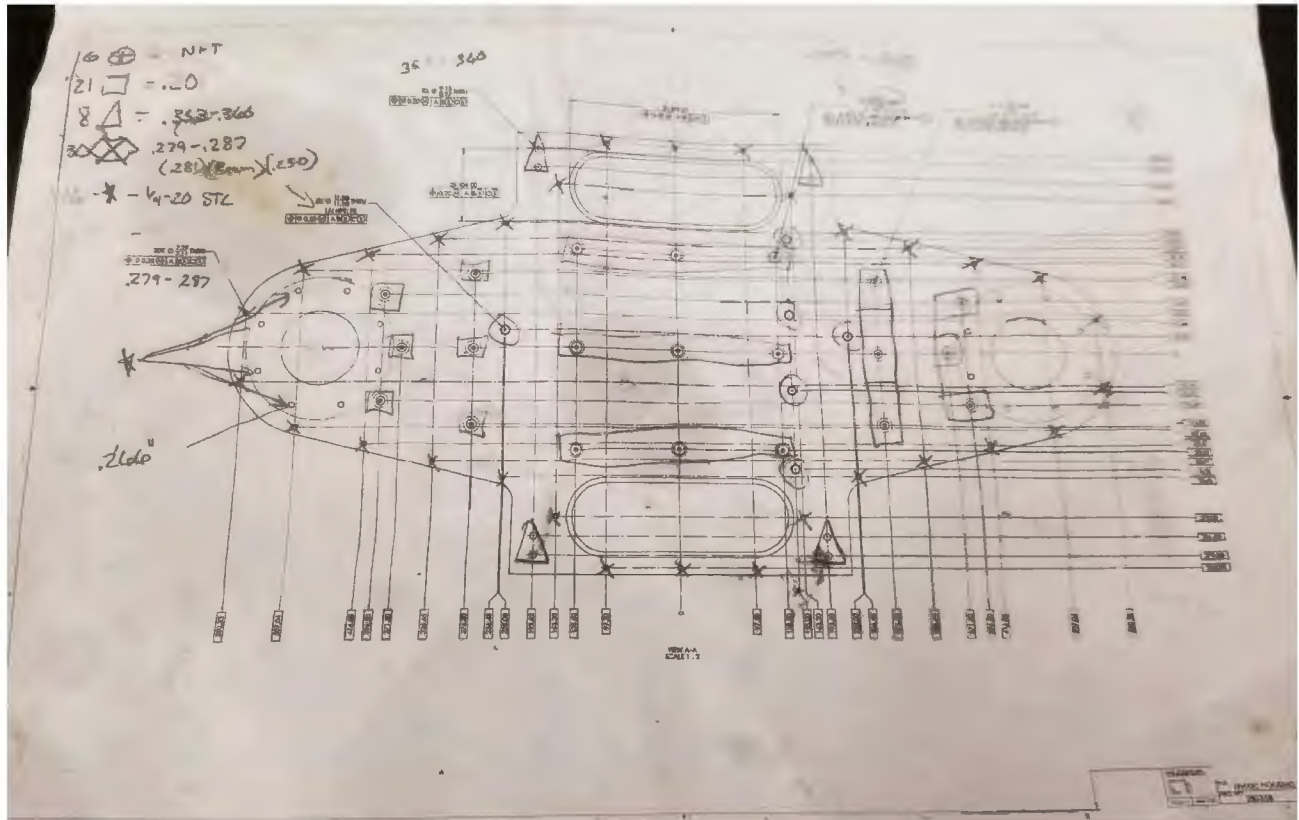
Copy of Purchase Order Number J0010BE9



Appendix 3

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0010BE9



**Report on Special Investigation
of the
University of Iowa
Department of Physics and Astronomy – Machine Shop**

Appendix 4

Report on Special Investigation of the University of Iowa Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0010F4C

PURCHASE ORDER

 <small>(255) 222-9626 / 800-368-2626 301-587-5124 www.xometry.com</small>		P.O. No. J0010F4C			
		Date: 11/27/2018			
To: Design Tech [REDACTED] Williamsburg, VA 22361 United States [REDACTED]	Ship To: [REDACTED] Fairfax, VA 22030 United States [REDACTED]	PO number should appear on all packages and correspondence. Please submit all invoices to: partnerinvoicing@xometry.com			
Partner Quote ID: N/A	Ship Dates: 12/19/2018	Shipping Method: FedEx 2 Day			
Requirements: Standard Inspection					
Notes: N/A					
Item	Code	Part ID**	Order ID	Description	Qty.
1	CHCS	0088783	05842-15053	EPT-05024-01 SLIPFIT Material: Aluminum 6061-T6 Finish: Chem Film Features: Inserts: 8 Surface Roughness/Finish: 32µin/0.8µm Ra, specific area Tolerances: precision ± 0.01 " (± 0.25 mm), 2 locations Inspection Requirements: Standard Inspection Notes: N/A	1
NET TOTAL					\$1,358.00
TOTAL					\$2,450.00

* Ship Dates refers to the date on which Xometry expects you to ship the parts. All shipments must receive an origin scan (e.g. they cannot be deposited in a drop box).
 ** The Xometry provided part ID and revision are equivalent to the part number and revision in the CAD or PDF file, unless stated otherwise.

Note: Please submit all invoices to partnerinvoicing@xometry.com. For terms and conditions, please see the Partner Manufacturing Services Agreement: <https://www.xometry.com/en/order-terms-of-service/>

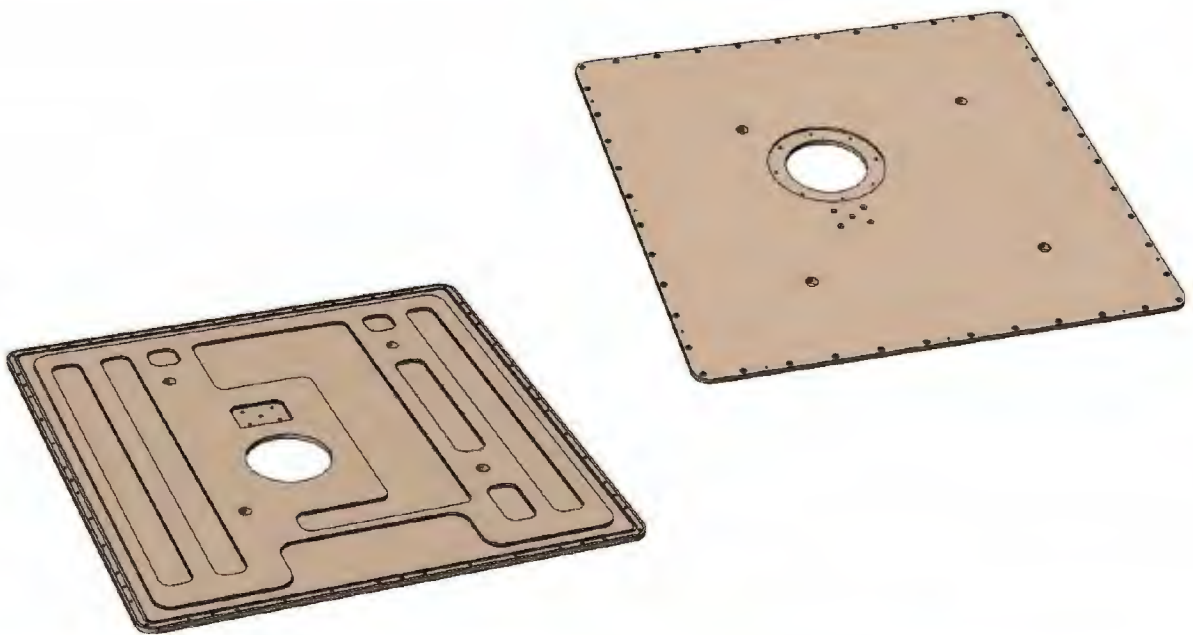
Approved By:

Date:
11/27/2018

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0010F4C

SSPA ASSEMBLY BASE PLATE



UNCLASSIFIED

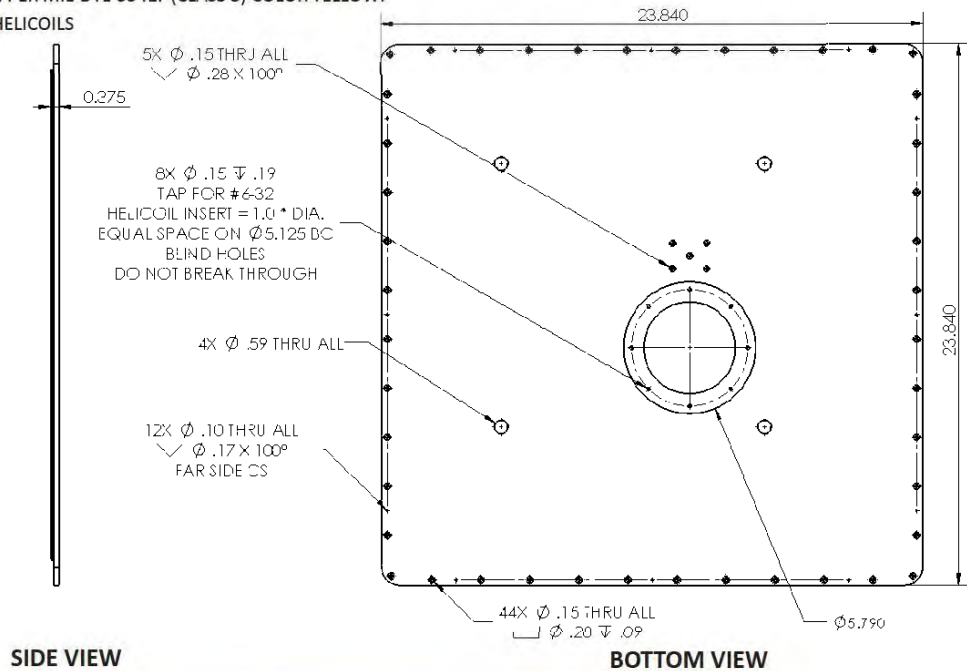
1

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0010F4C

SSPA ASSEMBLY COMPONENTS

- PART NUMBER: FPT-05024-01
- DESCRIPTION: BASE PLATE, SSPA
- MATERIAL: 6061 T6 ALUMINUM
- FINISH: CHEMICAL FILM PER MIL-DTL-5541F (CLASS 3) COLOR YELLOW.
- INSERTS: EIGHT 6-32 HELICOILS
- QUANTITY: 1



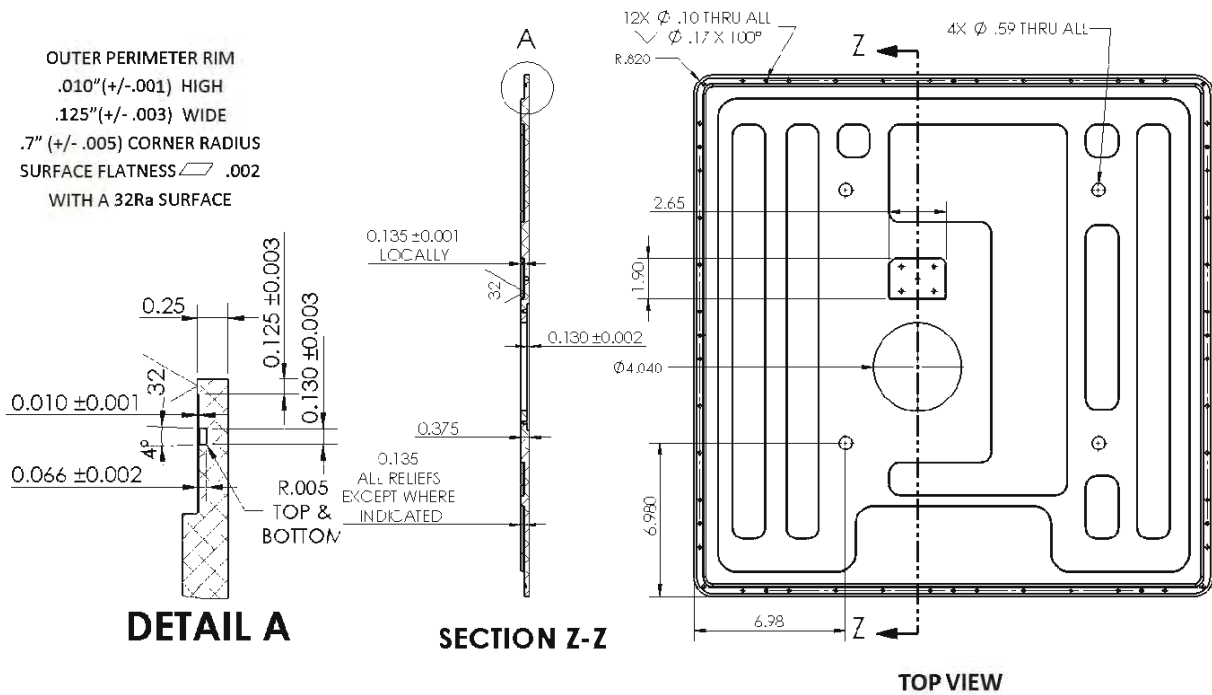
UNCLASSIFIED

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0010F4C

SSPA ASSEMBLY COMPONENTS

- PART NUMBER: FPT-05024-01 (CONTINUED)



UNCLASSIFIED

Appendix 4

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

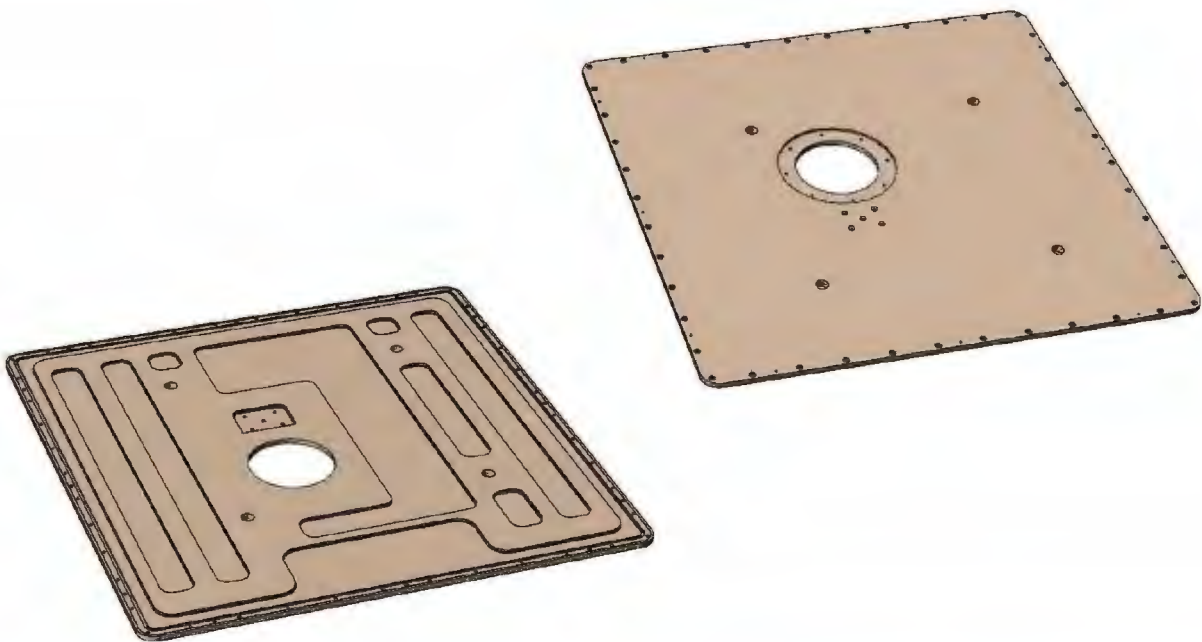
Copy of Purchase Order Number J0010F4C



Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0010F4C

SSPA ASSEMBLY BASE PLATE



UNCLASSIFIED

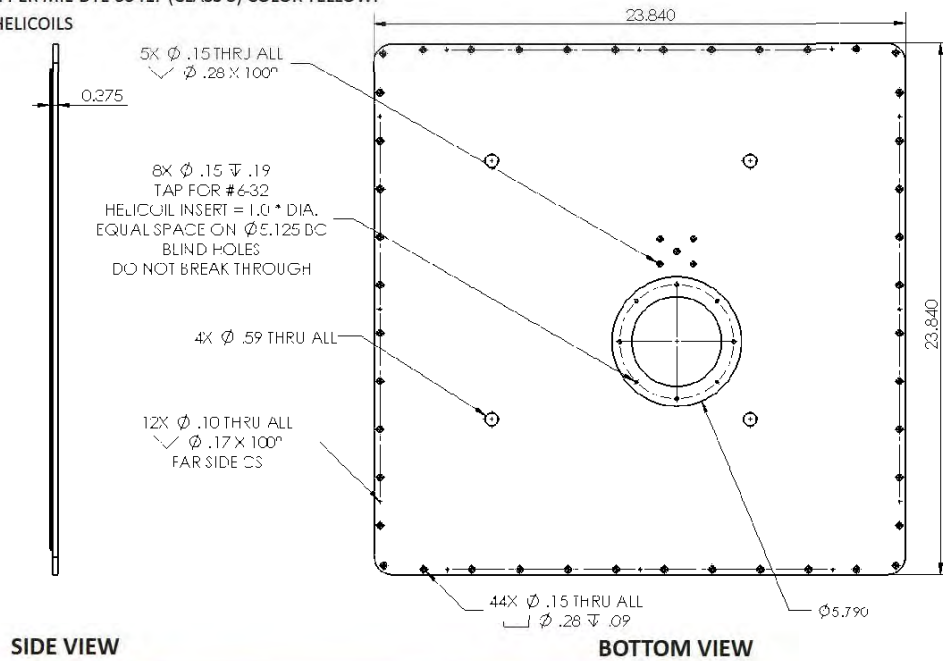
1

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0010F4C

SSPA ASSEMBLY COMPONENTS

- PART NUMBER: FPT-05024-01
- DESCRIPTION: BASE PLATE, SSPA
- MATERIAL: 6061 T6 ALUMINUM
- FINISH: CHEMICAL FILM PER MIL-DTL-5541F (CLASS 3) COLOR YELLOW.
- INSERTS: EIGHT 6-32 HELICOILS
- QUANTITY: 1



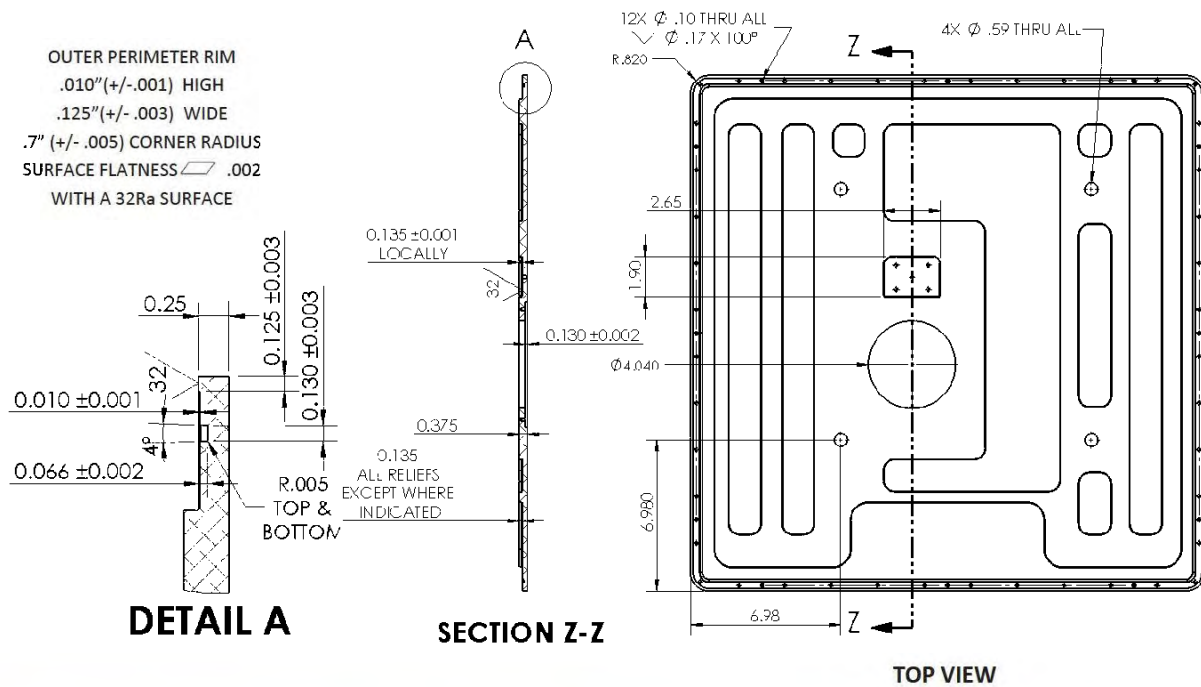
UNCLASSIFIED

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0010F4C

SSPA ASSEMBLY COMPONENTS

- PART NUMBER: FPT-05024-01 (CONTINUED)



UNCLASSIFIED

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0010F4C

12/16/2018 5:05 PM
Brian Work [REDACTED]
U May have to power down and back up to close the loop

12/16/2018 5:06 PM
[REDACTED]
Ok is there a certain way this needs to be powered down?

12/16/2018 5:06 PM (Viewed 12/16/2018 5:07 PM)
Brian Work [REDACTED]
Just estop and power down

12/17/2018 5:40 PM (Viewed 12/17/2018 5:52 PM)
Brian Work [REDACTED]
I have to absolutely ship that plat on Wednesday. So if u can plan on working a long day tomorrow to make that happen please do. I also need some time to chem film it afterwards. It is going to be tight
(Sent with Echo)

12/17/2018 5:58 PM
[REDACTED]
I was planning on it actually, if it was done by midday on Wednesday would that be ok?

12/17/2018 5:59 PM
[REDACTED]
I thought about leaving that program run but I wasn't sure if anyone would be there to stop it if the cutter blew up

12/17/2018 6:06 PM
[REDACTED]
If you were going to be around this even you could start the program that is loaded in the control

12/17/2018 6:21 PM
Brian Work [REDACTED]
What program number are you running next

12/17/2018 6:21 PM
Brian Work [REDACTED]
Or is it the program it's already loaded and ready to go I just need to hit cycle start

12/17/2018 6:22 PM
[REDACTED]
Just hit go the program number is 0001 I was verifying when I left

12/17/2018 6:23 PM
[REDACTED]
I updated the speed and feed and step over and I didn't notice on the first program it was going to cut out a area I didn't want to yet

12/17/2018 6:24 PM (Viewed 12/17/2018 6:26 PM)
Brian Work [REDACTED]
So you're working on the backside of the plate right now and you just need to finish those pockets and then that angle area

12/17/2018 6:26 PM
[REDACTED]
Yep

12/17/2018 6:27 PM
Brian Work [REDACTED]
I will get in there early tomorrow and start the next program the goal is to finish this thing by tomorrow so I have Wednesday to do the coding

**Report on Special Investigation
of the
University of Iowa
Department of Physics and Astronomy – Machine Shop**

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0013024

PURCHASE ORDER

 <small>111 Second Avenue, 10th Floor, New York, NY 10038-4202</small>				PO No. J0013024	
				Date: 03/09/2019	
To: DSSightTech Williamsburg, VA 52361 United States		Ship To: [REDACTED] Orlando, FL 32809 United States		PO number should appear on all packages and correspondence. Please submit all invoices to: partnerinvoices@xometry.com	
Partner Quote (Q): N/A		Ship Date*: 03/14/2019		Shipping Method: FedEx Ground	
Requirements: Standard Inspection					
Notes: N/A					
Item	Code	Part ID**	Order ID	Description	Qty
1	CNC-S	0009821	0CEFA150111	SD-002_MachinedPrototype-SUPPORT Material: Aluminum 6061 T6 Finish: Standard Features: Tolerances: precision ± 0.01 / ± 0.25 mm / 3 Locations: Inspection Requirements: Standard Inspection Notes: N/A	1
SUBTOTAL:					\$1,000.00
TOTAL:					\$1,000.00

* Ship Date refers to the date on which Xometry expects you to ship the parts. All shipments must receive an origin scan (e.g. they cannot be deposited in a drop box).

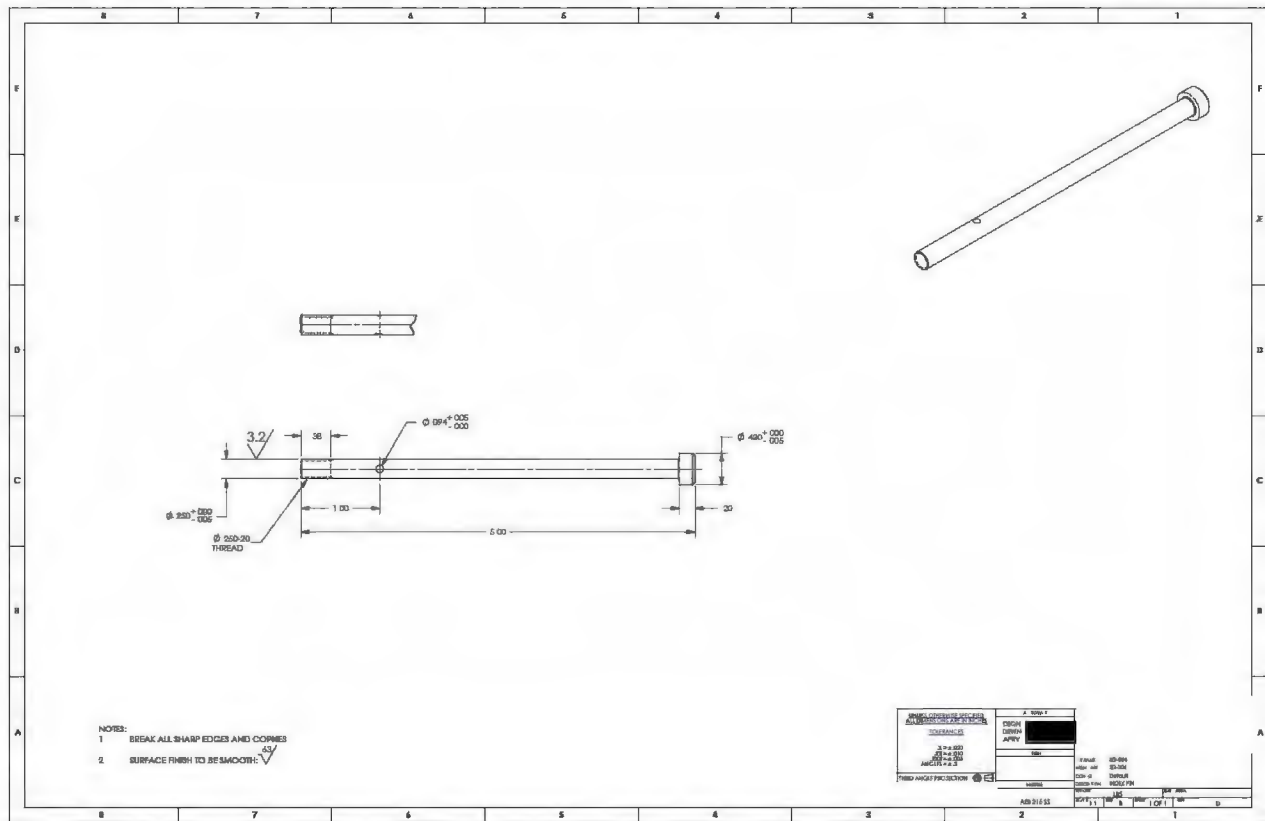
**The Xometry provided part ID and revision are equivalent to the part number and revision in the Q.D. or PDF file, unless stated otherwise.

Note: Please submit all invoices to partnerinvoices@xometry.com. For Terms and Conditions, please see the Written Manufacturing Services Agreement: <https://www.xometry.com/vendors/terms-of-service/>

Approved By: _____	Date: 03/09/2019
--------------------	---------------------

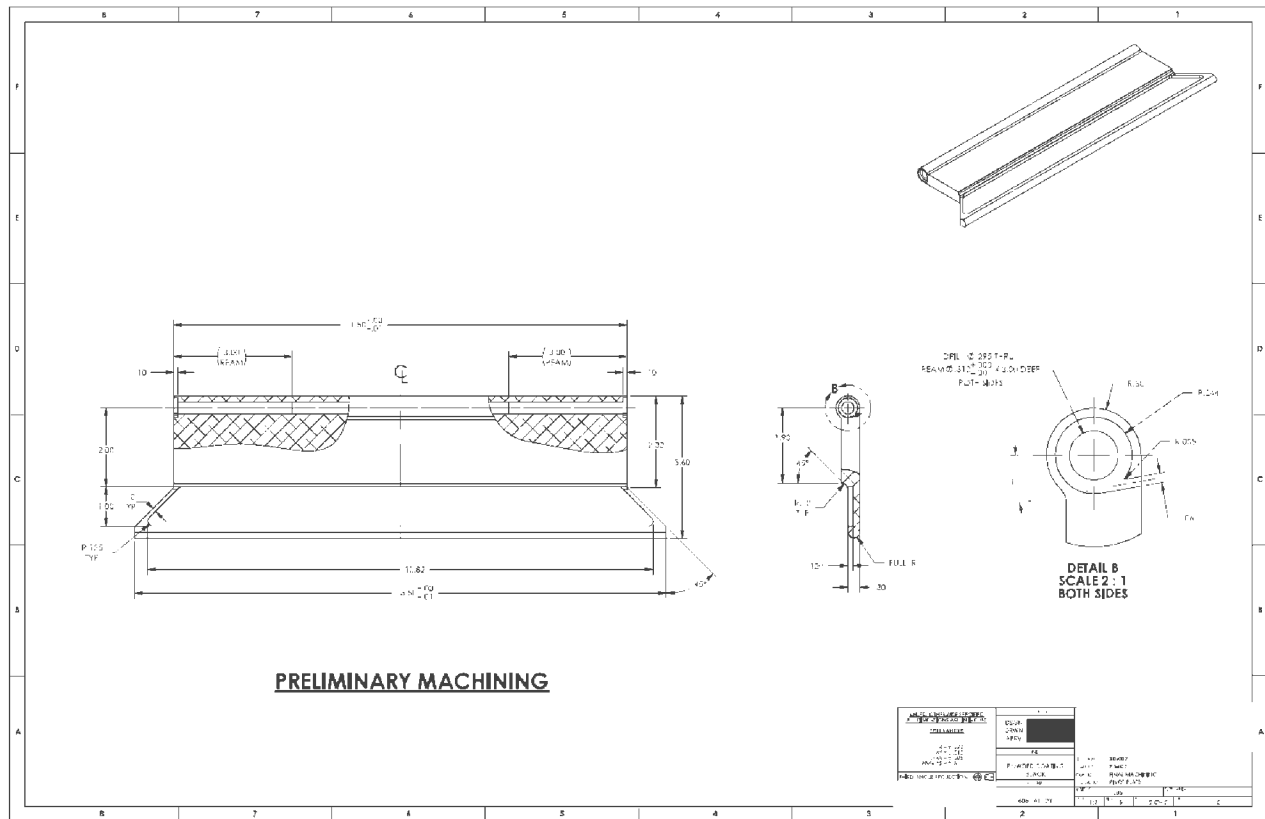
Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0013024



Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

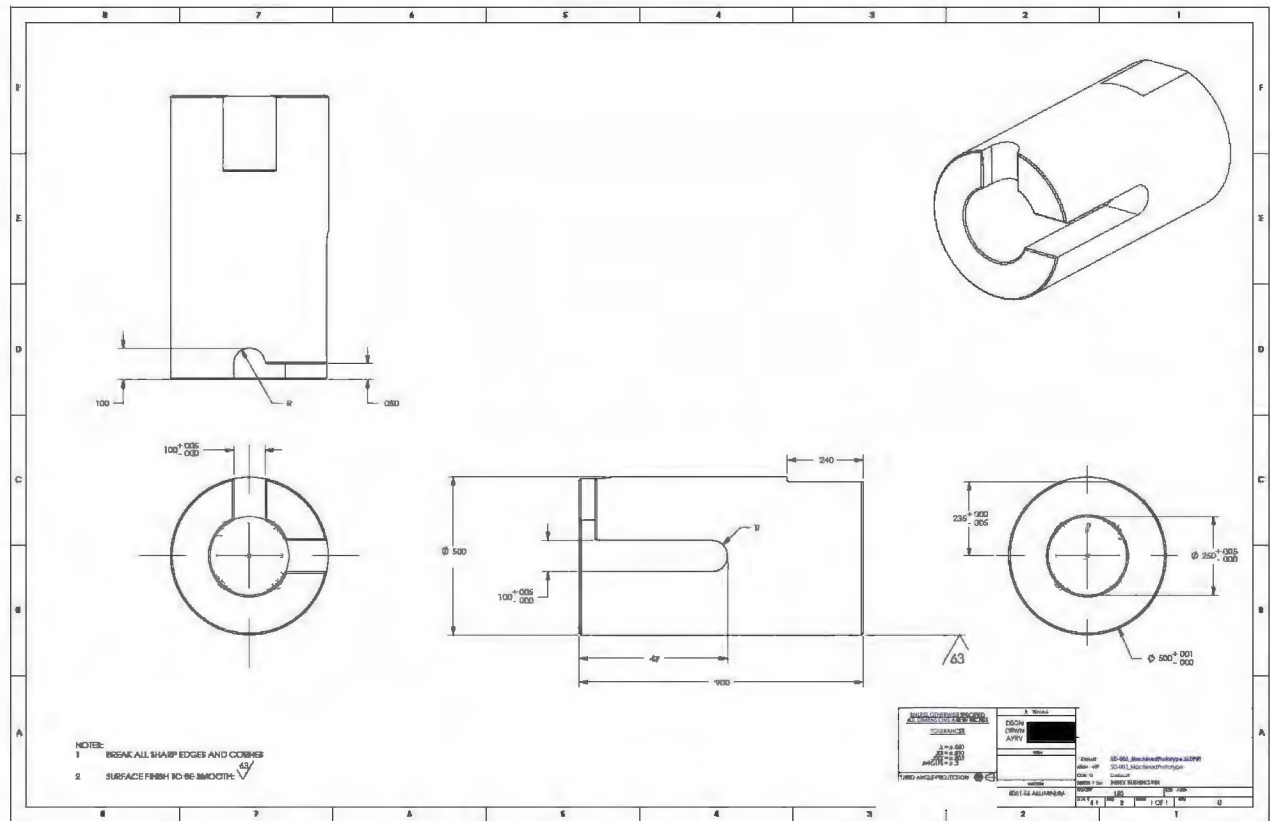
Copy of Purchase Order Number J0013024



Appendix 5

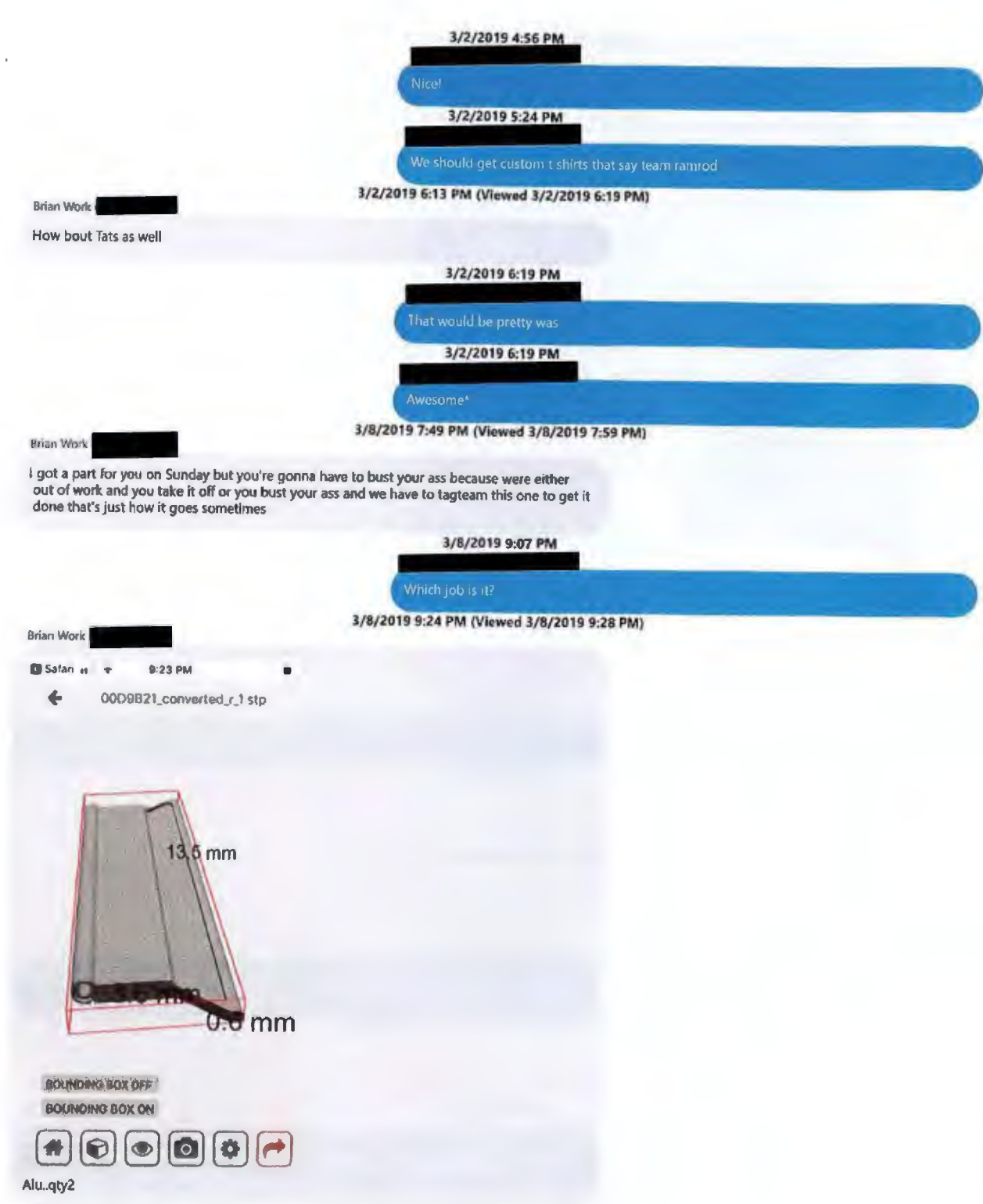
Report on Special Investigation of the University of Iowa Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0013024



Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0013024



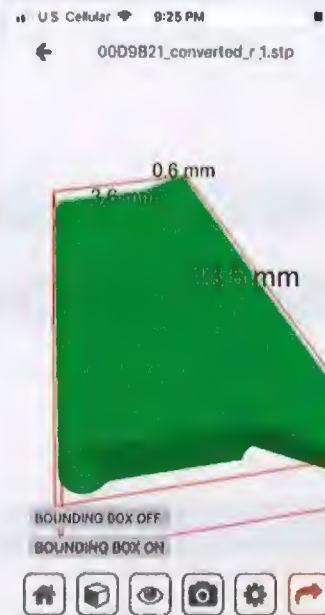
Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0013024

Brian Work [REDACTED] 3/8/2019 9:25 PM (Viewed 3/8/2019 9:28 PM)

Those are actually inch measurements

Brian Work [REDACTED] 3/8/2019 9:26 PM (Viewed 3/8/2019 9:28 PM)



3/8/2019 9:30 PM

When would they have to be done by?

3/8/2019 9:30 PM

Brian Work [REDACTED]

14th

3/8/2019 9:30 PM (Viewed 3/8/2019 9:31 PM)

Brian Work [REDACTED]

It's on like Donkey Kong

3/8/2019 9:34 PM

I could work 6 hrs Sunday and 7 hrs Wednesday if that doesn't work then I could take Sunday off and make up the hours later

3/8/2019 9:36 PM (Viewed 3/8/2019 9:52 PM)

Brian Work [REDACTED]

Cash @ Holmes... u start and plan I'll finish by time... not all on u

3/8/2019 9:55 PM

We could do that I'll get going on them ASAP it doesn't look like there's that much there I could get the first side done and get a model and fixture made then email it to you

3/8/2019 10:03 PM (Viewed 3/8/2019 10:06 PM)

Brian Work [REDACTED]

I'll be there probably anyway

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0013024

3/8/2019 10:06 PM
[REDACTED]
Ok

3/9/2019 8:40 PM (Viewed 3/9/2019 8:42 PM)
Brian Work [REDACTED]
I sent u email with files stp and pdf...get we done. Don't make a ticket or log hours..cash money ☹ Holmes

3/9/2019 8:42 PM
[REDACTED]
Sounds good

3/10/2019 5:01 PM (Viewed 3/10/2019 5:02 PM)
Brian Work [REDACTED]
Remember don't log your hours today

3/10/2019 5:02 PM
[REDACTED]
Yep

3/10/2019 5:48 PM
[REDACTED]
I just sent you the fixture and stock models in the e-mail

3/10/2019 5:48 PM (Viewed 3/10/2019 5:50 PM)
Brian Work [REDACTED]
Ok

3/10/2019 5:51 PM
[REDACTED]
I couldn't get the stock model to orient the same as the rest but the fixture and part models should be lined up with each other when you bring them in

3/10/2019 5:52 PM (Viewed 3/10/2019 5:53 PM)
Brian Work [REDACTED]
If it's like last time we're good

3/10/2019 5:53 PM (Viewed 3/10/2019 5:54 PM)
Brian Work [REDACTED]
Will I need to run any of the first side of the 3

3/10/2019 5:55 PM
[REDACTED]
Yeah I'm in the middle of the second one now, I'll leave it in the middle of the program at tool 6

3/10/2019 5:59 PM
[REDACTED]

3/10/2019 5:59 PM
[REDACTED]
Yep

3/10/2019 6:00 PM (Viewed 3/10/2019 6:01 PM)
Brian Work [REDACTED]
Can doosky

3/10/2019 6:01 PM
[REDACTED]
I programmed it so the tools run in order and there on the side of Willy's box

Appendix 6

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J001351F

PURCHASE ORDER

 <small>3000 Canyon Avenue Northbrook, IL 60062 800.XMOTRY</small>		P.O. No. 0001251F			
		Date: 03/22/2013			
To: DesignTech [REDACTED] Williamsburg, VA 52361 United States [REDACTED]		Ship To: [REDACTED] Woburn, MA 01801 United States [REDACTED]			
PO number should appear on all packages and correspondence. Please submit all invoices to: partinvoicing@xometry.com					
Partner Quote ID: N/A		Ship Date: 04/08/2013			
Shipping Method: UPS Standard Overnight					
Requirements: Finishing Certification, Standard Inspection					
Notes: N/A					
Item	Code	Part ID**	Order ID	Description	Qty.
1	UNC-3	00054551	1000545005	Traction Battery Water Judd in REV. 004 STEP Material: Aluminum 6061-T6 Finish: Chem-film, Clear Features: Threads/Tapped Holes: 3 Surface Roughness: Finish 32µin/0.8µm in specific areas Tolerances: precision +/- .008" (+/- .075mm); 2 locations Certifications: Finishing Certification Inspection Requirement: Standard Inspection Notes: See drawing for tolerance and surface finish call outs. Finish: Clear chromate (chem film) µin MIL DTL 5541 TYPE II CLASS 2 (inaccessible corner warning noted, use 1/4" endmill) Material: Aluminum 6061-T6	6
				SUBTOTAL	\$3,250.00
				TOTAL	\$3,250.00

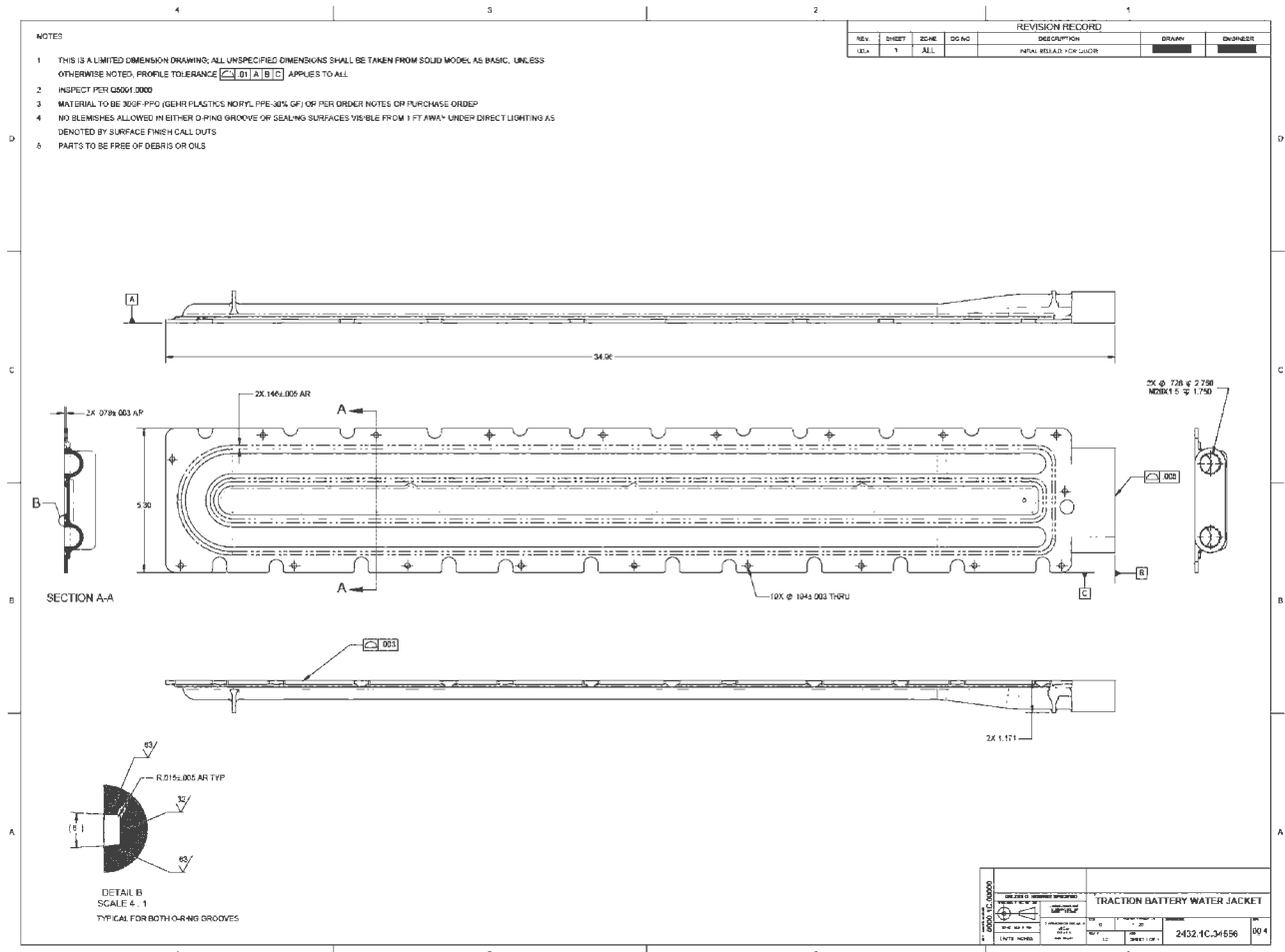
*Ship Date refers to the date on which Xometry expects you to ship the parts. All shipments must receive an origin scan (e.g. they cannot be deposited in a drop box).

Note: Please submit all inquiries to partnerships@zomemr.com. For terms and conditions, please see the Partners Manufacturing Services Agreement, <https://www.zomemr.com/end-user-terms-of-service/>.

Approved By:	Date: 02/23/2018
--------------	---------------------

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J001351F



Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J001351F



Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J001351F



Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J001351F



Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J001351F

3/31/2019 6:02 PM

I just left, I got dales parts done

3/31/2019 6:02 PM

Brian Work [REDACTED]

U da man

3/31/2019 6:03 PM

Brian Work [REDACTED]

Can u send me a pic of where it's at please

3/31/2019 6:10 PM (Delivered 3/31/2019 6:11 PM)

It just got done

3/31/2019 6:12 PM (Viewed 3/31/2019 6:13 PM)

Brian Work [REDACTED]

Pic please

3/31/2019 6:15 PM



3/31/2019 6:17 PM

Brian Work [REDACTED]

If I emailed you a program can you set up a 3/32 and mill and run it for me doesn't have to be now it could be after tutoring

3/31/2019 6:18 PM

Sure

3/31/2019 6:18 PM (Viewed 3/31/2019 6:19 PM)

Brian Work [REDACTED]

What time u be back in lab

3/31/2019 6:19 PM (Viewed 3/31/2019 6:20 PM)

Brian Work [REDACTED]

Tool#4 will be 1/16 ball instead

3/31/2019 6:20 PM

Brian Work [REDACTED]

Just touch it off top of part

3/31/2019 6:20 PM

So you want tool 4 and it to be a 1/16 ball

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0016DED

PURCHASE ORDER

		P.O. No. J0016DED																
Date: 03/03/2019																		
To: DesignTech [REDACTED] Williamsburg, VA 23185 United States [REDACTED]	Ship To: [REDACTED] San Antonio, TX 78237 United States [REDACTED]	PO number should appear on all packages and correspondence. Please submit all invoices to: partnerinvoicing@xometry.com																
Partner Quote ID: N/A	Ship Date: 08/15/2019	Shipping Method: UPS Standard Overnight																
Requirements: Standard Inspection																		
Notes: N/A																		
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Item</th> <th style="width: 10%;">Code</th> <th style="width: 10%;">Part ID**</th> <th style="width: 10%;">Order ID</th> <th style="width: 50%;">Description</th> <th style="width: 10%;">Qty</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>CHCS</td> <td>0008804</td> <td>0865P1505E</td> <td> R8910-001& REV_I STEP Material: Aluminum 6061 T6 Finish: Standard Features: Tolerances: precision ±0.004/typ. ±0.12mm, 1 location Inspection Requirements: Standard inspection Notes: ***CUSTOMER WILL HANDLE THE FINISH REQUIREMENTS*** </td> <td>1</td> </tr> </tbody> </table>	Item	Code	Part ID**	Order ID	Description	Qty	1	CHCS	0008804	0865P1505E	R8910-001& REV_I STEP Material: Aluminum 6061 T6 Finish: Standard Features: Tolerances: precision ±0.004/typ. ±0.12mm, 1 location Inspection Requirements: Standard inspection Notes: ***CUSTOMER WILL HANDLE THE FINISH REQUIREMENTS***	1	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">SUBTOTAL</td> <td style="width: 50%; text-align: right;">\$750.00</td> </tr> <tr> <td>TOTAL</td> <td style="text-align: right;">\$750.00</td> </tr> </table>		SUBTOTAL	\$750.00	TOTAL	\$750.00
Item	Code	Part ID**	Order ID	Description	Qty													
1	CHCS	0008804	0865P1505E	R8910-001& REV_I STEP Material: Aluminum 6061 T6 Finish: Standard Features: Tolerances: precision ±0.004/typ. ±0.12mm, 1 location Inspection Requirements: Standard inspection Notes: ***CUSTOMER WILL HANDLE THE FINISH REQUIREMENTS***	1													
SUBTOTAL	\$750.00																	
TOTAL	\$750.00																	

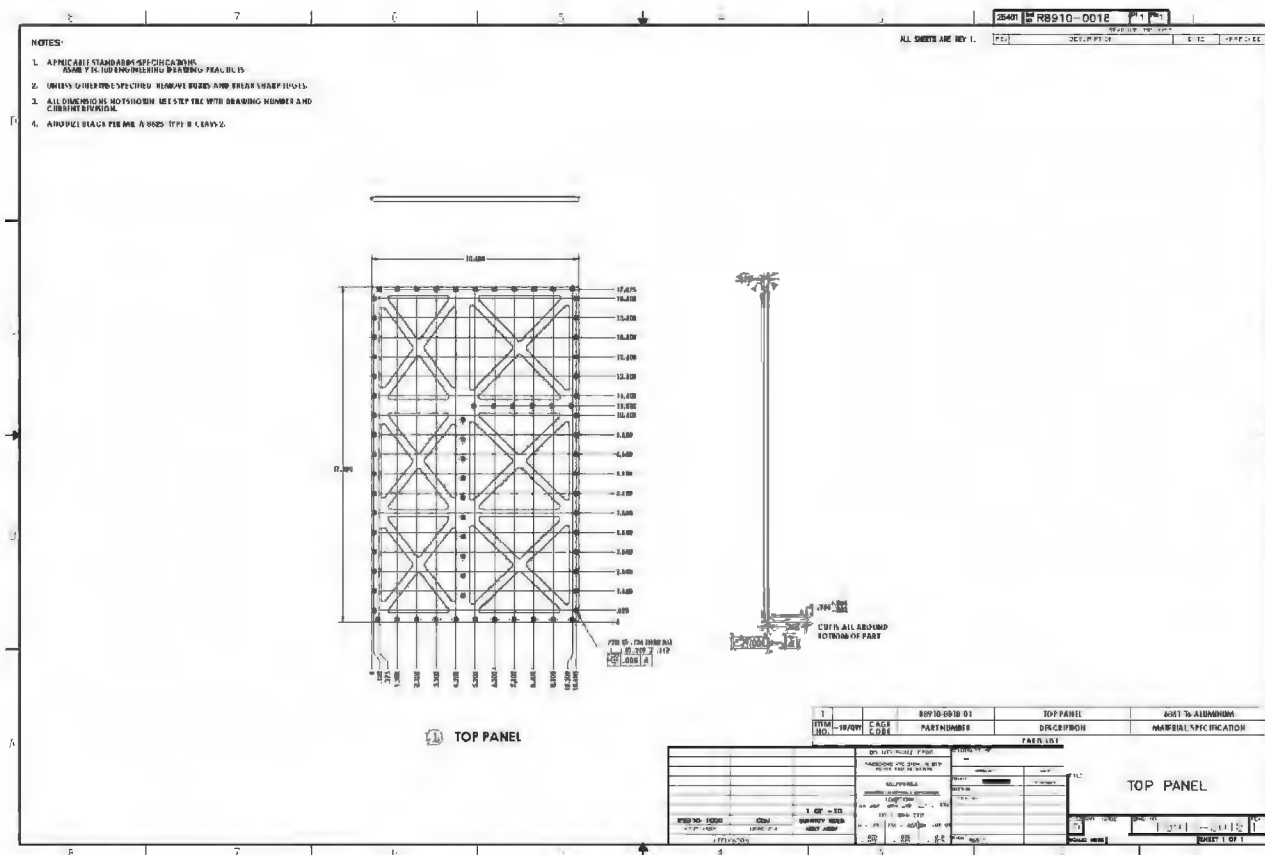
*Ship Date refers to the date in which Xometry expects you to ship the parts. All shipments must receive an origin scan (e.g. they cannot be deposited in a drop box).
 **The Xometry provided part ID and revision are equivalent to the part number and revision in the C&D or PDF file, unless stated otherwise.

Note: Please submit all invoices to: partnerinvoicing@xometry.com. For terms and conditions, please see the Partner Manufacturing Services Agreement: <https://www.xometry.com/vendor-terms-of-service/>.

Approved By: [REDACTED]	Date: 08/07/2019
-----------------------------------	----------------------------

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0016DED



Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0016DED

8/9/2019 11:18 AM



8/9/2019 11:18 AM (Viewed 8/9/2019 11:19 AM)

Brian Work [REDACTED]

Need close up of inspection it self

8/9/2019 11:19 AM



8/9/2019 11:21 AM (Viewed 8/9/2019 12:05 PM)

Brian Work [REDACTED]

Thanks buddy

8/9/2019 11:49 AM (Viewed 8/9/2019 12:05 PM)

Brian Work [REDACTED]

Vf2 getting ready to rock?

8/9/2019 11:50 AM (Viewed 8/9/2019 12:05 PM)


Brian Work [REDACTED]

Maybe try Rs from Willies pc...if ur not sure I'll do it Monday

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0021B47

PURCHASE ORDER

 <small>750 E. Duane Avenue Williamsburg, VA 23187 800-368-2552</small>		P.O. No: J0021B47			
		Date: 06/01/2020			
To: DesignTech Williamsburg, VA 23161 United States	Ship To: United States	PO number should appear on all packages and correspondence. Please submit all invoices to: partnerinvoices@xometry.com			
Partner Quote ID: N/A	Ship Date: 06/17/2020	Shipping Method: FedEx 2 Day Air			
Requirements: Standard Material Certification, Standard Inspection					
Notes: N/A					
Item	Code	Part ID#	Order ID	Description	Qty
1	CNC-S	0170224	097800500A	SR-V-P-D-C Flywheel Material: Titanium Grade 5 Finish: Standard Features: Threads/Tapped Holes: 2 Surface Roughness finish 1.6um/0.000125um/16 specific area Part Markings: Laser Mark: 1 Certifications: Standard Material Certification Inspection Requirements: Standard Inspection Notes: (//)	15
2	CNC-S	0170225	097800500A	SR-V-P-D-C Flywheel Material: Titanium Grade 5 Finish: Standard Features: Threads/Tapped Holes: 1 Surface Roughness finish 1.6um/0.000125um/16 specific area Part Markings: Laser Mark: 1 Certifications: Standard Material Certification Inspection Requirements: Standard Inspection Notes: (//)	15
SUBTOTAL					\$7,000.00
TOTAL					\$7,000.00

* Ship Date refers to the date on which Xometry shipped your order (the parts). All shipments must receive an origin scan (e.g. they cannot be deposited in a drop box).

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0021B47

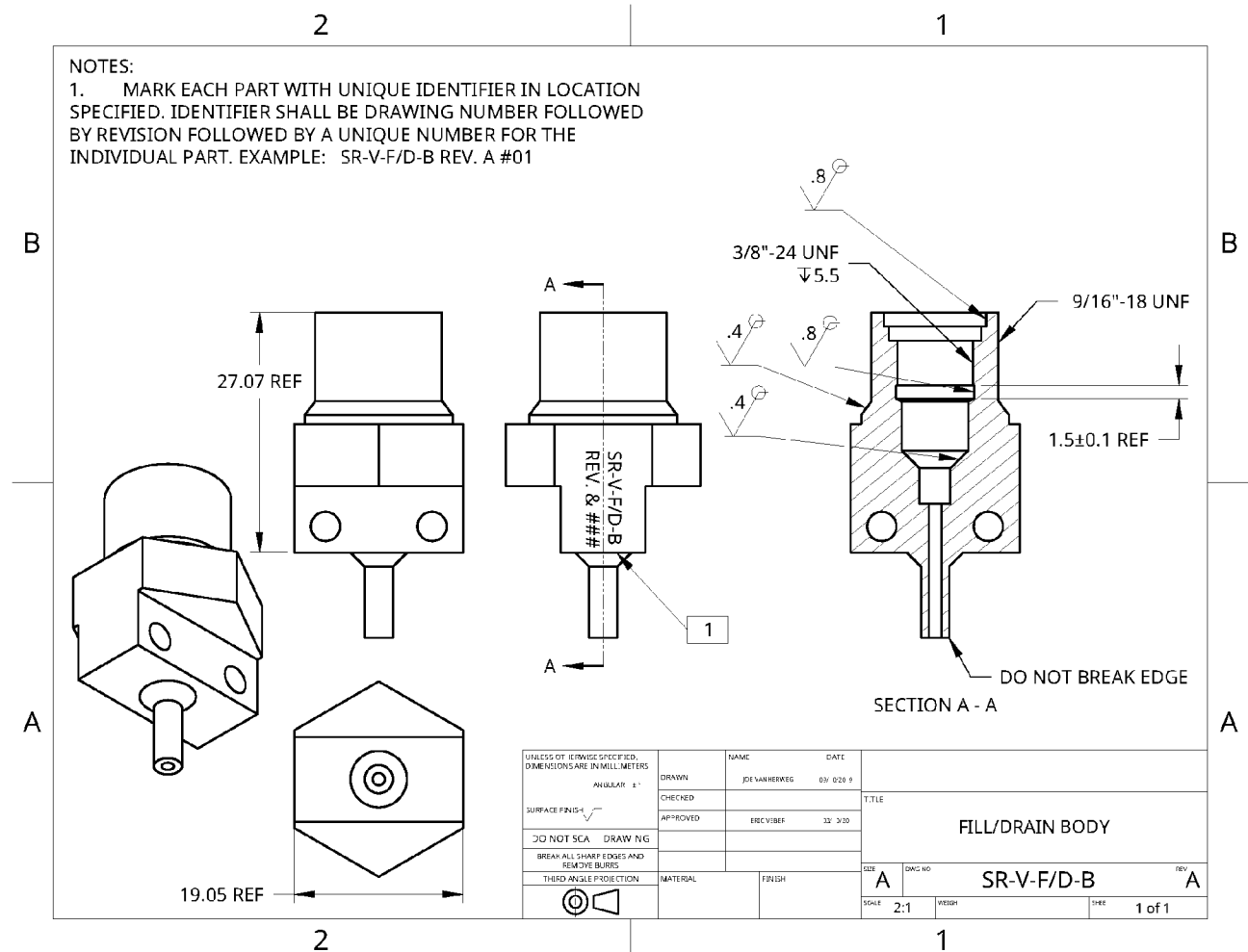
** The Xometry provided part ID and revision are equivalent to the part number and revision in the CAD or PDF file, unless stated otherwise.

Note: Please submit all invoices to partnerinvoices@xometry.com. By accepting this Purchase Order, you are acknowledging that you have read and are accepting our terms and conditions as described in our Partner Terms and Conditions: <https://www.xometry.com/partner-terms-and-conditions>.

Approved By:	Date: 06/01/2020
---------------------	----------------------------

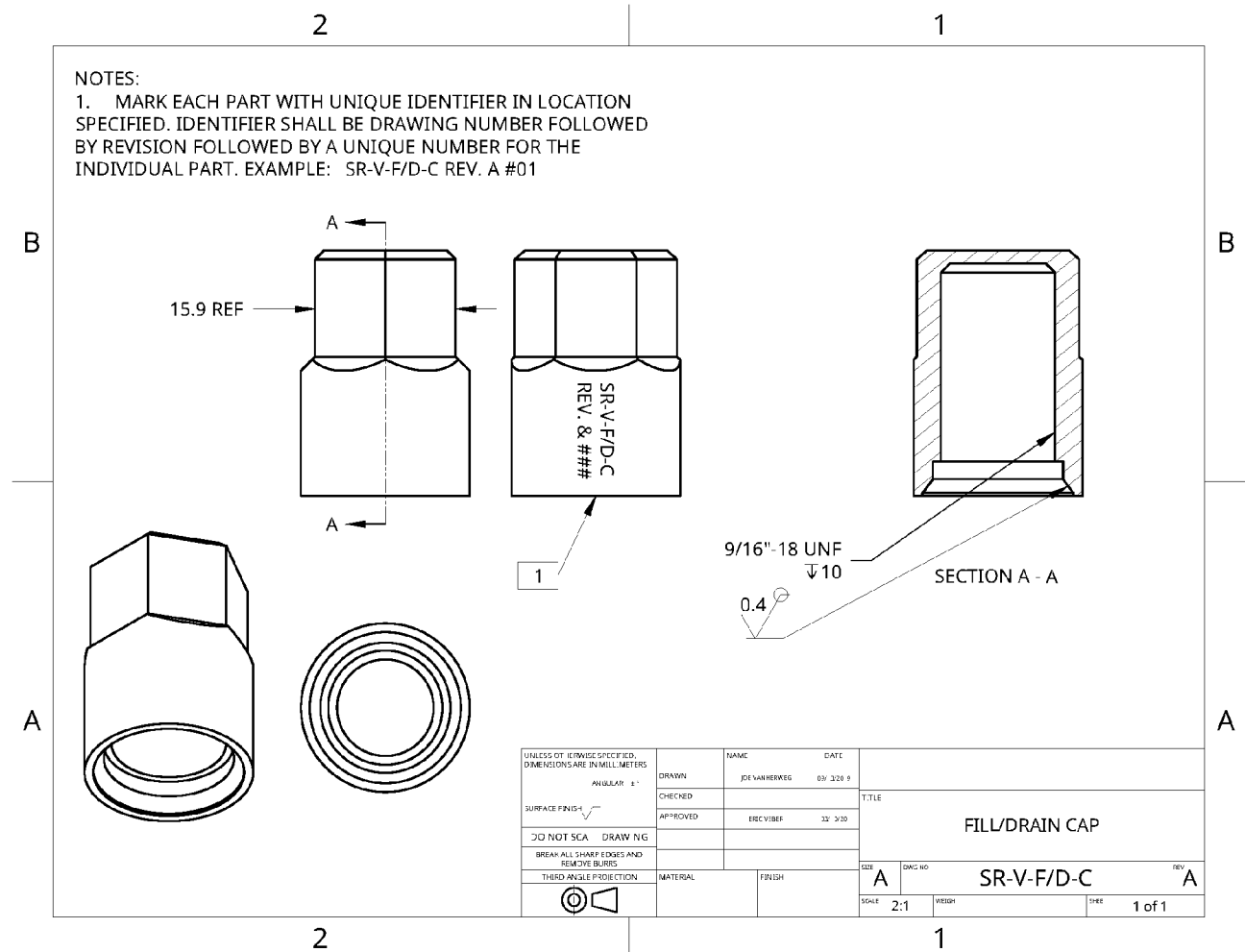
Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0021B47



Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

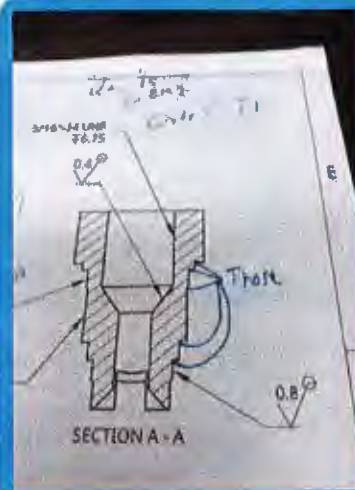
Copy of Purchase Order Number J0021B47



Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0021B47

6/9/2020 7:59 PM



6/9/2020 8:05 PM (Delivered 6/9/2020 8:07 PM)

If there's a firm tool that is the tap dia for a

6/9/2020 8:05 PM (Delivered 6/9/2020 8:07 PM)

5/16-24 and has a 74 deg angle at the bottom with a .125 pilot that would be baller

6/9/2020 8:50 PM (Viewed 6/9/2020 8:51 PM)

Brian Work

If u can model what u want I'll do what I can to get it quick

6/9/2020 8:55 PM

I found some groove inserts that I think will work to square out the corners, they might have to be square anyway. One thing that does seem weird is there's a male thread that's in the middle of the part but the way it's modeled there's no lead in on the front of the thread and no relief between the threads and the shoulder behind them. I'm assuming it's just modeled a little weird

6/9/2020 8:58 PM

Brian Work

Yeah gotta have some relief cuz we gotta make it

6/9/2020 9:02 PM

That's what I figured, the G9 parts should be ready to ship Thursday morning. Was [redacted] wanting those parts ASAP? There's about a days worth of stuff I need to make a couple brackets for skiff at some point, I could get the skiff stuff done Thursday then get going on [redacted] stuff Friday

6/9/2020 9:52 PM (Viewed 6/9/2020 9:53 PM)

Brian Work

Yeah we need to start those next...U can keep them running if you have something running by Monday morning

6/11/2020 3:16 PM (Viewed 6/11/2020 3:24 PM)


Brian Work

G9 parts done?

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J001663B

PURCHASE ORDER

 7951 Cessna Avenue Gaithersburg, MD 20879 240-252-1138				P.O. No. J001663B	
				Date: 07/19/2019	
To: D3signTech [REDACTED] United States [REDACTED]		Ship To: [REDACTED] Albuquerque, NM 87107 United States 5053382228		PO number should appear on all packages and correspondence. Please submit all invoices to partnerinvoices@xometry.com	
Partner Quote ID: N/A		Ship Date*: 08/02/2019		Shipping Method: FedEx Standard Overnight	
Requirements Standard Material Certification, Standard Inspection					
Notes N/A					
Item	Code	Part ID**	Order ID	Description	Qty.
1	CNC-S	01053AA	1421B-15005	XLS-DPF-1102-J-ISOLATOR GLASS FLANGE-STEP STEP Material: UHMW PE, White Finish: Standard Features: Surface Roughness: finish 32uin/0.8um Ra, specific area Tolerances: precision +/-0.002" (+/-0.051mm), 6 locations Certifications: Standard Material Certification Inspection Requirement: Standard Inspection Notes: Please note drawing for lowest surface finish and tolerances. ***BEST EFFORT ON 16uin SURFACE FINISH; TARGET IS 32uin*** ***PART MUST BE DONE ON A LATHE*** Traceability required	1
SUBTOTAL					\$1,102.63
TOTAL					\$1,102.63

* Ship Date refers to the date on which Xometry expects you to *ship* the parts. All shipments must receive an origin scan (e.g. they cannot be deposited in a drop box)
 ** The Xometry provided part ID and revision are equivalent to the part number and revision in the CAD or PDF file, unless stated otherwise.

Note: Please submit all invoices to partnerinvoices@xometry.com. For terms and conditions, please see the Partner Manufacturing Services Agreement: <https://www.xometry.com/vendor-terms-of-service/>.

Approved By:

Date:
07/19/2019

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J001663B

7/20/2019 8:39 AM

This week I was thinking I could work tomorrow through Wednesday 10ish hour days so I could have Thursday and Friday off because I have to have all my stuff out of my apartment by 9 Sunday morning

7/20/2019 8:41 AM (Viewed 7/20/2019 8:43 AM)

Brian Work

Sounds good to me...u bout done with that part and need more?

7/20/2019 8:47 AM

I might get it done tomorrow if not Monday for sure. I stopped in and wants to change a couple things on the ring looking things I made so if the tube is done I could do those or if there's other stuff and the machine is tied up I could do that

7/20/2019 11:31 AM (Viewed 7/20/2019 12:18 PM)

Brian Work

Do you care if the work is Xometry work so long as it is reasonable there are some parts that are pretty easy in comparison to what you're currently doing I don't want to have to filter every job you just gonna have to trust a little bit I won't put you in a bad position if I do then I'll be the one that has to take the kick in the nuts

7/20/2019 12:20 PM

It doesn't really matter to me, I guess if the indexer isn't available I don't really have much of a choice

7/20/2019 12:24 PM (Viewed 7/20/2019 12:26 PM)

Brian Work

If u want to take tube off and use indexer today have at it...need machine to make some holes tomorrow

7/20/2019 12:27 PM

I should probably focus on the current xom until it's done there's probably only half a day of indexer work to do so it wouldn't make much sense to set it up until the tube is done

7/20/2019 12:29 PM (Viewed 7/20/2019 12:30 PM)

Brian Work

Agreed...tube should be done Tuesday probably

7/20/2019 12:30 PM

If there's a couple day job on xom I can do that

7/20/2019 12:31 PM

Brian Work

I got one for u...material will be here Monday..i will send u files

7/20/2019 12:31 PM

Ok sounds good

7/20/2019 12:35 PM

Brian Work

It's a uhmw lathe part 12" in diameter 2.25 thick it may not have to be a large part but there is a finish call out and uhmw likes sharp tools plus u seemed interested in messing with Milltronics lathe

7/20/2019 12:36 PM

Ok that'll work

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J001663B

7/20/2019 12:41 PM (Viewed 7/20/2019 12:42 PM)

Brian Work [REDACTED]



7/20/2019 12:42 PM

Brian Work [REDACTED]

Just 1 due in 14 days and should take 6-8 hours give or take a few

7/20/2019 12:45 PM

[REDACTED]

That looks good just be sure and order the material thick enough so there's something to hold onto in the chuck

7/20/2019 2:32 PM

Brian Work [REDACTED]

I can only get it 2.5 square that large so u will probably need to fixture it to something else but potentially milling it is the best solution

7/20/2019 2:39 PM

[REDACTED]

That'll work if the part is 2.25 thick you could order the material 3.5 thick and slug it out on the water jet to 14" diameter then I could still turn it on the lathe and use tabs to hold it on the will to bring it into height and finish it out

7/20/2019 2:39 PM

Brian Work [REDACTED]

Sorry man 2.5 is what u got

7/20/2019 2:39 PM

Brian Work [REDACTED]

U have time though

7/20/2019 2:40 PM

Brian Work [REDACTED]

Since it's square u have a ton of room for holes to bolt it to something though

7/20/2019 2:41 PM

[REDACTED]

Yeah I'll have to look at it Monday

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J001663B

7/20/2019 2:44 PM
[REDACTED]

I have a plan in mind

7/20/2019 2:45 PM
[REDACTED]

Do we have machinable jaws for the 12" chuck?

7/20/2019 2:55 PM
[REDACTED]

Brian Work [REDACTED]
Should in that lathe cabinet

7/20/2019 2:56 PM
[REDACTED]

Ok I've never really looked

7/20/2019 2:56 PM
[REDACTED]

Brian Work [REDACTED]
I'll make job ticket and put files in it for u. Will bill this through protostudios...throw Spencer a bone

7/20/2019 2:58 PM
[REDACTED]

Ok

7/21/2019 6:46 PM
[REDACTED]

So if I finish up that bracket in 24hrs is there a bottle o' scotch in it for me considering it was quoted for 30?


7/21/2019 6:50 PM (Viewed 7/21/2019 6:52 PM)
[REDACTED]

Brian Work [REDACTED]
30 I gotta find where I said 30 I'm pretty sure it was 3 day or 24 hours if u will. I'll buy u Guinness this is a University part maybe [REDACTED] will get ya the scotch

7/21/2019 6:53 PM
[REDACTED]

Oh well all I got to say is...

7/21/2019 6:53 PM
[REDACTED]



Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J001663B

7/21/2019 6:53 PM

Boom shakalaka

7/21/2019 6:55 PM (Viewed 7/21/2019 6:56 PM)

Brian Work



7/21/2019 6:58 PM (Delivered 7/21/2019 6:59 PM)

It actually turned out better than I expected

7/21/2019 6:59 PM (Viewed 7/21/2019 7:03 PM)

Brian Work

U set a lofty standard my friend

7/21/2019 7:04 PM

Just wait till we get those new machines shit will be getting real then

7/21/2019 7:20 PM

Brian Work

I'm almost scared cuz Willie and I r gonna need some training wheels

7/21/2019 7:21 PM

There's a distance to go screen and 5% rapid

7/21/2019 7:22 PM (Viewed 7/21/2019 7:23 PM)

Brian Work

Ima be ok as I'm sitting in front of one right now running a 3/4 inch cutter 7.5 stickout holding onto less that 1/2 inch


7/21/2019 7:23 PM

Oh jeez

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J00196AB

PURCHASE ORDER

 <small>3D Printing • CNC Machining • Additive Manufacturing</small>		P.O. #: J00196AB												
		Date: 10/14/2019												
To: DesignTech Williamsburg, VA 52361 United States	Ship To: Warsaw, IN 46582 United States	PO number should appear on all packages and correspondence. Please submit all invoices to: partnerinvoices@xometry.com												
Partner Quote ID: N/A	Ship Date: 10/22/2019	Shipping Method: FedEx 2 Day Air												
Requirements: Standard Inspection														
Notes: N/A														
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Item</th> <th style="width: 10%;">Code</th> <th style="width: 15%;">Part ID**</th> <th style="width: 15%;">Order ID</th> <th style="width: 40%;">Description</th> <th style="width: 10%;">Qty</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>CNC-5</td> <td>012482R</td> <td>J001-L5000</td> <td> 11 0010227.stp Material: UH MW PE White Finish: Standard Inspection Requirement: Standard Inspection Notes: N/A </td> <td>30</td> </tr> </tbody> </table>	Item	Code	Part ID**	Order ID	Description	Qty	1	CNC-5	012482R	J001-L5000	11 0010227.stp Material: UH MW PE White Finish: Standard Inspection Requirement: Standard Inspection Notes: N/A	30		
Item	Code	Part ID**	Order ID	Description	Qty									
1	CNC-5	012482R	J001-L5000	11 0010227.stp Material: UH MW PE White Finish: Standard Inspection Requirement: Standard Inspection Notes: N/A	30									
		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">SUBTOTAL</td> <td style="width: 40%; text-align: right;">\$3,500.00</td> </tr> <tr> <td>TOTAL</td> <td style="text-align: right;">\$3,500.00</td> </tr> </table>	SUBTOTAL	\$3,500.00	TOTAL	\$3,500.00								
SUBTOTAL	\$3,500.00													
TOTAL	\$3,500.00													

* Ship Date refers to the date on which Xometry expects you to ship the parts. All shipments must receive an origin scan (i.e. they cannot be deposited in a drop box).

**The Xometry provided part ID and revision are equivalent to the part number and revision in the CAD or PDF file, unless stated otherwise.

Notes: Please submit all invoices to partnerinvoices@xometry.com. For terms and conditions, please see the Partner Manufacturing Services Agreement: <https://www.xometry.com/vendors/terms-of-service/>

Approved By:	Date: 10/14/2019
--------------	---------------------

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J00196AB



Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J00196AB

10/13/2019 5:49 PM

Brian Work [REDACTED]

Just let it run

10/13/2019 5:49 PM

[REDACTED]

Ok

10/14/2019 8:54 AM (Viewed 10/14/2019 8:55 AM)

Brian Work [REDACTED]

So I gotta Ehret says range error until 22 not sure what's going on here but somethings fucked up and I need your help

10/14/2019 8:56 AM

[REDACTED]

I'll stop in in 20 min

10/14/2019 8:58 AM (Viewed 10/14/2019 9:26 AM)

Brian Work [REDACTED]

It looks like you have 222 Union program but not a tool 22 in the actual carousel pockets

10/14/2019 11:03 AM

[REDACTED]

Is there anything I could do for 5 hrs tomorrow evening?

10/14/2019 12:07 PM (Viewed 10/14/2019 12:11 PM)

Brian Work [REDACTED]

Let me get back to U in a few hours on that but probably yes

10/14/2019 6:20 PM (Viewed 10/14/2019 6:27 PM)

Brian [REDACTED]

U.S. Cellular LTE 6:10 PM
work.somabry.com

110010287.stp



2.724 x 2.724 x 2.382 in | 69.2 x 69.2 x 60.5 mm

10/14/2019 6:20 PM (Viewed 10/14/2019 6:27 PM)

Brian Work [REDACTED]

U program or plan and I can run during week?

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J00196AB

Brian Work [REDACTED] 10/14/2019 6:21 PM (Viewed 10/14/2019 6:27 PM)

It's plastic hdpe

Brian Work [REDACTED] 10/14/2019 6:22 PM (Viewed 10/14/2019 6:27 PM)

Qty 30 due 22nd

10/14/2019 6:33 PM

We could probably do that

Brian Work [REDACTED] 10/14/2019 6:36 PM (Viewed 10/14/2019 6:45 PM)



Brian Work [REDACTED] 10/14/2019 6:40 PM (Viewed 10/14/2019 6:45 PM)

K it's ours figure we can run straight side on lathe and refixture

Brian Work [REDACTED] 10/14/2019 7:11 PM (Viewed 10/14/2019 7:14 PM)

Should be enough time in them to make most of ur time

Brian Work [REDACTED] 10/14/2019 7:26 PM (Viewed 10/14/2019 7:33 PM)

Do you think we can make these out of around

10/14/2019 7:33 PM

?

Brian Work [REDACTED] 10/14/2019 7:36 PM (Viewed 10/14/2019 7:39 PM)

Do you think we can make those parts out of round stock

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J00196AB

10/14/2019 7:40 PM

Yeah that would probably be the least waste

10/14/2019 7:44 PM (Viewed 10/14/2019 8:13 PM)

Brian Work

Just thinking if we could fixture it on the lathe at the right angle we might be able to just flip it in for him and get the job done

10/15/2019 8:29 AM



We should check into this style of insert at some point for plastic/aluminum I'm not sure who all makes them though

10/15/2019 8:58 AM

Brian Work

You got time to stop by today talk about that project for a minute I got some ideas

10/15/2019 8:59 AM

I'll stop in about noon

10/15/2019 8:08 PM

I got a program loaded in the control of the lathe for tools 1 and 2 to cut the backs of these, the .031 radius aluminum inserts are sitting on my box and I made step files of the vise jaws and a model of the jaws with the parts in them these models are on a flash drive sitting on my box

10/15/2019 8:09 PM (Viewed 10/15/2019 8:12 PM)

Brian Work

Ok I'll get things moving as soon as I can

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J00196AB

Brian Work [REDACTED] 10/15/2019 8:10 PM (Viewed 10/15/2019 8:12 PM)

Btw [REDACTED] and I got that Auger working so I think we add a spray bar to back of machine and run it tits out

10/15/2019 8:13 PM

I like tits out

10/15/2019 8:17 PM

Brian Work [REDACTED]
Especially when running

10/15/2019 8:18 PM

I got some other programs made after it looks like to rough and finish the domes 45 min per 2 parts

10/16/2019 6:59 AM (Viewed 10/16/2019 7:51 AM)

Brian Work [REDACTED]
That'll work

10/16/2019 7:29 AM (Viewed 10/16/2019 7:51 AM)

Brian Work [REDACTED]
Had an idea that we could just 3-D print the buys jaws at the correct angle hopefully and then we don't have to fuck with making or putting the vice jaws or a vice at the 10° angle we could just both device jobs on and go to town

10/16/2019 9:40 AM

Using inaccurate fixturing yo save 1.5hr on a job we're going to have 40hrs in seems problematic but if you want to do it that way ok

10/16/2019 10:07 AM

Brian Work [REDACTED]
Nah saw the jaws nbd

10/16/2019 10:08 AM

I think there is a couple made out of 2" square stock sitting on the gray shelf by the drill press that would work well the standard ones may have issues with cutting into the jaw bolts

10/16/2019 10:43 AM (Viewed 10/16/2019 11:14 AM)

Brian Work [REDACTED]
Yeah I thought of that. I think I'll make them at the angle so we don't need a sine vise to hold them...we can just bolt them straight in to whatever Kurt vise and go

10/16/2019 11:30 AM

You could do that just make sure the tops of the jaws are perpendicular to the bores and put a hole at a known location that's parallel with the dia they'll be clamped on. you should put a couple slots in the tops of the jaws so we can put a dowel in them to align when bolting them into the vise

10/16/2019 11:52 AM

There's a slit around the flange of the parts that is angled and .015 at the top... gonna need some small cutters for that

10/16/2019 1:13 PM (Viewed 10/16/2019 1:25 PM)

Brian Work [REDACTED]
I think I fixed all the pockets so we can use all 24 pots

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J00196AB

10/16/2019 1:25 PM
[REDACTED]
Sweet what was going on with them

10/16/2019 1:26 PM (Viewed 10/16/2019 1:27 PM)
Brian Work [REDACTED]
It's an adapter u can pop out...they have SS fingers on them that u can bend back a little

10/16/2019 1:27 PM
[REDACTED]
Oh I see do they pull out of the pod harder?

10/16/2019 1:30 PM
[REDACTED]
I tried using the setting that touched off multiple tools in a row this last weekend and it would run the program but it moved really slow

10/16/2019 1:32 PM
Brian Work [REDACTED]
Yes fo sho pull out harder... have not had issue with probe at all

10/16/2019 1:33 PM
[REDACTED]
It was the tool offester thing z was moving down slow

10/16/2019 1:34 PM (Viewed 10/16/2019 2:23 PM)
Brian Work [REDACTED]
Been using both np

10/16/2019 7:53 PM (Viewed 10/16/2019 8:05 PM)
Brian Work [REDACTED]
How many hours u planning on this weekend?

10/16/2019 8:06 PM
[REDACTED]
9-6 on Sunday

10/16/2019 8:28 PM
[REDACTED]
I thought about working Friday and making 3 sets of jaws and putting the third vise in the hass and getting it setup then someone could come in and change parts every couple hours

10/16/2019 8:31 PM (Viewed 10/16/2019 8:32 PM)
Brian Work [REDACTED]
Every bit would help...hoping to have soft jaws done hoping u can do lathe part

10/16/2019 8:31 PM (Viewed 10/16/2019 8:32 PM)
Brian Work [REDACTED]
We'll get it going and we can keep it going

10/16/2019 8:46 PM
[REDACTED]
That works to

10/17/2019 1:05 PM (Viewed 10/17/2019 1:07 PM)
Brian Work [REDACTED]
If u can get lathe parts going then [REDACTED] can keep them going. What time can u be in here to get things going

10/17/2019 1:08 PM
[REDACTED]
5:30 tomorrow I have class until 5:20

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J00196AB

Brian Work [REDACTED] 10/17/2019 1:08 PM (Viewed 10/17/2019 1:09 PM)

Hoping u start lathe side. [REDACTED] can run them. Willie will make soft jaws tomorrow...the. On Sunday all of the one side will be done and soft jaws ready to begin milking. Btw we don't have to do anything of the super tiny geometry

10/17/2019 1:10 PM

It should take 3 min to run the lathe side so I should be able to get them all done tomorrow night

Brian Work [REDACTED] 10/17/2019 1:11 PM (Viewed 10/17/2019 1:41 PM)

Sweet

10/17/2019 8:38 PM

If [REDACTED] gets bored tomorrow you should have him saw up the material for those parts

Brian Work [REDACTED] 10/17/2019 8:44 PM (Viewed 10/17/2019 8:50 PM)

Will do how much extra u want

10/17/2019 8:51 PM

Probably only need to mar them 1/8in longer than the model, I'll just take enough of the end to get them to clean up

10/17/2019 9:13 PM

I think I'm going to have to start working Saturday mornings instead of Tuesdays starting next weekend

Brian Work [REDACTED] 10/17/2019 9:14 PM (Viewed 10/17/2019 9:15 PM)

Ok that probably smart

10/17/2019 9:16 PM

Homework is no joke this semester and I guess it's just going to get worse

Brian Work [REDACTED] 10/17/2019 9:20 PM (Viewed 10/17/2019 9:21 PM)

Kinda thought that might happen

10/17/2019 9:21 PM

It's nice having atleast one day off a week but apparently it's not a possibility

Brian Work [REDACTED] 10/17/2019 10:24 PM (Viewed 10/17/2019 10:32 PM)

It'll all payoff

10/17/2019 10:34 PM

I guess I don't have to worry either way because if I work 7 days a week for 6 or 7 years and it doesn't pay off I'll be in a insane asylum rolling my shit into balls and eating crayons!!!

Brian Work [REDACTED] 10/17/2019 10:48 PM (Viewed 10/17/2019 11:25 PM)

It'll even out eventually

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop


Copy of Purchase Order Number J00196AB

10/18/2019 7:52 AM
Brian Work [REDACTED]
In order to ship on time we need those parts turned one side tonight. Ship date is 27th. If u can turn them then mill them on Sunday we should be good to go.

10/18/2019 7:53 AM
Brian Work [REDACTED]
Obviously Will and I can keep things moving as well

10/18/2019 1:32 PM
[REDACTED]
[REDACTED]
10/18/2019 1:33 PM (Viewed 10/18/2019 2:00 PM)
Brian Work [REDACTED]
Wtf

10/18/2019 2:45 PM
[REDACTED]
Be sure and have those parts sawed up or there'll be no way they get done tonight
10/18/2019 2:50 PM (Viewed 10/18/2019 2:52 PM)

Brian Work [REDACTED]
Done already bro
10/18/2019 2:52 PM
[REDACTED]


You guys ready to get weird tonight or what?

10/18/2019 5:04 PM (Viewed 10/18/2019 5:22 PM)

Brian Work [REDACTED]
Where are you we miss you here please come soon

10/18/2019 5:25 PM
[REDACTED]
I just got out of class I'll be there in a few minutes
10/18/2019 5:44 PM
[REDACTED]
Scenes how the vending machine is janky you should bring me an amp or rockstar punched

10/18/2019 5:44 PM
Brian Work [REDACTED]
Sorry bro no can-do I got a hustle to get this thing nailed off

10/18/2019 5:45 PM
Brian Work [REDACTED]
You can ask Wille to make your day though

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J00196AB

10/18/2019 6:56 PM

Did you want [REDACTED] to run the lathe and I setup the haas?

10/18/2019 6:58 PM

Brian Work (3193256772)

I gave [REDACTED] the option of either working with you to learn the lathe door a couple parts he could make manually on the lead in the back room so I'm gonna let you guys work that part out if you just need parts swapped out in LA then ran then just ask [REDACTED] if he'll do that totally up to you and him and Wille I'm out of this one for the most part

10/18/2019 6:59 PM

Ok

10/18/2019 7:11 PM

It's up to you if you want the haas setup tonight then [REDACTED] going to have to change parts on the lathe

10/18/2019 7:11 PM (Viewed 10/18/2019 7:15 PM)

Brian Work [REDACTED]

Hey is Wille there be is [REDACTED] here

10/18/2019 7:15 PM

[REDACTED] but no willy

10/18/2019 7:16 PM (Viewed 10/18/2019 7:19 PM)

Brian Work (3193256772)

Pretty sure Wille will be back but I send a message to [REDACTED] just go talk to them bro you guys can be buds let them know the deal if you runs that Mill Tronics then you can set up the Haas I just thought Wille was going to handle it but he ain't there

10/18/2019 7:42 PM (Viewed 10/18/2019 9:44 PM)

Brian Work [REDACTED]

By the way you're mighty by pitbull's came in there in the box on that shelf that has all the BT tooling on it

10/18/2019 8:57 PM (Viewed 10/18/2019 9:44 PM)

Brian Work [REDACTED]

All working out?

10/18/2019 9:44 PM

So far

10/18/2019 9:45 PM (Viewed 10/18/2019 10:20 PM)

Brian Work [REDACTED]

Gotta luv it

10/18/2019 10:20 PM

File attachment with MIME type: video/quicktime

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J00196AB

10/18/2019 10:20 PM (Delivered 10/18/2019 10:21 PM)



10/18/2019 10:21 PM (Viewed 10/18/2019 10:22 PM)

Brian Work [REDACTED]

FUCK Yeah!!!

10/18/2019 10:39 PM

File attachment with MIME type; video/quicktime
Yeah just a little faster than the milltronics lol

10/18/2019 10:41 PM

Brian Work [REDACTED]

Mo Betta machine...FYI keep spindle 10k and under for now please as chiller is not working

10/18/2019 10:44 PM

Is there a ticket made up for these?

10/18/2019 10:45 PM (Viewed 10/18/2019 10:46 PM)

Brian Work [REDACTED]

Sorry no just make on call protostudios ballparts

10/18/2019 10:47 PM

Ok

10/18/2019 10:48 PM (Viewed 10/18/2019 10:49 PM)

Brian Work [REDACTED]

How many more hours u need for week?

10/18/2019 10:49 PM

I'm good for this week

10/18/2019 10:49 PM (Viewed 10/18/2019 10:55 PM)

Brian Work [REDACTED]

I mean how many hours Sunday trying to do the math

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J00196AB

University of Iowa - Protostudios

Coralville, IA 52241 US

protostudios

INVOICE

BILL TO

Brian Busch
D3signTech LLC

INVOICE # 1252

DATE 11/08/2019

DUE DATE 12/08/2019

TERMS Net 30

ACTIVITY	QTY	RATE	AMOUNT
Product	1	936.00	936.00
[ExGen] Machining Services - 11/08/2019 - Machining Services / Spencer Kuhl: 1792 - (3) Plates anodize, bag & tag - 10/10/19			
Protostudios Service Fee (15%)	0.15	936.00	140.40
Protostudios Service Fee (15%) for [ExGen] Machining Services - 11/08/2019 - Machining Services / Spencer Kuhl: 1792 - (3) Plates anodize, bag & tag - 10/10/19			
Product	1	780.00	780.00
[ExGen] Machining Services - 11/08/2019 - Machining Services / Spencer Kuhl: 1797 - (3) Plates anodize, bag & tag - 10/15/19			
Protostudios Service Fee (15%)	0.15	780.00	117.00
Protostudios Service Fee (15%) for [ExGen] Machining Services - 11/08/2019 - Machining Services / Spencer Kuhl: 1797 - (3) Plates anodize, bag & tag - 10/15/19			
Product	1	936.00	936.00
[ExGen] Machining Services - 11/08/2019 - Machining Services / Spencer Kuhl: 1809 - ProtoStudios ball parts - 10/27/19			
Protostudios Service Fee (15%)	0.15	936.00	140.40
Protostudios Service Fee (15%) for [ExGen] Machining Services - 11/08/2019 - Machining Services / Spencer Kuhl: 1809 - ProtoStudios ball parts - 10/27/19			
PAYMENT			3,049.80
BALANCE DUE			\$0.00

Warranty/Indemnification

All product and services delivered are delivered to Client at Client's sole risk and are "as is" without warranties of any kind, either express or implied, including all implied warranties of merchantability, fitness for a particular purpose, title, non-infringement, and any warranties arising from a course of dealing, usage or trade practice.

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0019434

PURCHASE ORDER

 <small>(311) East Ave. Madison, WI 53703-1101</small>		P.O. No. J0019434												
		Date: 10/09/2019												
To: DesignTech Williamsburg, VA 52361 United States	Ship To: Norwood, MA 02062 United States	PO number should appear on all packages and correspondence. Please submit all invoices to: partnerinvoices@xometry.com												
Partner Quote ID: N/A	Ship Date: 10/21/2019	Shipping Method: FedEx Standard Overnight												
Requirements: Finishing Certification, Standard Material Certification, Standard Inspection														
Notes: N/A														
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Item</th> <th style="width: 10%;">Code</th> <th style="width: 10%;">Part ID**</th> <th style="width: 10%;">Order ID</th> <th style="width: 50%;">Description</th> <th style="width: 10%;">Qty.</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>000-5</td> <td>01180AE</td> <td>125F5-15010</td> <td> T150000-10080 01 STEP Material: Aluminum 6061 T6 Finish: Black Hard Coat Anodize Features: Threads/Tapped Holes: 22 Tolerances: precision +/- .001 (+/- .025mm) & locations Certifications: Finishing Certification Standard Material Certification Inspection Requirement Standard Inspection Notes: ***ALL MATERIALS AND FINISHES TO BE ROLL COMPLIANT*** </td> <td>2</td> </tr> </tbody> </table>	Item	Code	Part ID**	Order ID	Description	Qty.	1	000-5	01180AE	125F5-15010	T150000-10080 01 STEP Material: Aluminum 6061 T6 Finish: Black Hard Coat Anodize Features: Threads/Tapped Holes: 22 Tolerances: precision +/- .001 (+/- .025mm) & locations Certifications: Finishing Certification Standard Material Certification Inspection Requirement Standard Inspection Notes: ***ALL MATERIALS AND FINISHES TO BE ROLL COMPLIANT***	2		
Item	Code	Part ID**	Order ID	Description	Qty.									
1	000-5	01180AE	125F5-15010	T150000-10080 01 STEP Material: Aluminum 6061 T6 Finish: Black Hard Coat Anodize Features: Threads/Tapped Holes: 22 Tolerances: precision +/- .001 (+/- .025mm) & locations Certifications: Finishing Certification Standard Material Certification Inspection Requirement Standard Inspection Notes: ***ALL MATERIALS AND FINISHES TO BE ROLL COMPLIANT***	2									
		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">SUBTOTAL</td> <td style="width: 40%; text-align: right;">\$1,275.00</td> </tr> <tr> <td>TOTAL</td> <td style="text-align: right;">\$1,275.00</td> </tr> </table>	SUBTOTAL	\$1,275.00	TOTAL	\$1,275.00								
SUBTOTAL	\$1,275.00													
TOTAL	\$1,275.00													

* Ship Date refers to the date on which Xometry expects you to ship the parts. All shipments must receive origin scan (e.g. they cannot be deposited in a drop box).

**The Xometry-provided part ID and revision are equivalent to the part number and revision in the C&D or PDF file, unless stated otherwise.

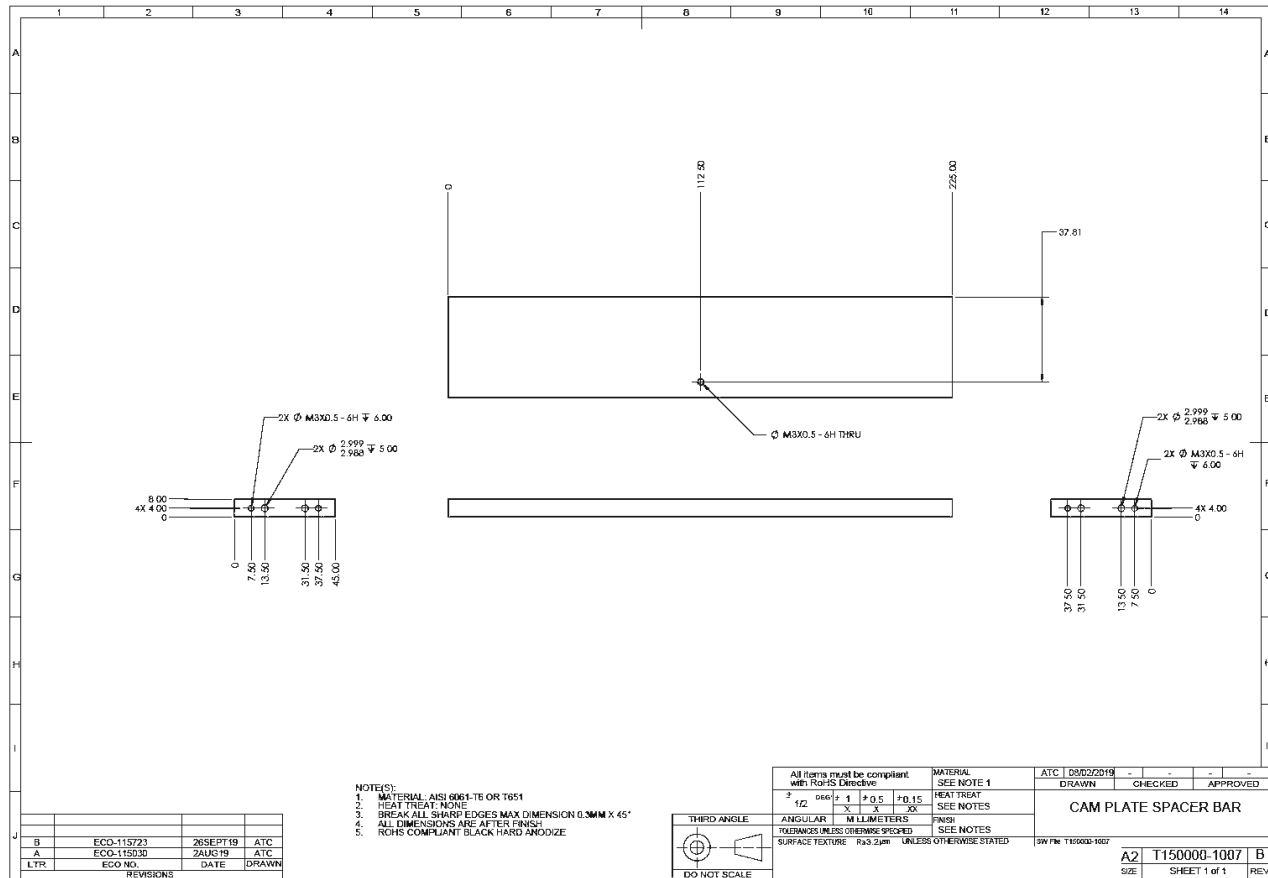
***Please submit all invoices to partnerinvoices@xometry.com. For terms and conditions, please see the Partner Manufacturing Services Agreement: <https://www.xometry.com/submit/terms-of-service/>.

Approved By:

Date:
10/09/2019

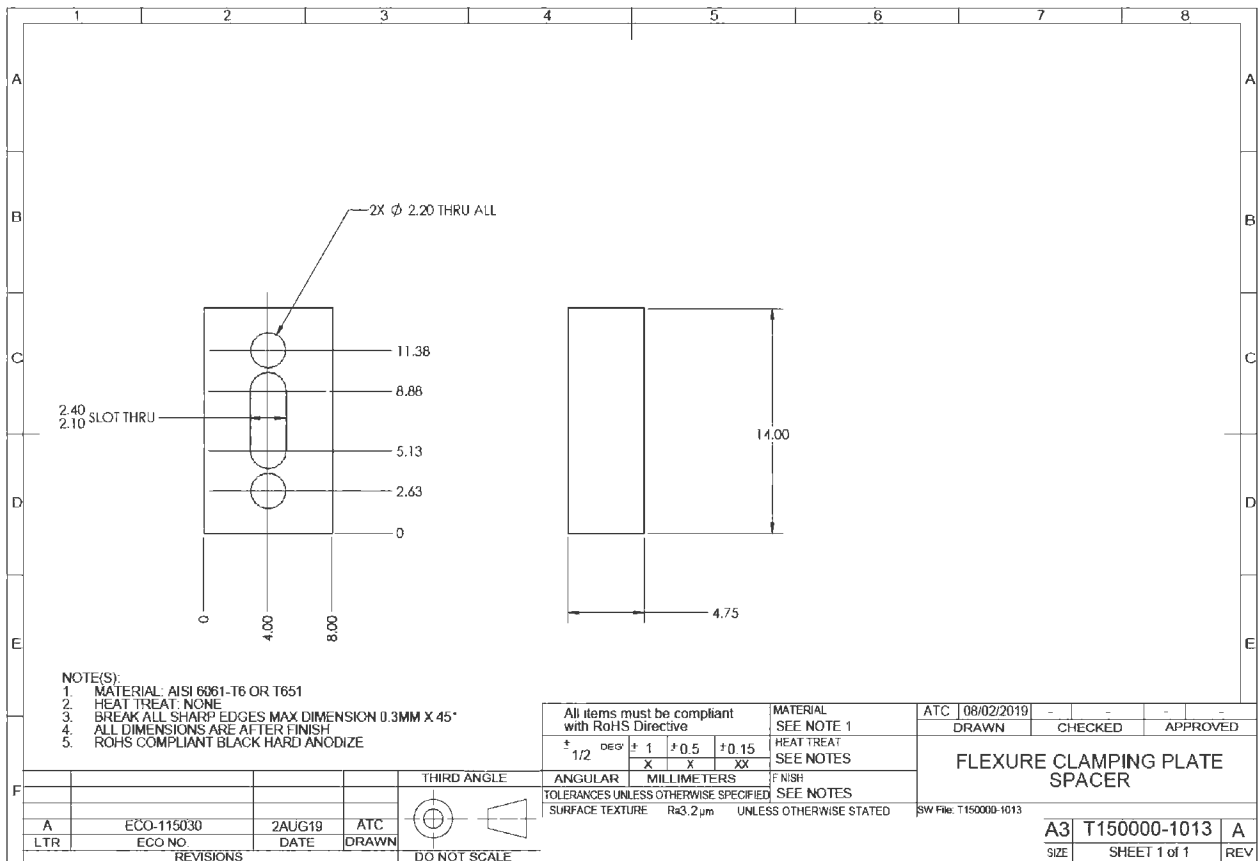
Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0019434



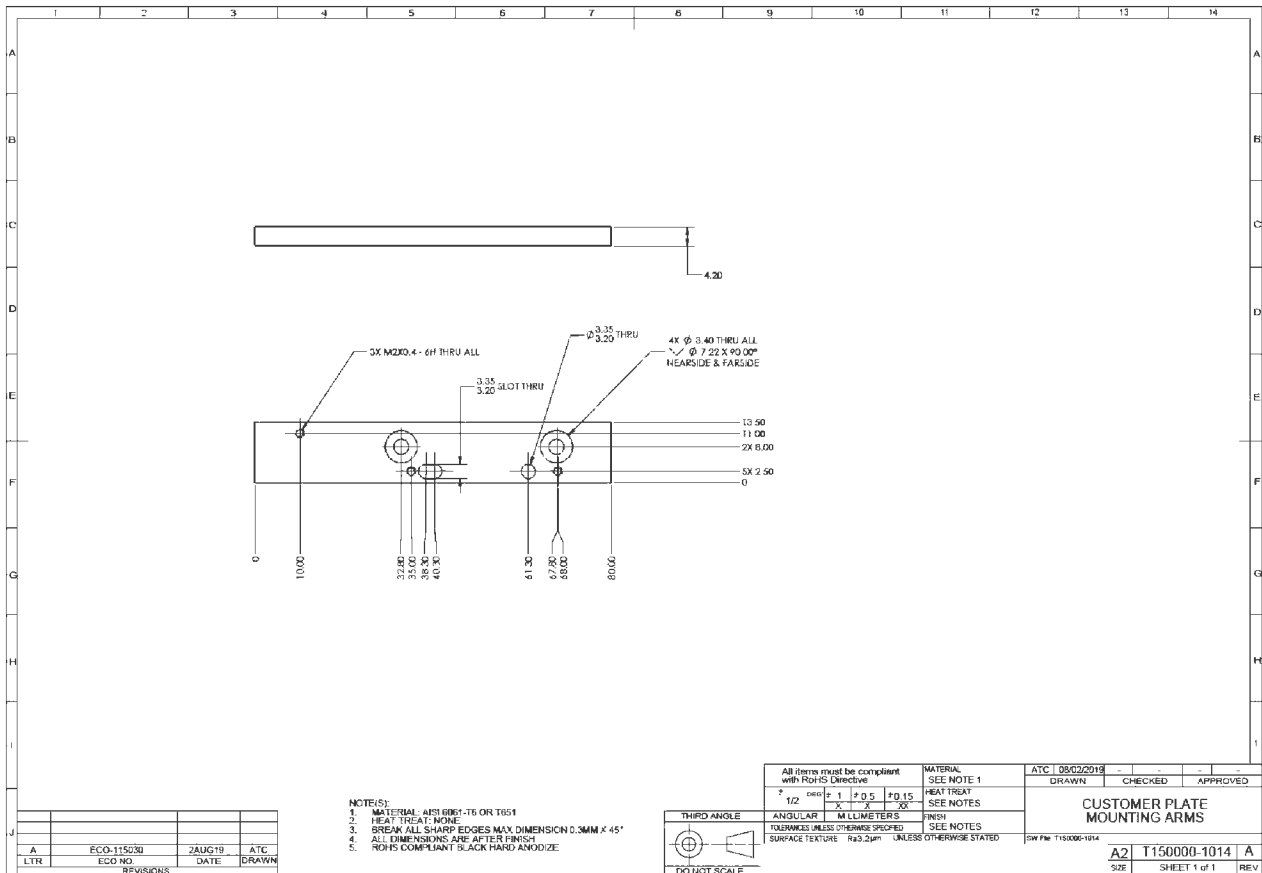
Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0019434



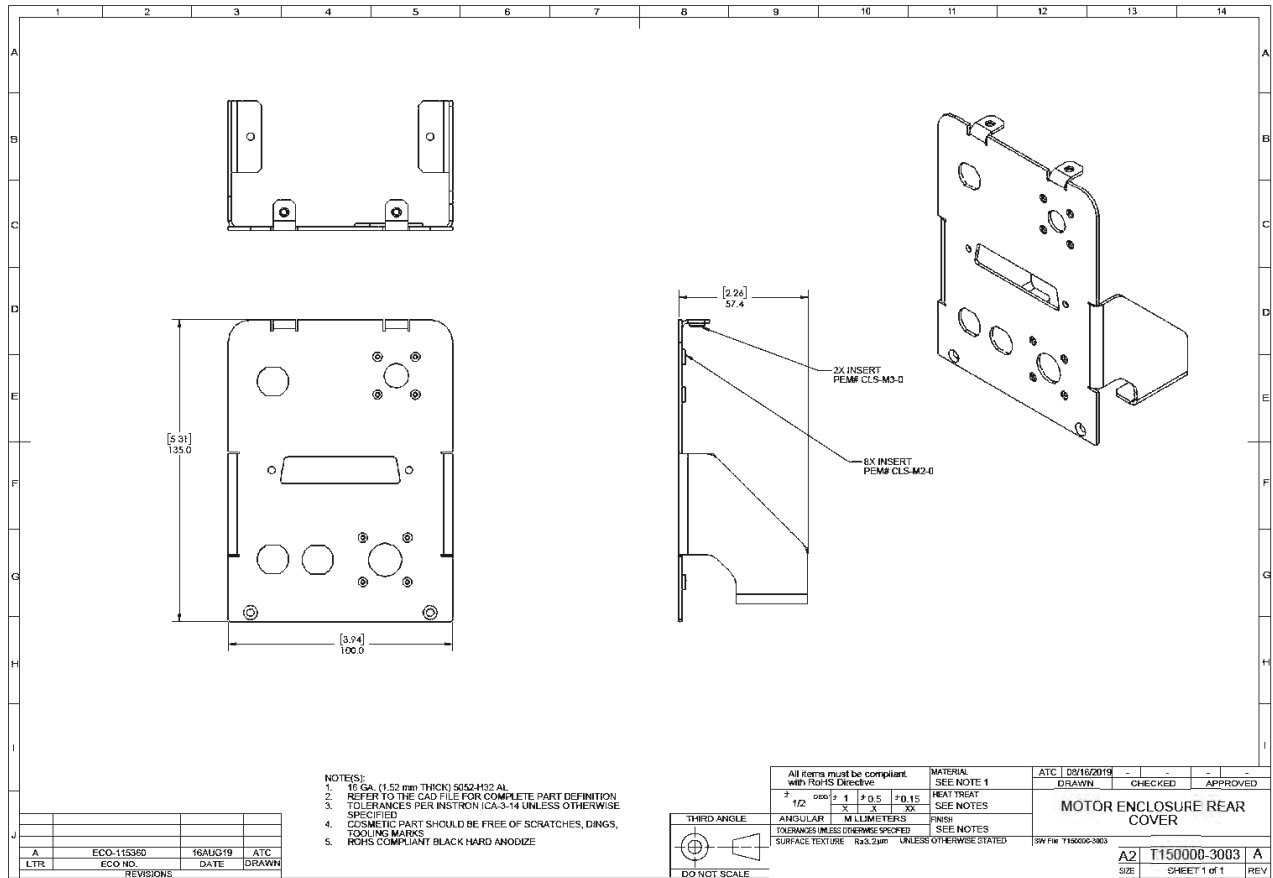
Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0019434



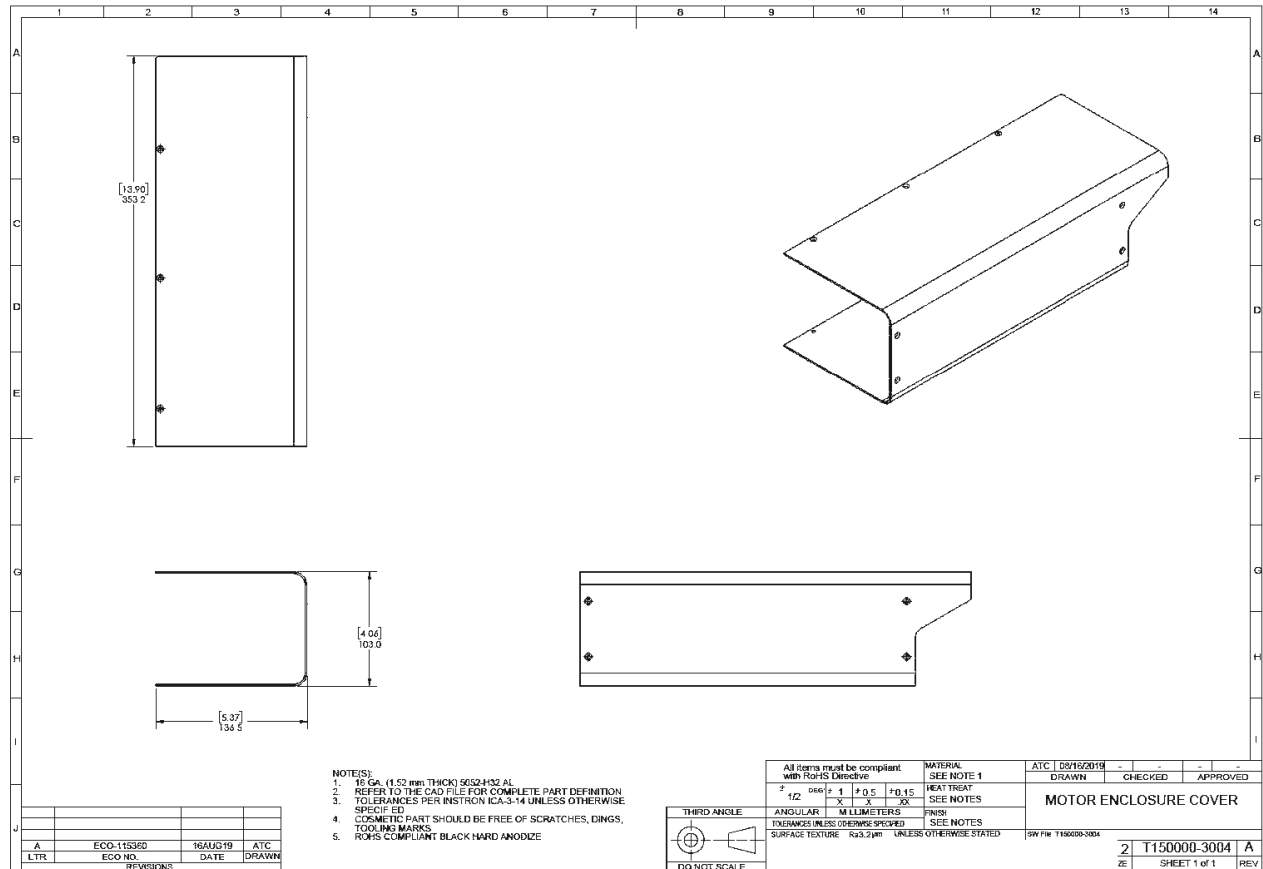
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0019434



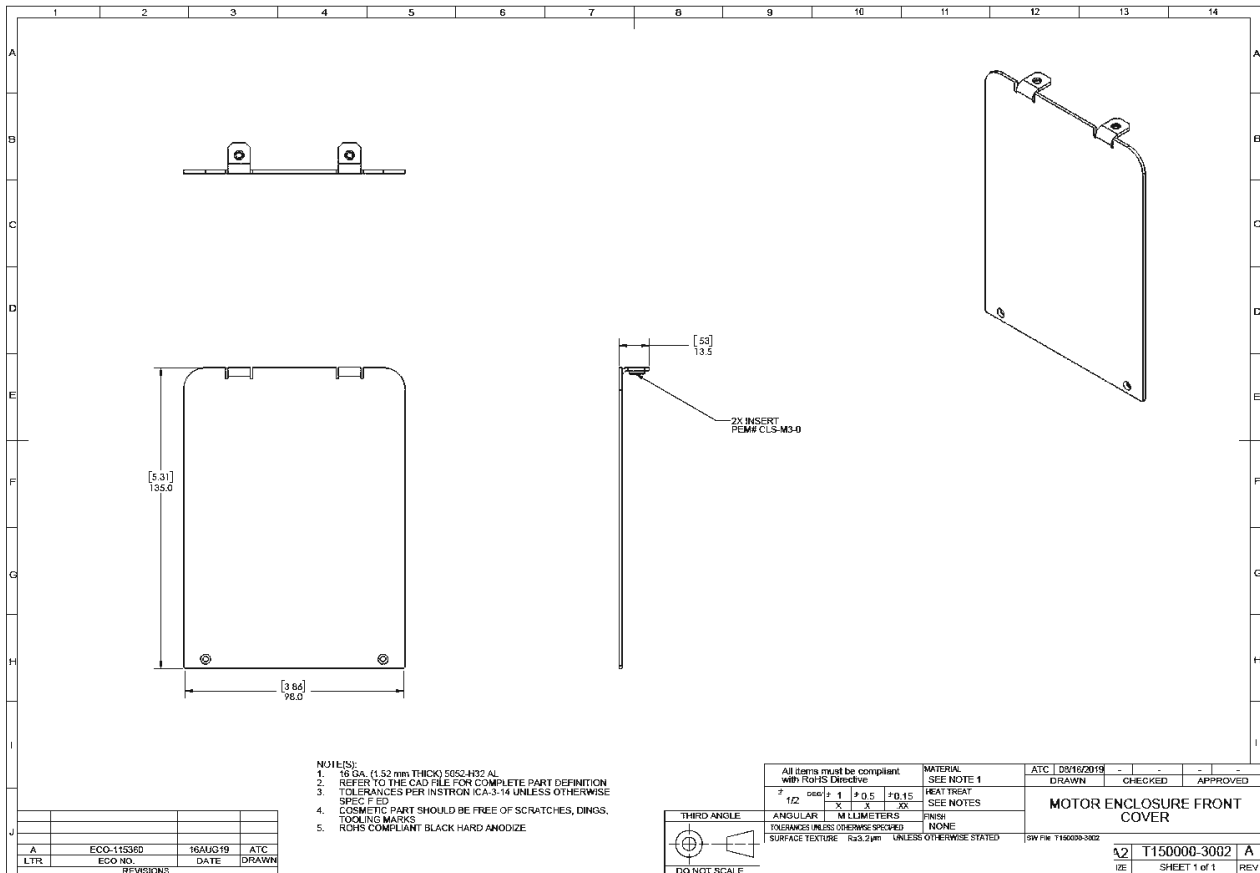
Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0019434



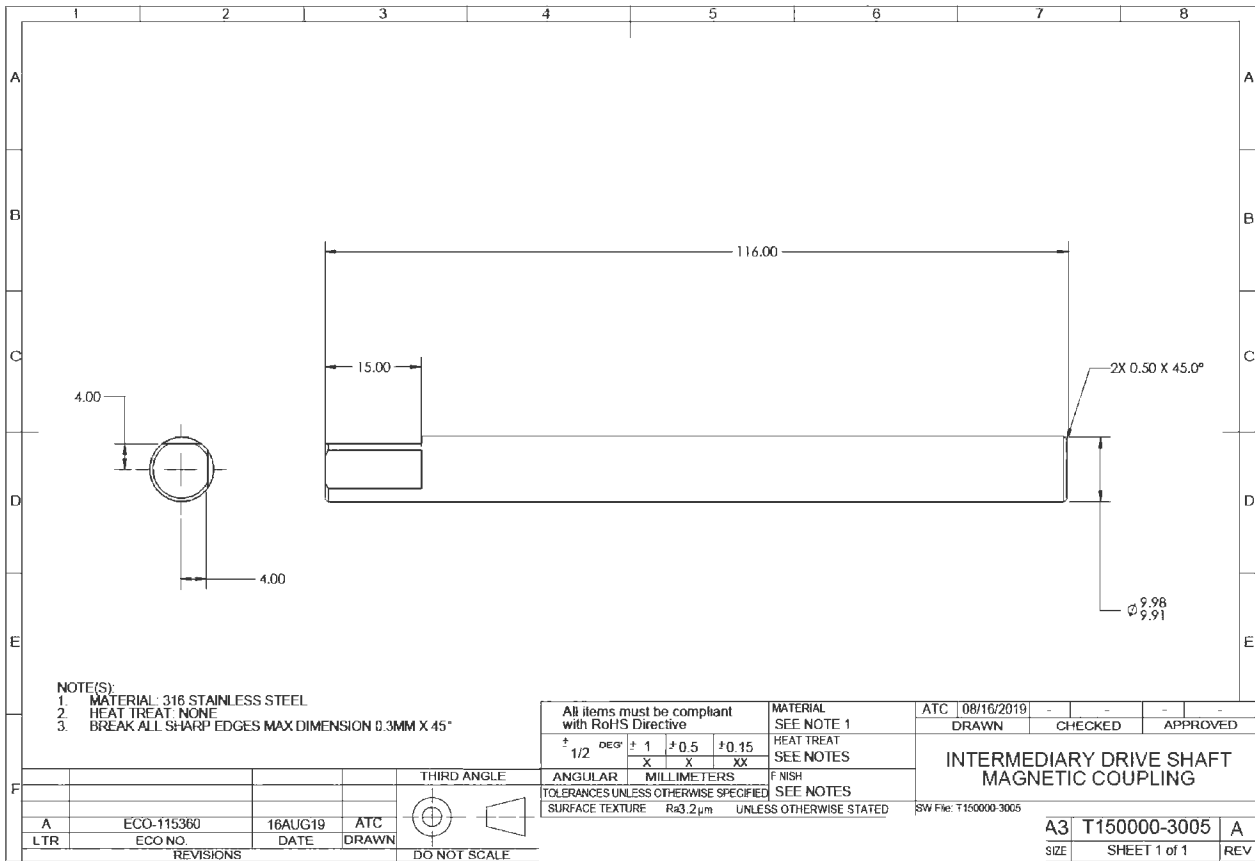
Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0019434



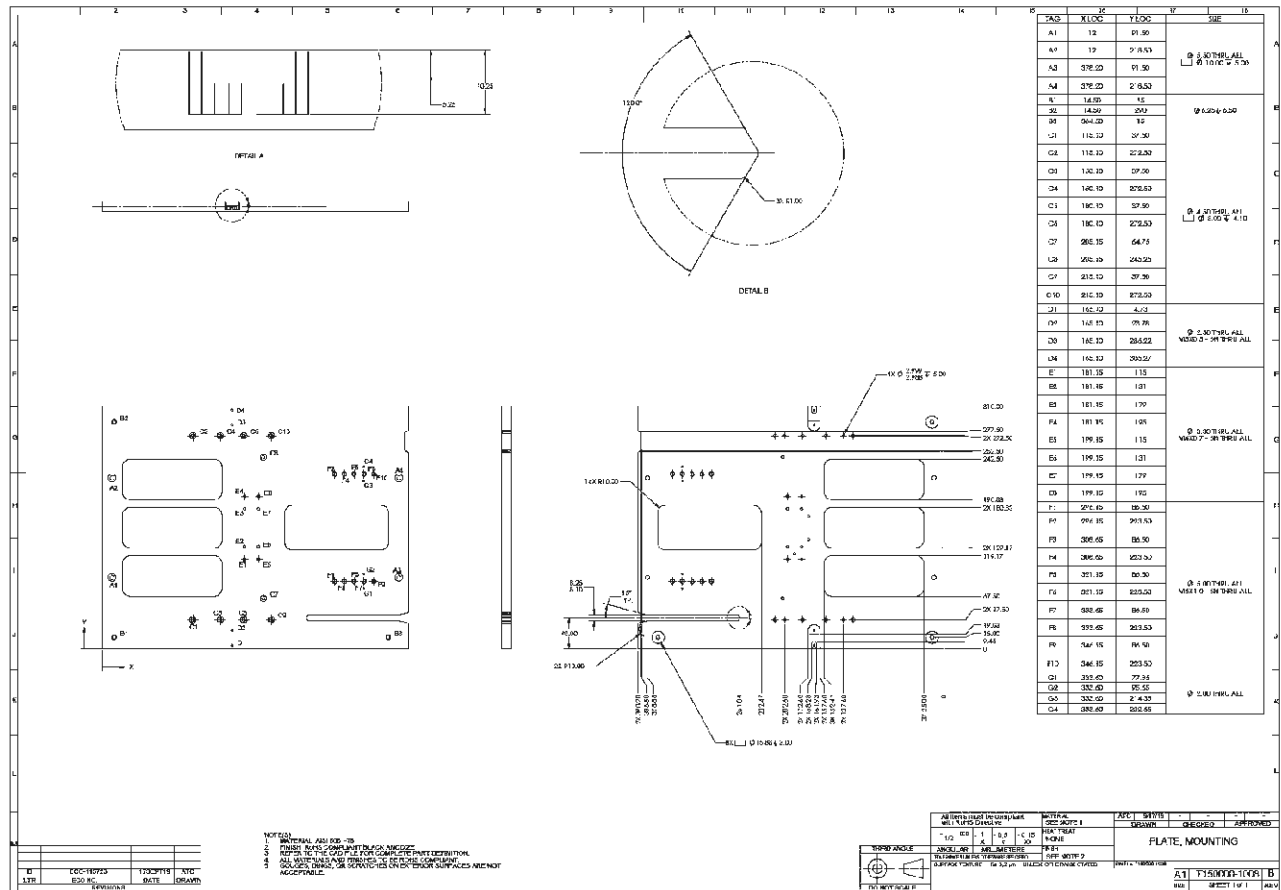
Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0019434



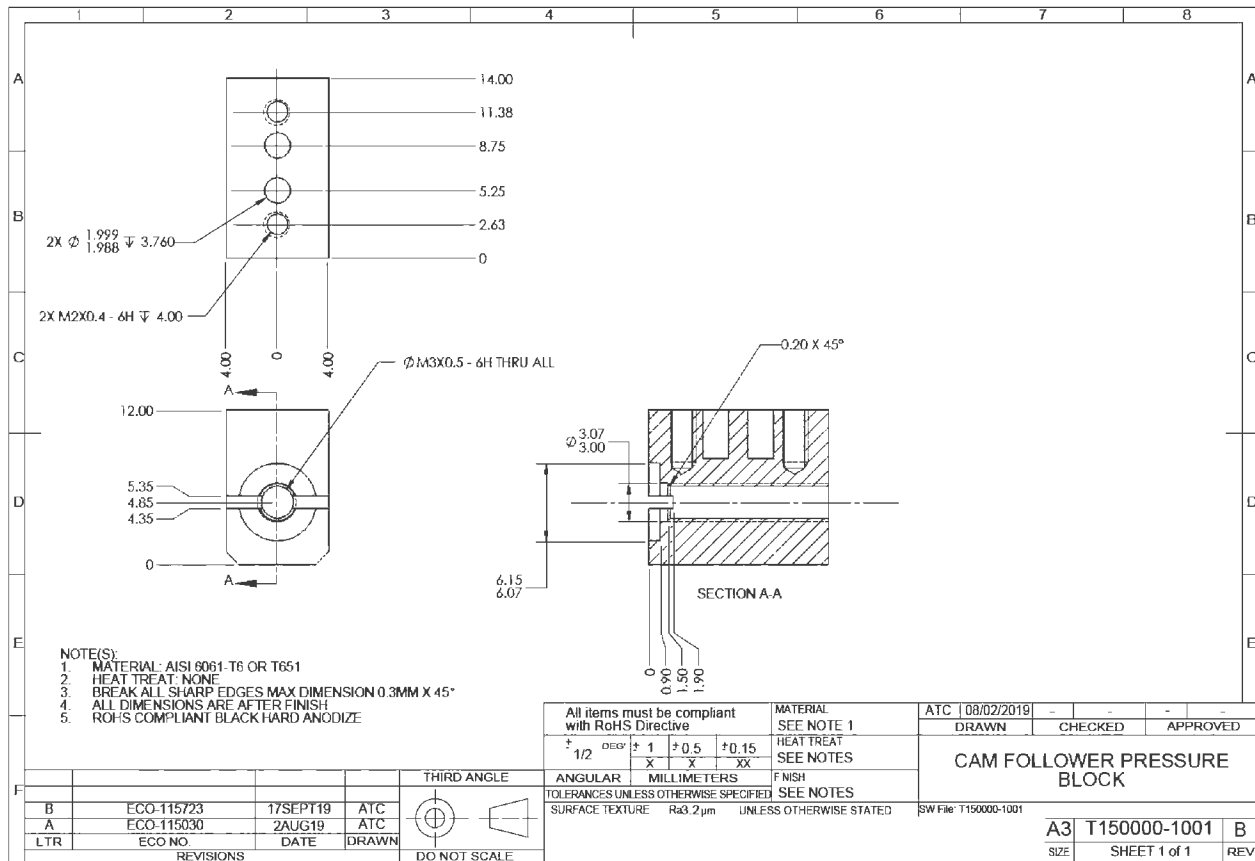
Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0019434



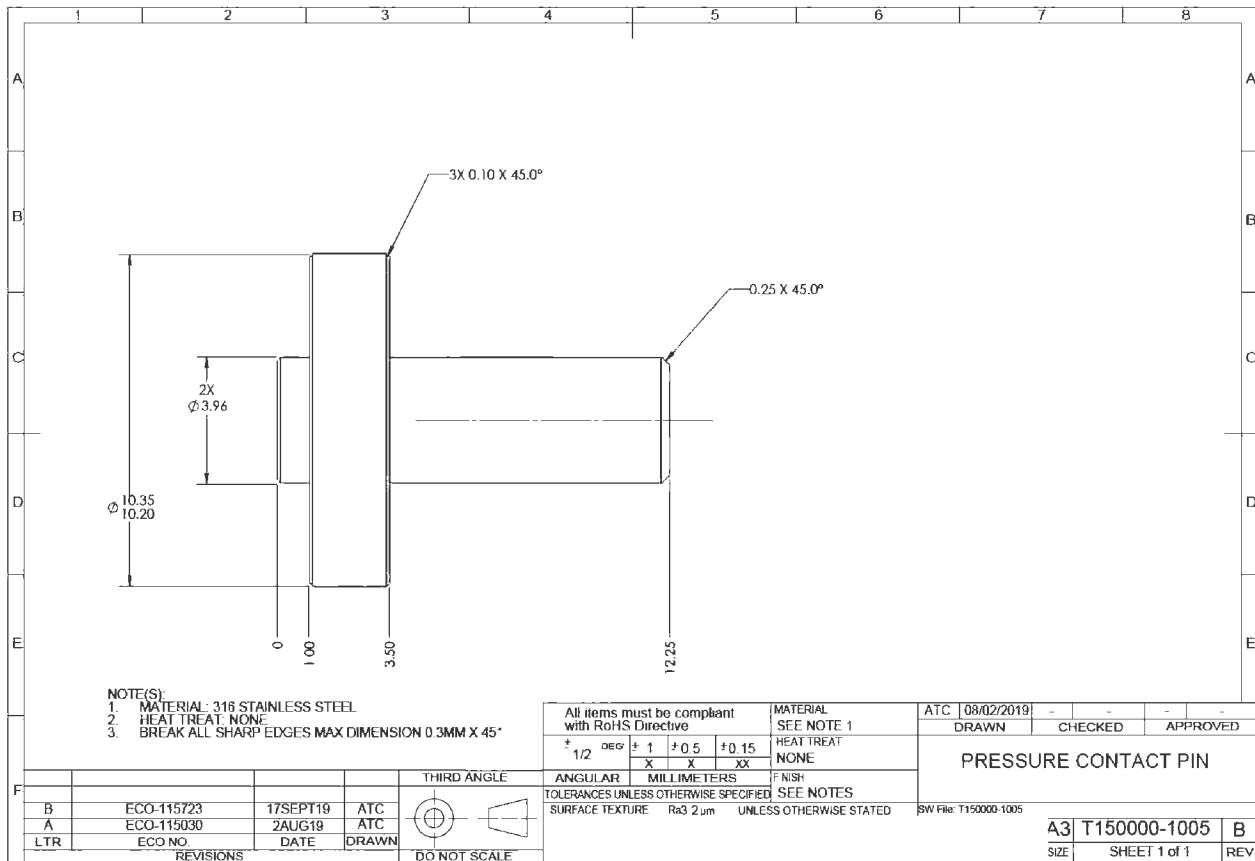
Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0019434



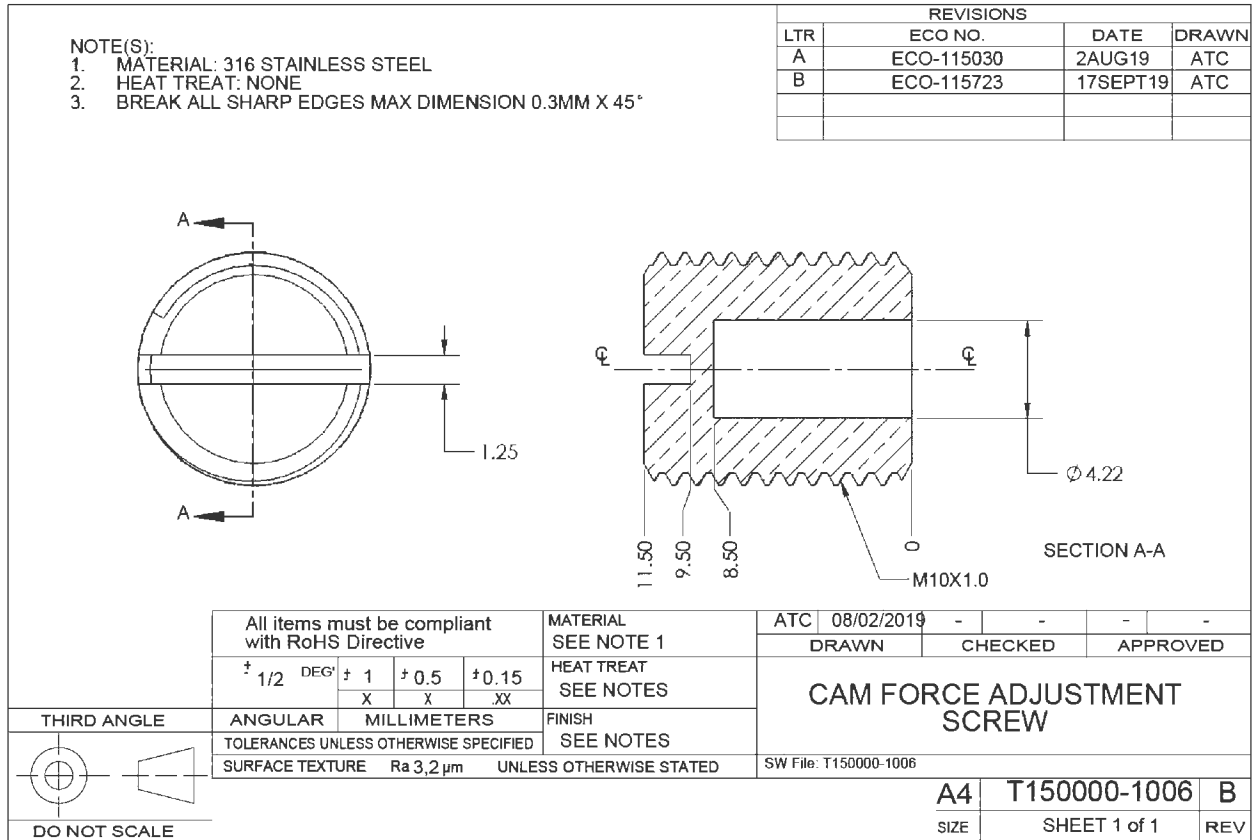
Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0019434



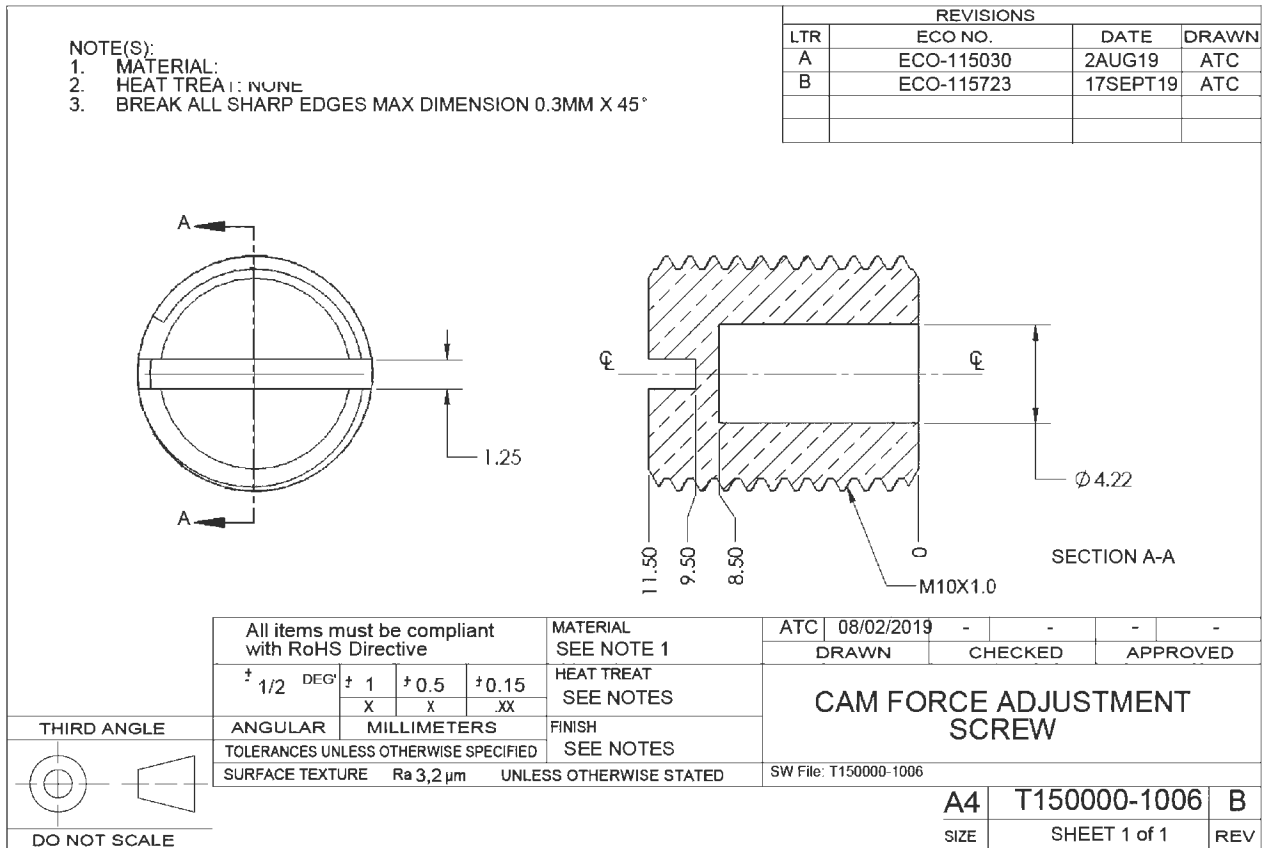
Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0019434



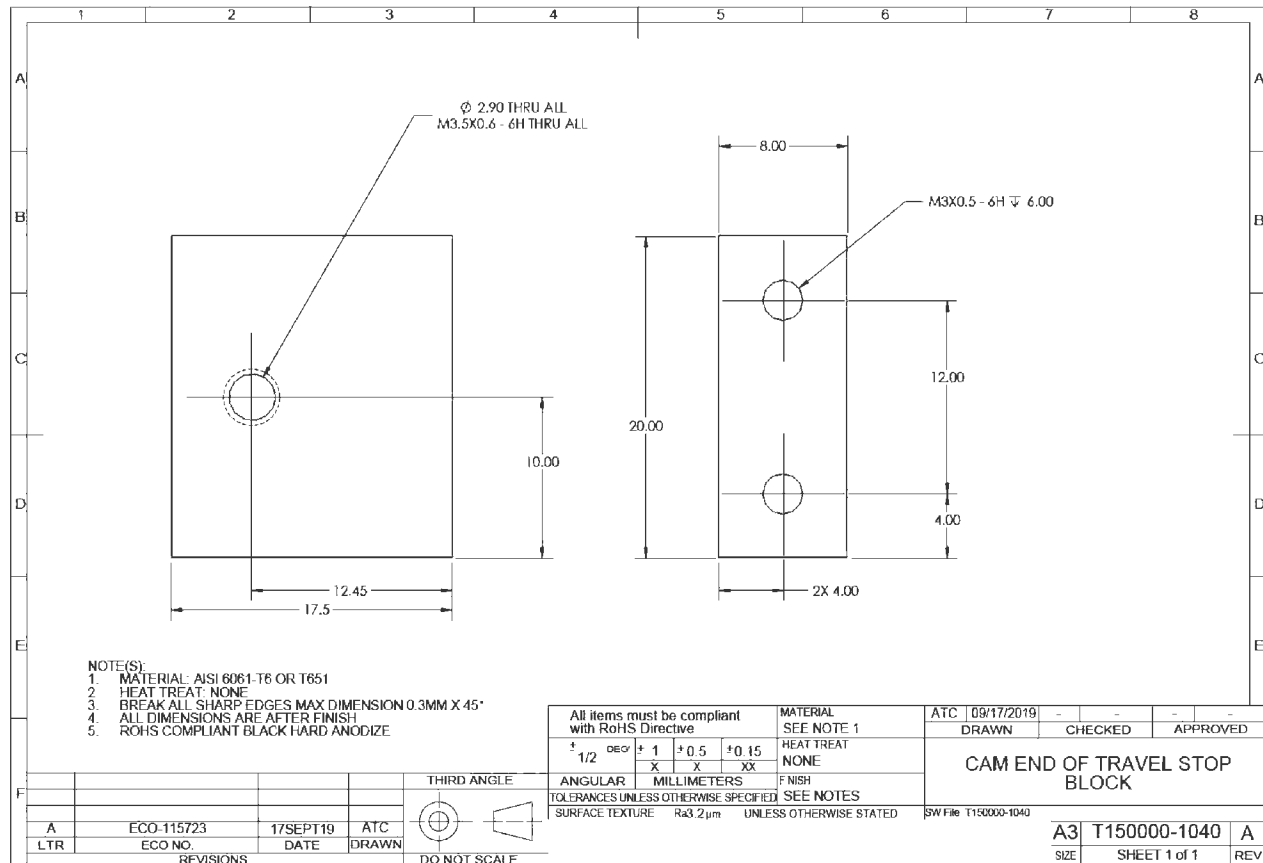
Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0019434



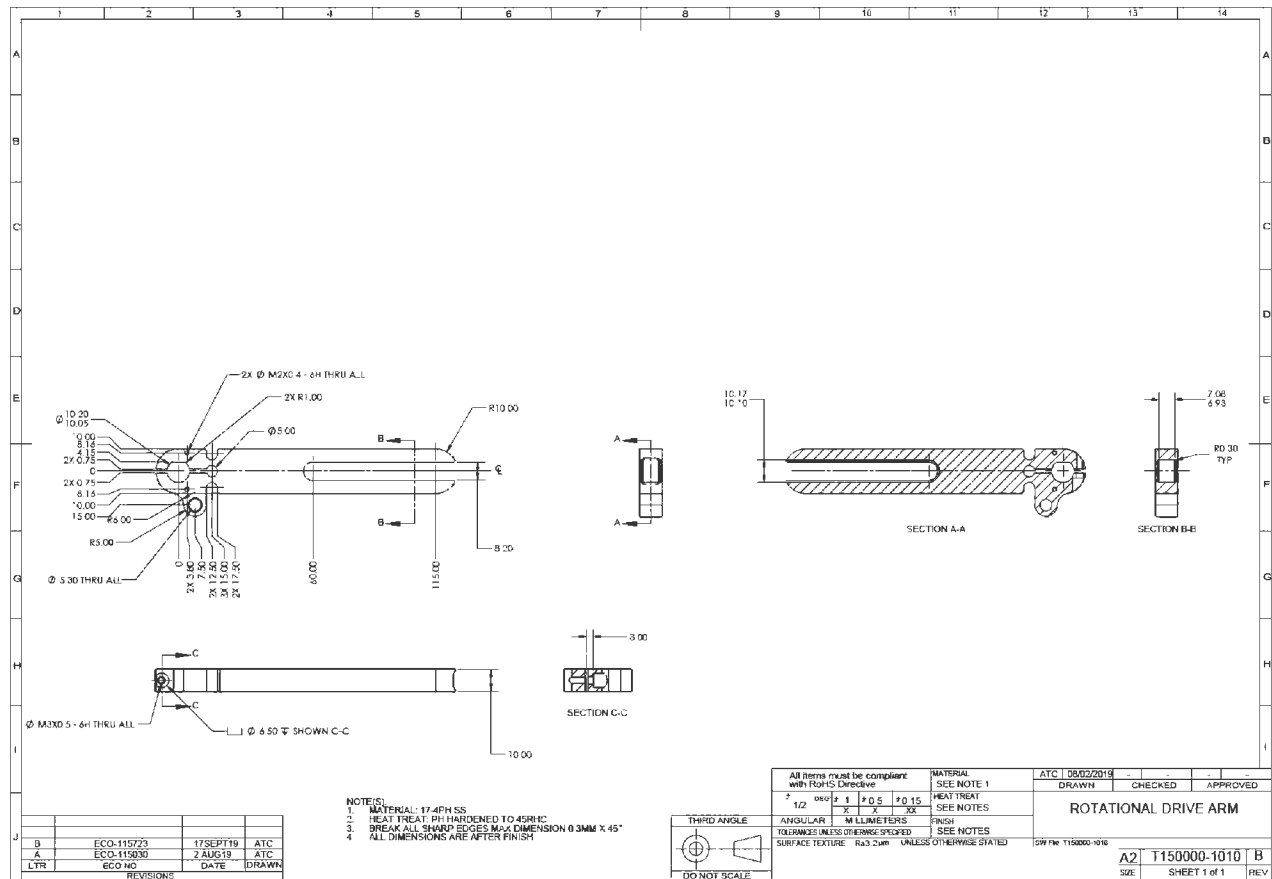
Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0019434



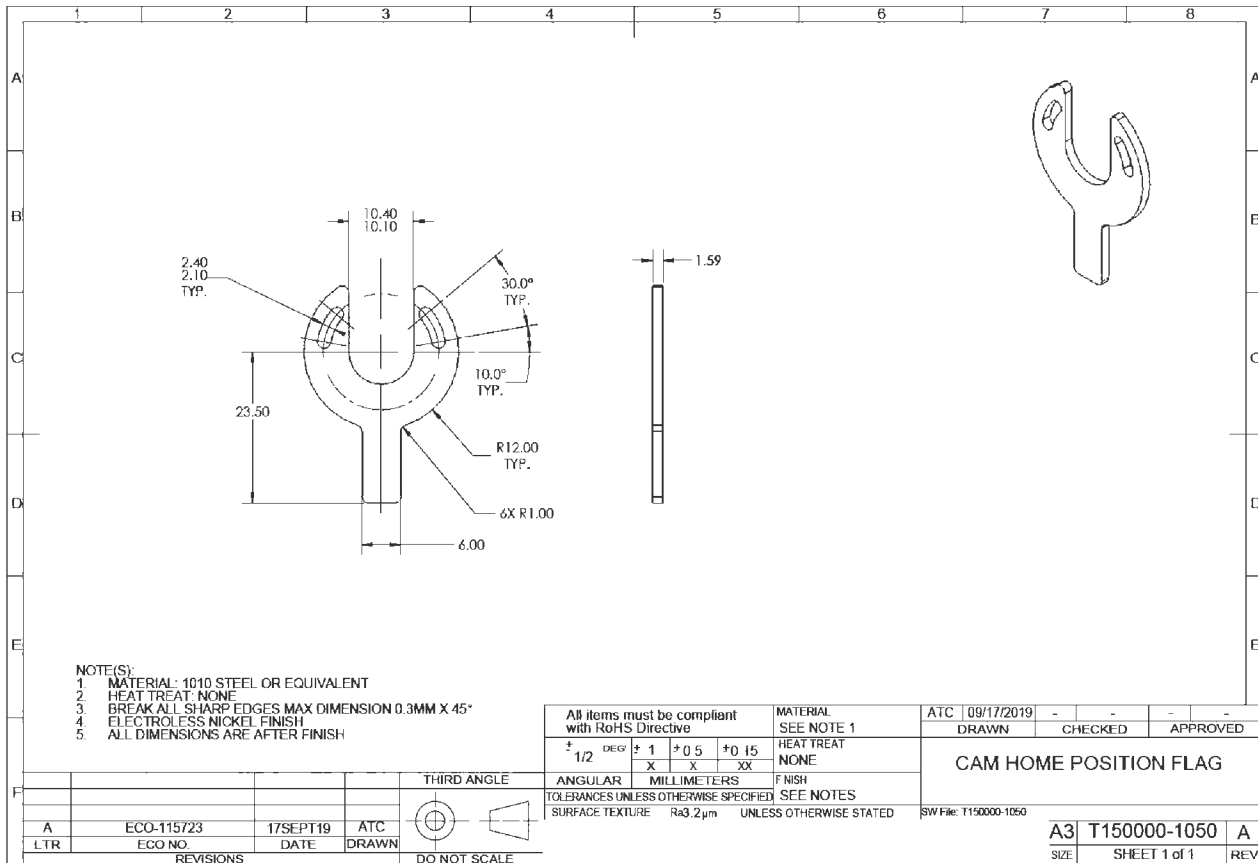
Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0019434



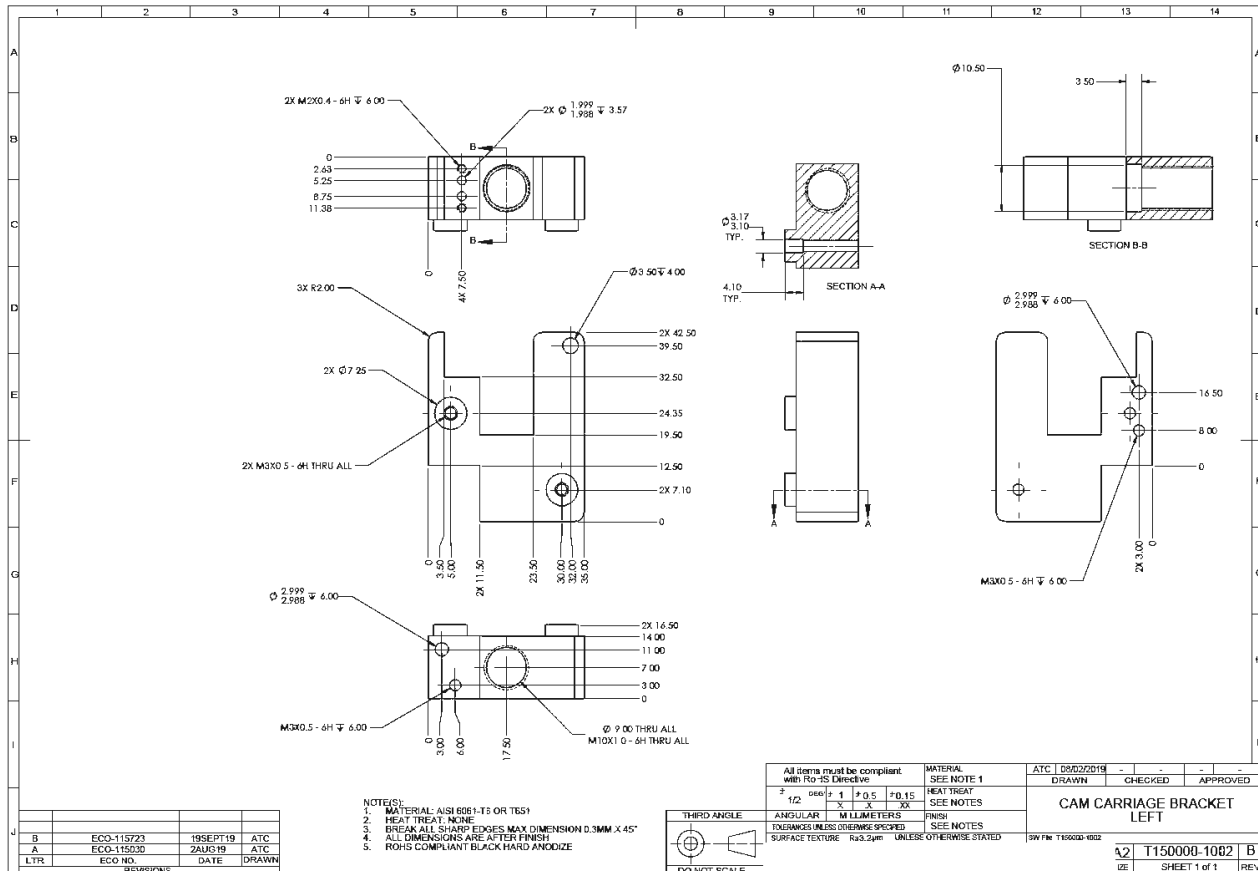
Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0019434



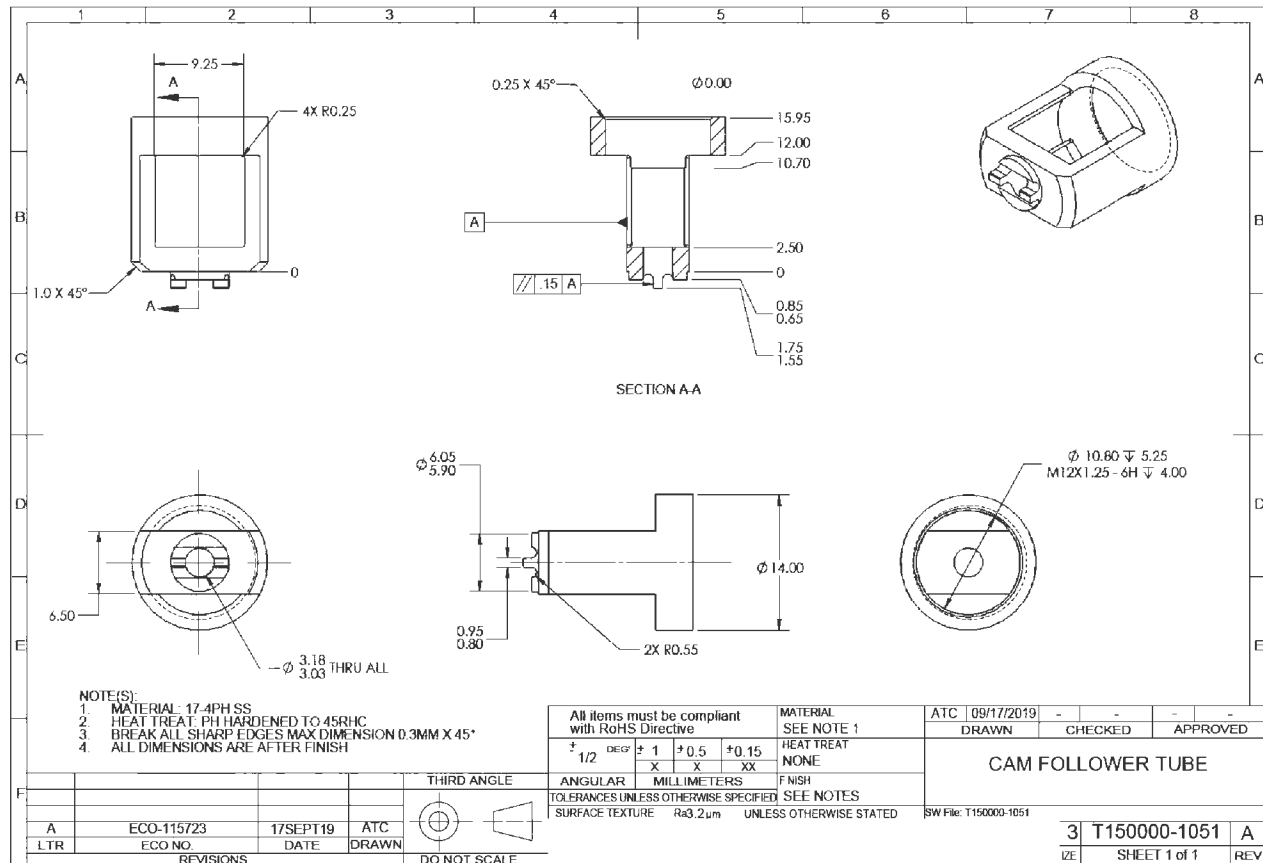
Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0019434



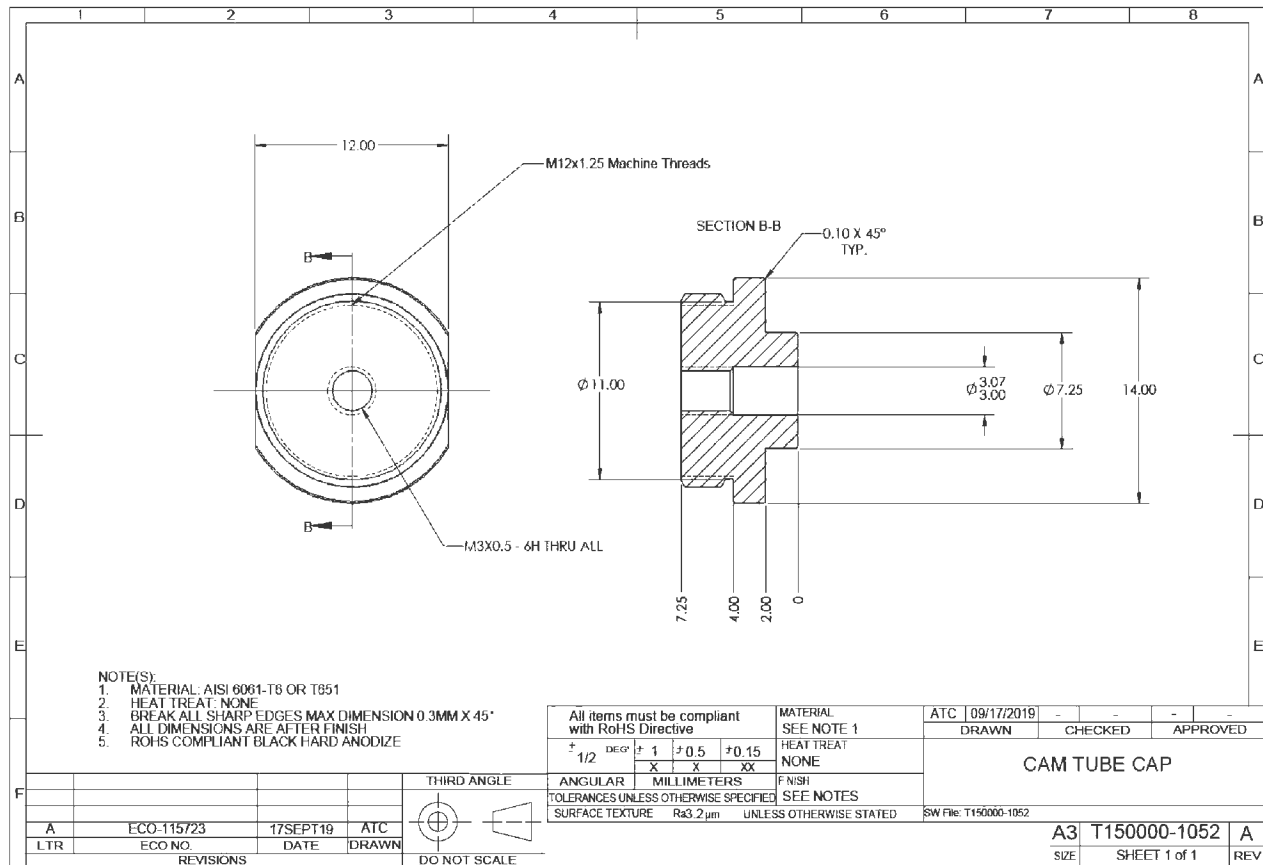
Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0019434



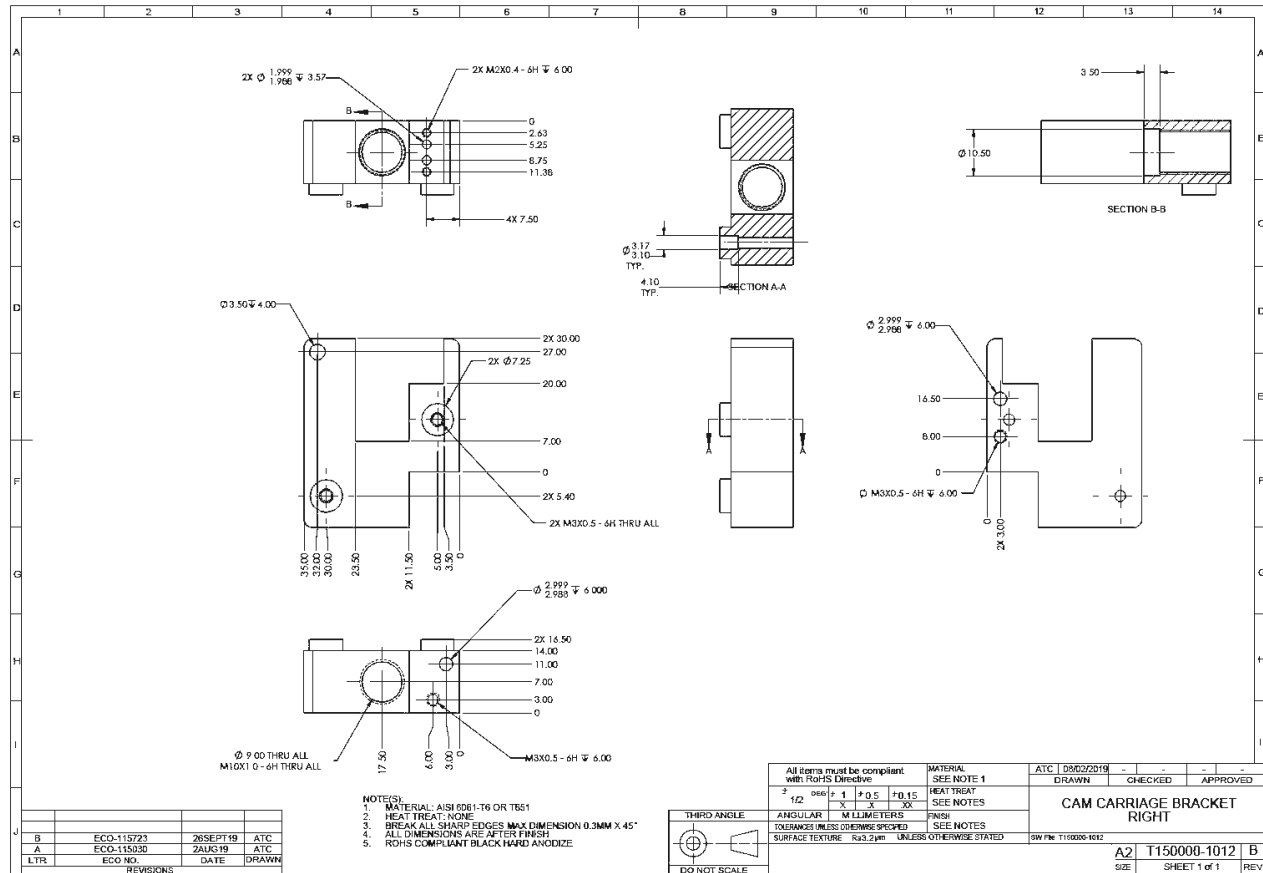
Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0019434



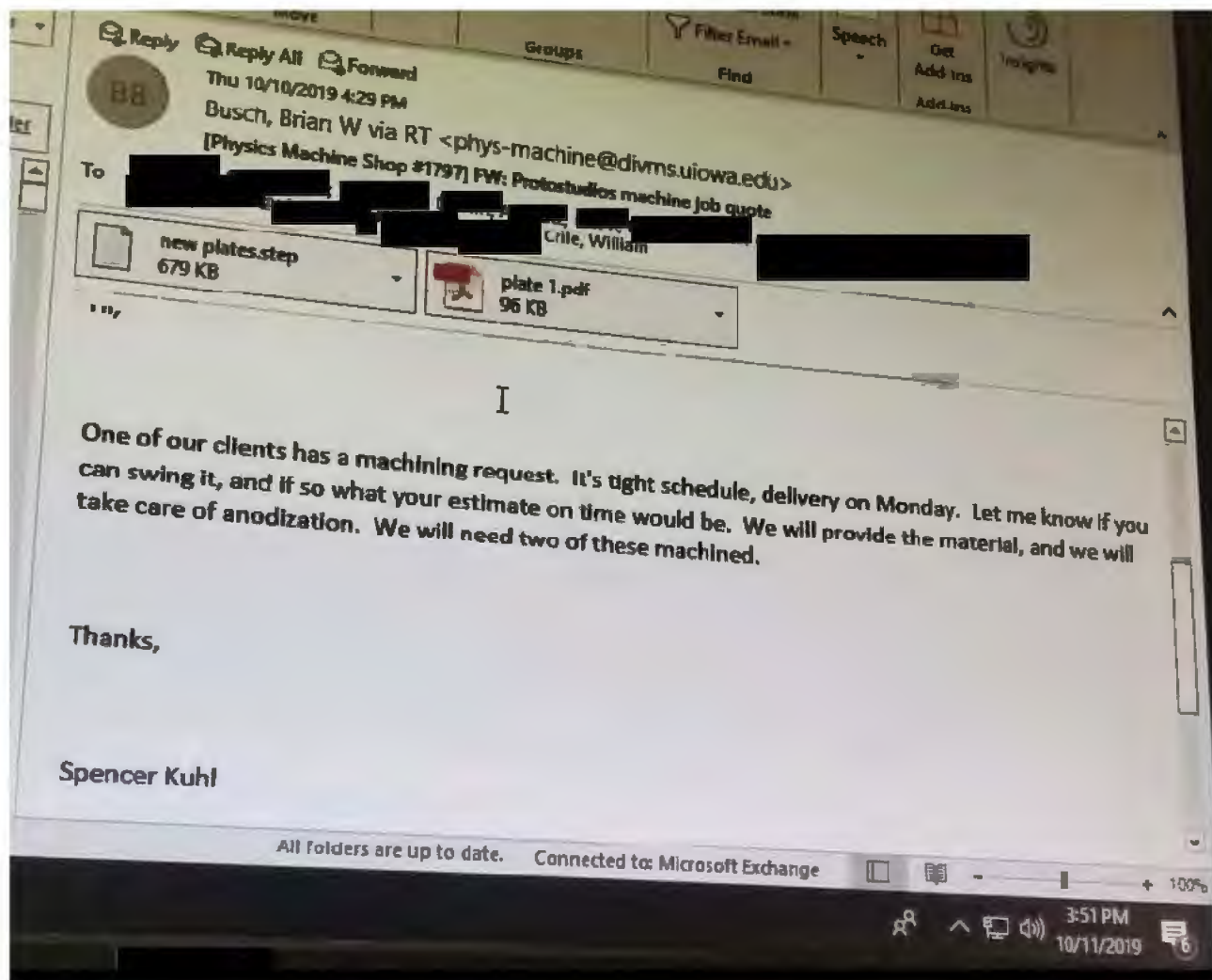
Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0019434



Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

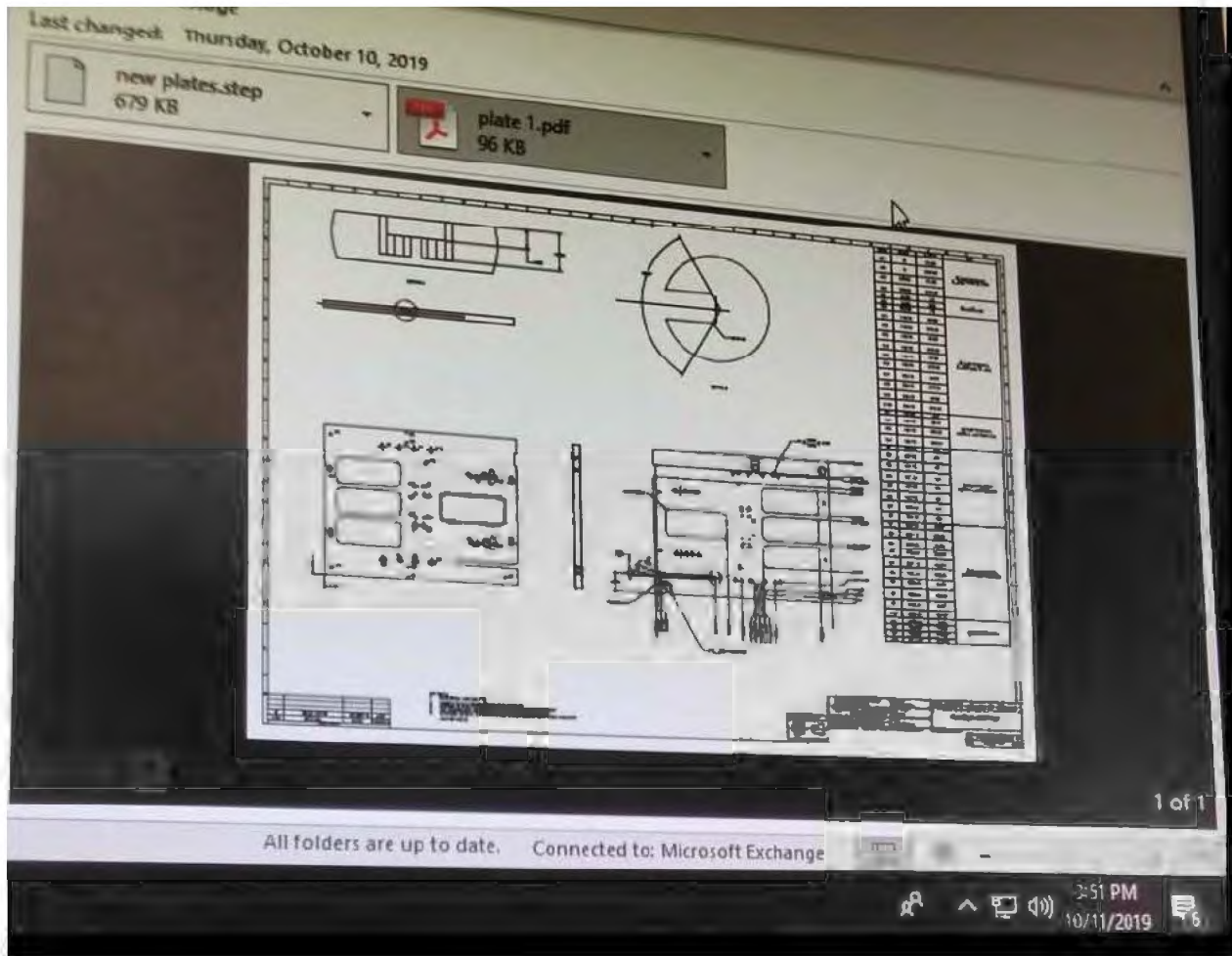
Copy of Purchase Order Number J0019434



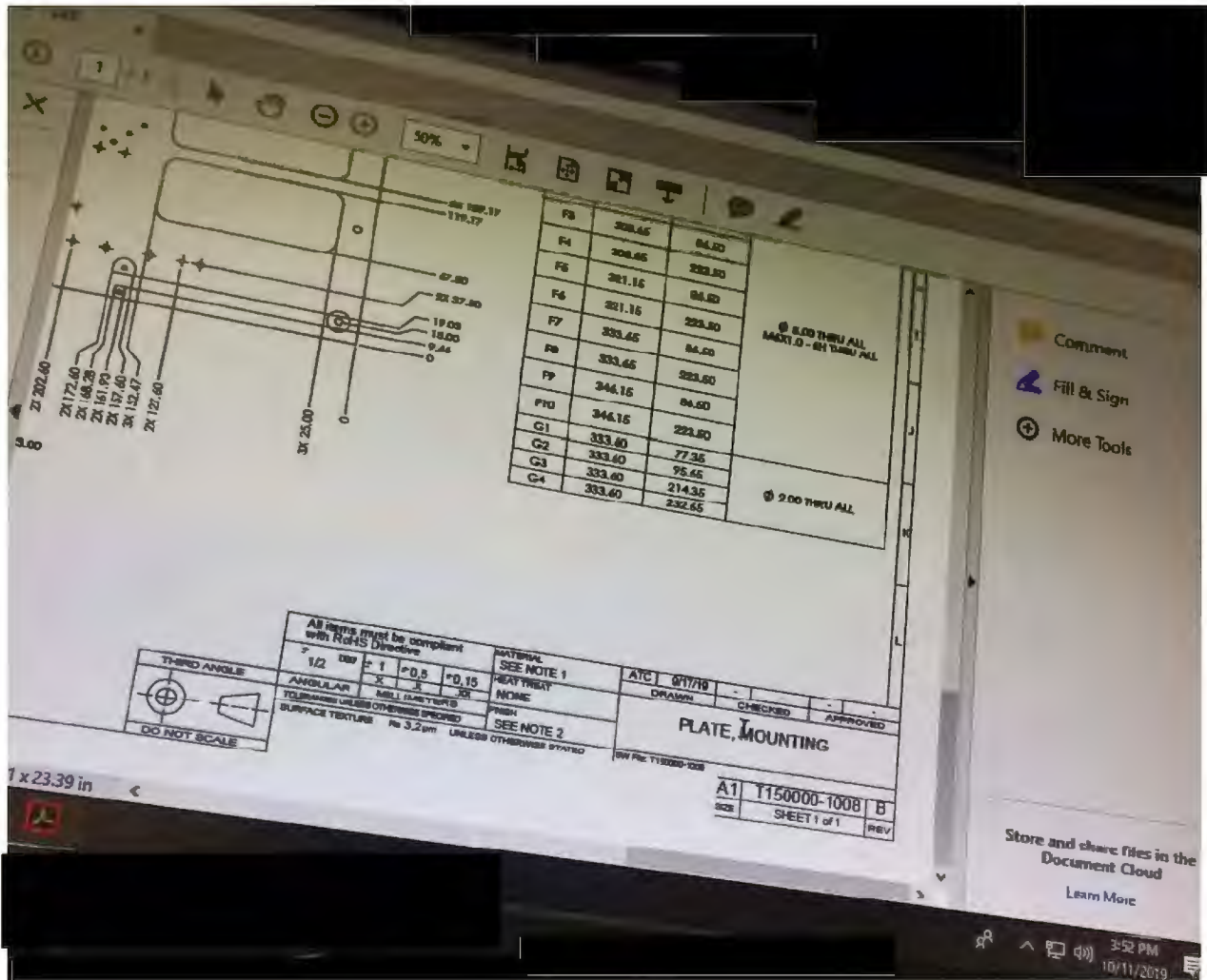
Appendix 11

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0019434



Copy of Purchase Order Number J0019434



Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0019434

Brian Work [REDACTED] 10/11/2019 9:03 AM (Viewed 10/11/2019 9:20 AM)

Did the job for hood have a shop ticket? Just need to be sure if the machine shop machines are used we charge it out. For all I care I can charge it to instructional time but if u have to ample stuff for hood I the shop u should bill it and count it towards it weekly hours....benefits u and the shop

Brian Work [REDACTED] 10/11/2019 9:03 AM (Viewed 10/11/2019 9:20 AM)

U it I

10/11/2019 9:22 AM

I have a ticket in my queue called laser stand that I've put all the hours on I opened it this summer and never closed it

Brian Work [REDACTED] 10/11/2019 9:49 AM (Viewed 10/11/2019 9:53 AM)

Gotcha

Brian Work [REDACTED] 10/11/2019 9:49 AM (Viewed 10/11/2019 9:53 AM)

Put plate job in ur queue btw

10/11/2019 10:11 AM

Maybe I should close it I figured they added up the hours every month and charged it accordingly

Brian Work [REDACTED] 10/11/2019 10:34 AM (Viewed 10/11/2019 11:04 AM)

No it's fine just covering my bases

Brian Work [REDACTED] 10/11/2019 3:46 PM (Viewed 10/11/2019 4:21 PM)

Material for those places in the office in the boxes

Brian Work [REDACTED] 10/11/2019 3:47 PM (Viewed 10/11/2019 4:21 PM)

Please run it on the VF to charge a total hours to that project hopefully along with that you can finish up the laser stand part you were working on in charge some hours do that after that you can charge sub shop time to designing fixture etc.

10/11/2019 4:22 PM

Sounds good

Brian Work [REDACTED] 10/11/2019 4:23 PM (Viewed 10/11/2019 5:24 PM)

Hopefully some run time for studying. Plates do need finished for anodizing Monday morning tho

10/11/2019 5:24 PM (Delivered 10/11/2019 5:25 PM)

I looked at them a little the other day and they seem pretty simple.

Brian Work [REDACTED] 10/11/2019 5:25 PM (Viewed 10/11/2019 5:27 PM)

Hoping I'd say that

10/11/2019 5:28 PM

Was there 1 or 2 to do? I can't remember what you said yesterday

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0019434

Brian Work [REDACTED]

10/11/2019 6:43 PM (Viewed 10/11/2019 6:52 PM)

2 of same part

10/11/2019 6:53 PM



10/11/2019 7:53 PM (Viewed 10/11/2019 7:59 PM)

Brian Work [REDACTED]



10/12/2019 11:24 AM

Did those collets come in yet? I could really use them on these plates

10/12/2019 11:25 AM (Viewed 10/12/2019 11:58 AM)

Brian Work [REDACTED]

What sizes do you need unfortunately they didn't come in yet I might be able to bring you some butt if you got a break down tools throughout the shop to get the parts done look at Wille's toolbox and the one in the back room

10/12/2019 11:51 AM (Viewed 10/12/2019 11:58 AM)

Brian Work [REDACTED]

Sorry about there on order just didn't make it here this week

10/12/2019 11:59 AM

I found what I need I think

10/12/2019 12:00 PM

I took the collet out of ever holder I could find

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0019434

10/12/2019 12:02 PM (Viewed 10/12/2019 12:07 PM)

if so please put back when done. Everything else nbd

10/12/2019 12:03 PM (Viewed 10/12/2019 12:07 PM)

I ordered 2 more full sets and the. Extra 1/8,3/16 and 1/4s

10/12/2019 12:07 PM

I didn't see any holders that had collets on

10/12/2019 12:13 PM (Viewed 10/12/2019 1:01 PM)

Brian Work

Ok

10/12/2019 4:06 PM (Viewed 10/12/2019 4:14 PM)

Brian Work

Can you do me a solid once the saw is done cutting all the way through that part can you take the part that was cut off and then cut off and 8 5/8 chunk please

10/12/2019 4:15 PM

I'm leaving now and it's maybe a 1/4 of the way through the block

10/12/2019 4:16 PM

Brian Work

OK well whenever you return could you just cut off turn the block and cut it for me please

10/12/2019 4:16 PM

That works

10/12/2019 4:16 PM (Viewed 10/12/2019 4:41 PM)

Brian Work

If I have time I may stop and just do it but it's not looking that way right now

10/12/2019 10:34 PM (Viewed 10/12/2019 10:48 PM)

Brian Work

Do you see any problem with those parts being ready to anodize Monday morning

10/12/2019 10:49 PM

They should be done, the first side is done on both and there all programmed

10/12/2019 11:45 PM (Viewed 10/13/2019 5:47 AM)

Brian Work

Sweet

10/13/2019 2:31 PM

So I just noticed there's a few holes that have a tolerance of .1180-.1176 can they be reamed after ionizing

10/13/2019 2:45 PM (Viewed 10/13/2019 2:46 PM)

Brian Work

I'll ream after anodizing

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0019434


10/13/2019 2:48 PM
[Redacted]

Ok I changed a couple programs and shaved a hr of the runtime, I didn't realize I had one of the programs taking two step downs which explains why the program was taking so long to send

10/13/2019 2:48 PM (Viewed 10/13/2019 2:50 PM)

Brian Work [Redacted]
Gotcha

10/13/2019 3:39 PM
[Redacted]



10/13/2019 3:39 PM
[Redacted]

Tool changer is coming in handy on this job

10/13/2019 3:39 PM
[Redacted]

I have like every collet in the shop lol

10/13/2019 3:41 PM (Viewed 10/13/2019 3:50 PM)

Brian Work [Redacted]
U had me worried with that plc at first

10/13/2019 4:54 PM
[Redacted]

How many hours should I put on this job?

10/13/2019 4:57 PM (Viewed 10/13/2019 5:09 PM)

Brian Work [Redacted]
10 on that one

10/13/2019 5:09 PM
[Redacted]

Ok

10/13/2019 5:48 PM
[Redacted]

There's still a few more tools to run in the last plate, do you want me to let the part finish out of turn on the op stop so you can run out the last 5 tools when you get here?

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0019434

University of Iowa - Protostudios

Coralville, IA 52241 US

protostudios

INVOICE

BILL TO

Brian Busch
D3signTech LLC

INVOICE # 1252

DATE 11/08/2019

DUE DATE 12/08/2019

TERMS Net 30

ACTIVITY	QTY	RATE	AMOUNT
Product	1	936.00	936.00
[ExGen] Machining Services - 11/08/2019 - Machining Services / Spencer Kuhl: 1792 - (3) Plates anodize, bag & tag - 10/10/19			
Protostudios Service Fee (15%)	0.15	936.00	140.40
Protostudios Service Fee (15%) for [ExGen] Machining Services - 11/08/2019 - Machining Services / Spencer Kuhl: 1792 - (3) Plates anodize, bag & tag - 10/10/19			
Product	1	780.00	780.00
[ExGen] Machining Services - 11/08/2019 - Machining Services / Spencer Kuhl: 1797 - (3) Plates anodize, bag & tag - 10/15/19			
Protostudios Service Fee (15%)	0.15	780.00	117.00
Protostudios Service Fee (15%) for [ExGen] Machining Services - 11/08/2019 - Machining Services / Spencer Kuhl: 1797 - (3) Plates anodize, bag & tag - 10/15/19			
Product	1	936.00	936.00
[ExGen] Machining Services - 11/08/2019 - Machining Services / Spencer Kuhl: 1809 - ProtoStudios ball parts - 10/27/19			
Protostudios Service Fee (15%)	0.15	936.00	140.40
Protostudios Service Fee (15%) for [ExGen] Machining Services - 11/08/2019 - Machining Services / Spencer Kuhl: 1809 - ProtoStudios ball parts - 10/27/19			
PAYMENT			3,049.80
BALANCE DUE			\$0.00

Warranty/Indemnification

All product and services delivered are delivered to Client at Client's sole risk and are "as is" without warranties of any kind, either express or implied, including all implied warranties of merchantability, fitness for a particular purpose, title, non-infringement, and any warranties arising from a course of dealing, usage or trade practice.

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J001A88B

PURCHASE ORDER

 7951 Cessna Avenue Gaithersburg, MD 20878 246-882-1133				P.O. No. J001A88B	
				Date: 11/14/2019	
To: D3signtech [REDACTED] Williamsburg, IA 52861 United States [REDACTED]		Ship To: Xometry 7951 Cessna Ave Gaithersburg, MD 20879 United States 246-252-1138		PO number should appear on all packages and correspondence Please submit all invoices to: partnerinvoices@xometry.com	
Partner Quote ID: N/A		Ship Date: 12/10/2019		Shipping Method: FedEx Priority Overnight	
Requirements Standard Inspection					
Notes N/A					
Item	Code	Part ID**	Order ID	Description	Qty
1	CNC-5	612DB00	102FB-15003	1006345077_rev 4_11-18-2019.stp Material: Aluminum 6061-T6 Finish: Standard Features: Threads/Tapped Holes: 55 Surface Roughness: finish 63µin/1.6µm Ra, entire part Part Markings: Bag and Tag 1 Inspection Requirement: Standard Inspection Notes: See close hole and slot tolerances in detail A See flatness of 4 surfaces drawing don't D3 ***** QUOTED FOR A 5th axis MILL CAVITIES THAT HAVE TO BE MILLED BY 1" END MILL (WILL NEED TO RADI) CHANGED TO .50" BECAUSE OF THE DEPTH OF THESE AREAS QUOTED THIS PART WITH A EXTRA EXTRA LONG END MILL-1" x .6" x 12" 4 Flute, Uncoated, 30" Relia Part No. 770-4112 1" Carbide Square End Mill Extra Extra Long 4 Flute Uncoated- WEBSITE- https://www.the-carbide-end-mill-store.com ***** LSC QUOTED THIS PART TO BE MADE ON A LARGE CNC MILL	1
SUBTOTAL					\$12,500.00
TOTAL					\$12,500.00

* Ship Date refers to the date on which Xometry expects you to ship the parts. All shipments must receive an origin scan (e.g. they cannot be deposited in a drop box)
 **The Xometry provided part ID and revision are equivalent to the part number and revision in the Q&D or PDF file, unless stated otherwise.

Note: Please submit all invoices to: partnerinvoices@xometry.com. For terms and conditions, please see the Partner Manufacturing Services Agreement: <https://www.xometry.com/en/usa/terms-of-service/>

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J001A88B

Approved By:	Date: 11/14/2019
---------------------	----------------------------

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J001A88B

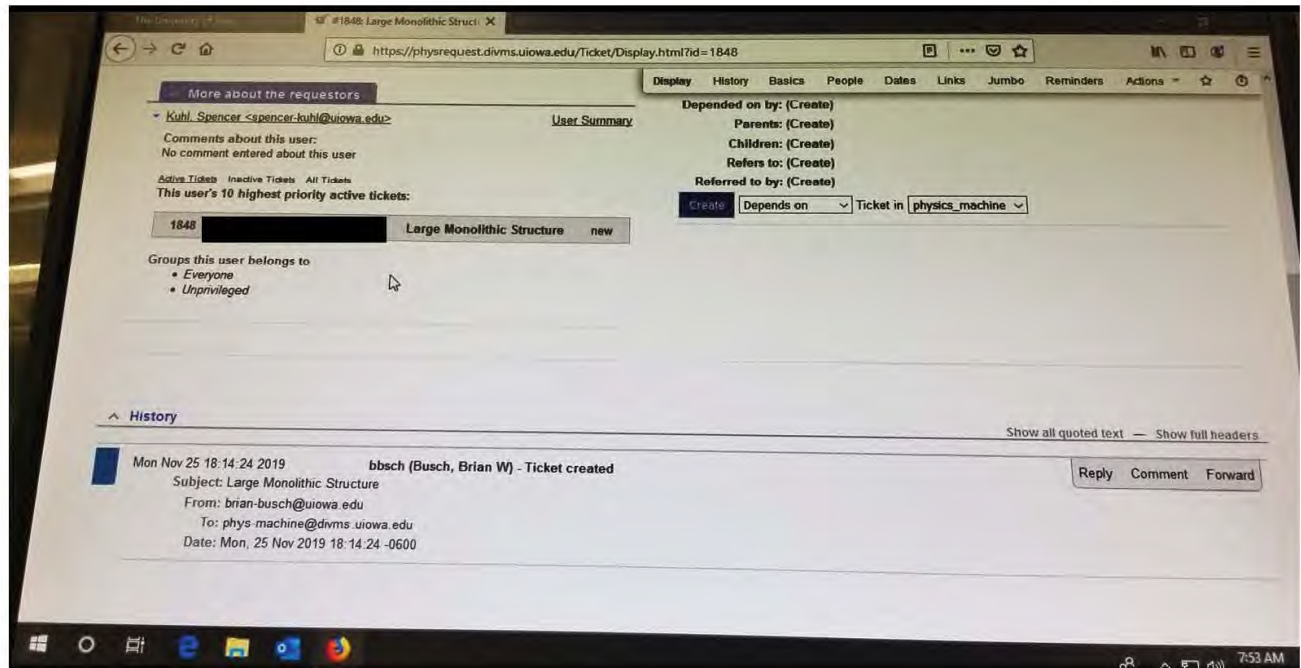
The screenshot displays a web application interface for managing tickets. The browser address bar shows the URL: <https://physrequest.dhms.uiowa.edu/Ticket/Display.html?id=1848>. The page title is "#1848: Large Monolithic Structure". The interface includes a navigation bar with tabs: Display, History, Basics, People, Dates, Links, Jumbo, Reminders, and Actions. The main content area is divided into several sections:

- Ticket metadata**:
 - The Basics**:
 - Id: 1848
 - Status: new
 - Worked: 73 hours (4,380 minutes)
 - Users: [redacted] 64 hours (3,240 minutes)
 - Priority: 0/
 - Queue: physics_machine
 - Custom Fields**:
 - ending Source
 - People**: [redacted]
- Reminders**:
 - New reminder:
 - Subject: [text input]
 - Owner: [dropdown menu]
 - Due: [text input]
 - Save button
- Dates**:
 - Created: Mon Nov 25 18:14:24 2019
 - Starts: Not set
 - Started: Not set
 - Last Contact: Not set
 - Due: Not set
 - Followed: Not set
 - Date: Sun 28 16:18:05 [redacted]
- Links**: [redacted]

Appendix 12

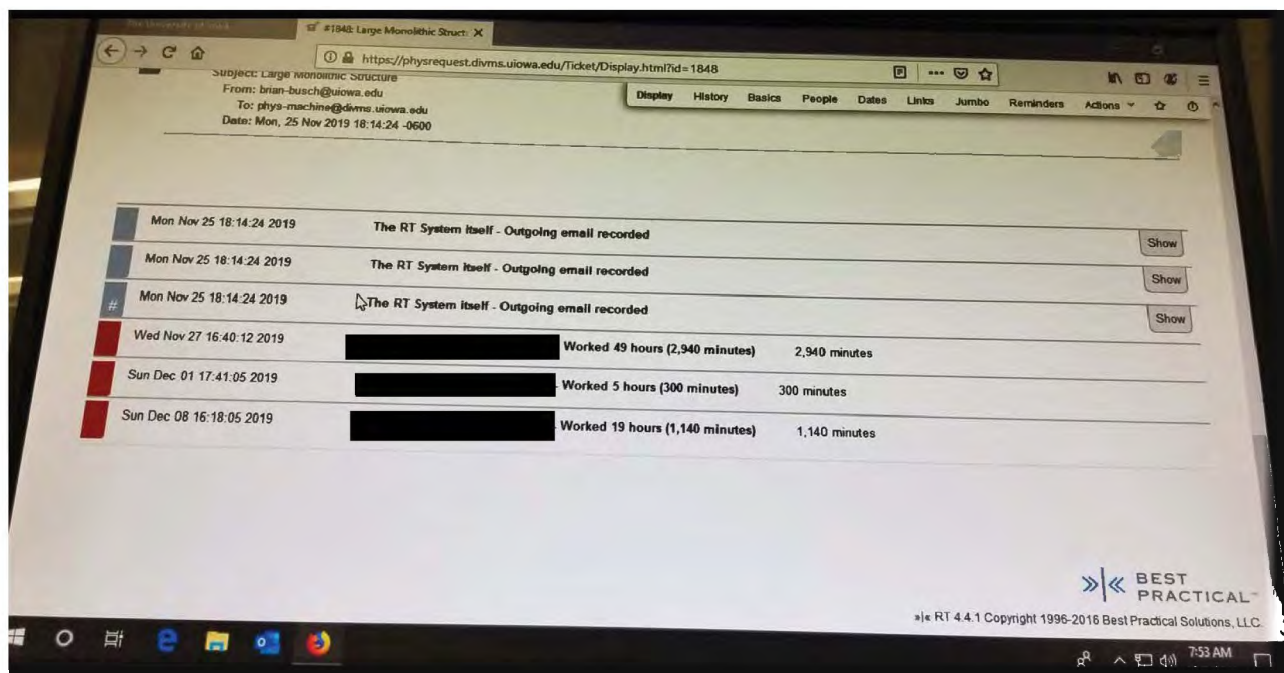
Report on Special Investigation of the University of Iowa Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J001A88B



Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J001A88B



Appendix 12

Report on Special Investigation of the University of Iowa Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J001A88B

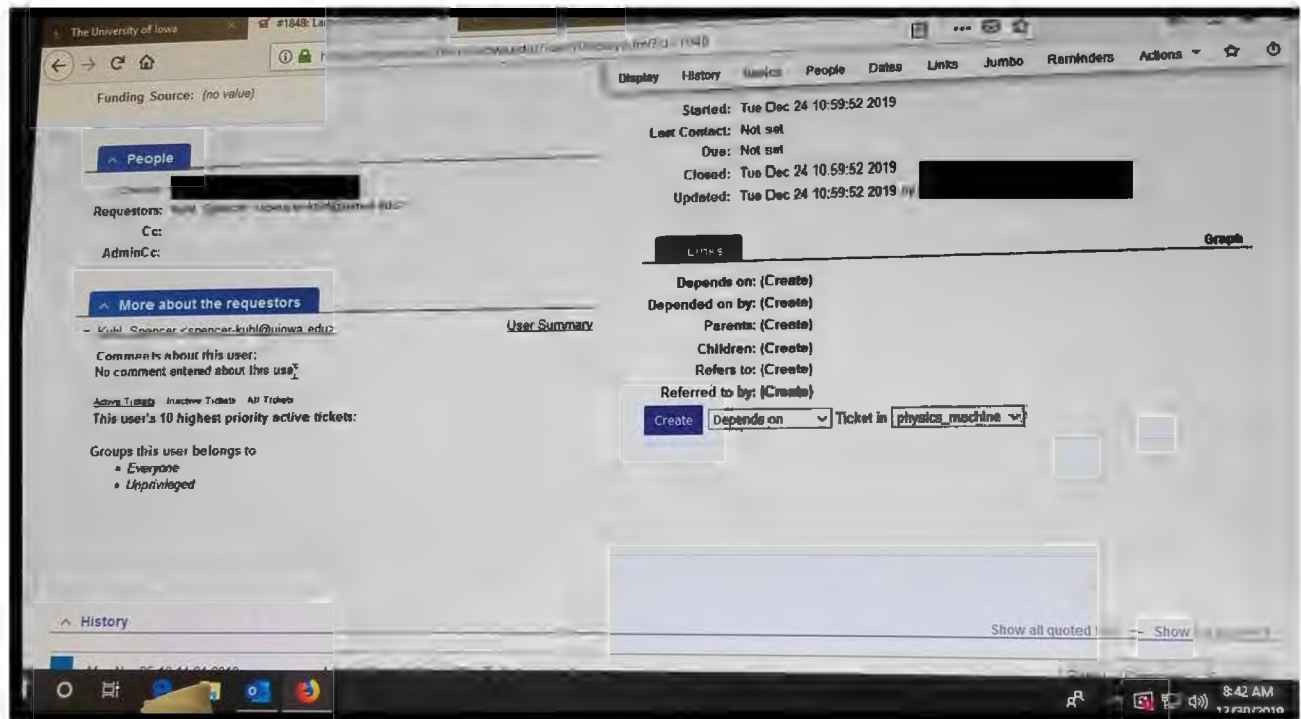
The screenshot displays a web browser window with the URL <https://physrequest.divms.uiowa.edu/Ticket/Display.html?id=1848>. The page title is "#1848: Large Monolithic Structure Max Hours 100". The user is logged in as "matmiller". The interface includes a navigation bar with links like Home, Search, Articles, Assets, Tools, and a "New ticket in" button. The main content area is divided into several sections:

- The Basics:** Status: resolved, Worked: 100 hours (5,000 minutes), Users: [redacted] hours (3,240 minutes), Priority: IV, Queue: physics_machine.
- Reminders:** Subject, Owner, Due.
- Custom Fields:**
- People:** Owner: [redacted], Questions: Kuhl Spencer <spencer-kuhl@uiowa.edu>, Cc: [redacted].
- Dates:** Created: Mon Nov 25 18:14:24 2019, Starts: Not set, Started: Tue Dec 24 10:59:52 2019, Last Contact: Not set, Due: Not set, Closed: Tue Dec 24 10:59:52 2019, Updated: Tue Dec 24 10:59:52 2019 by [redacted].
- Links:**

A "Save" button is visible on the right side of the "Reminders" section.

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

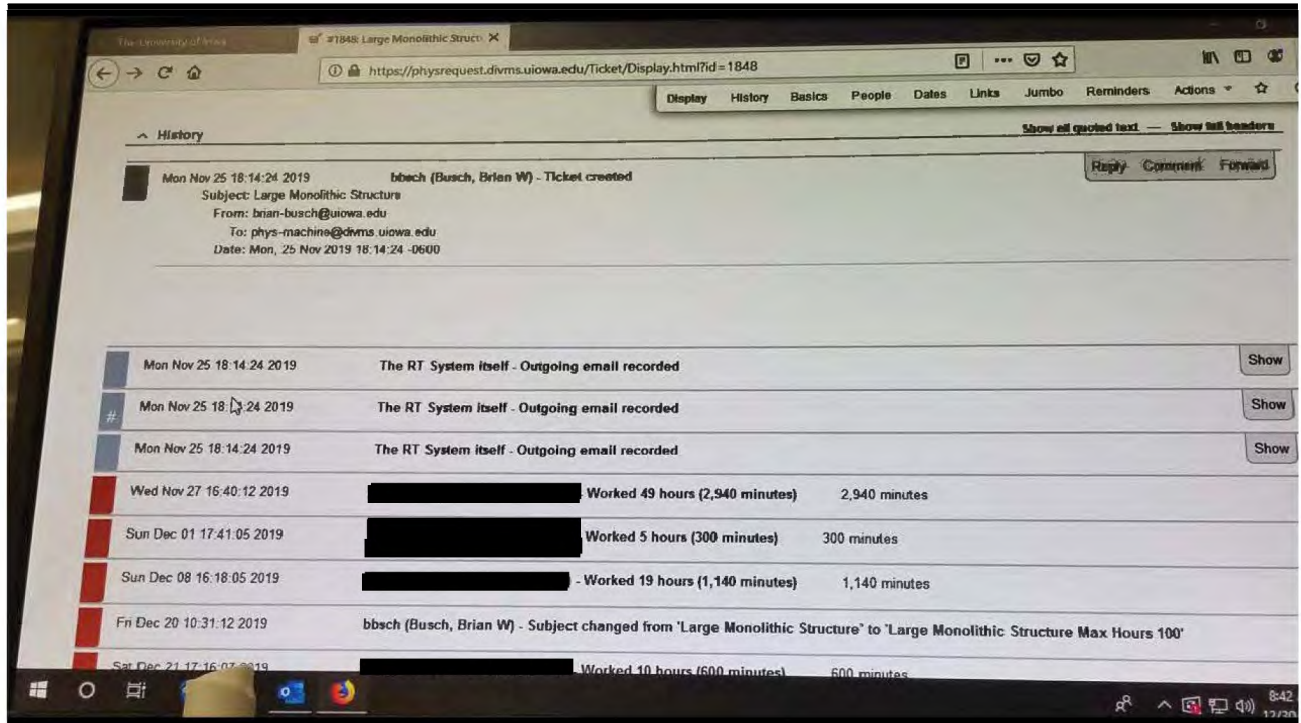
Copy of Purchase Order Number J001A88B



Appendix 12

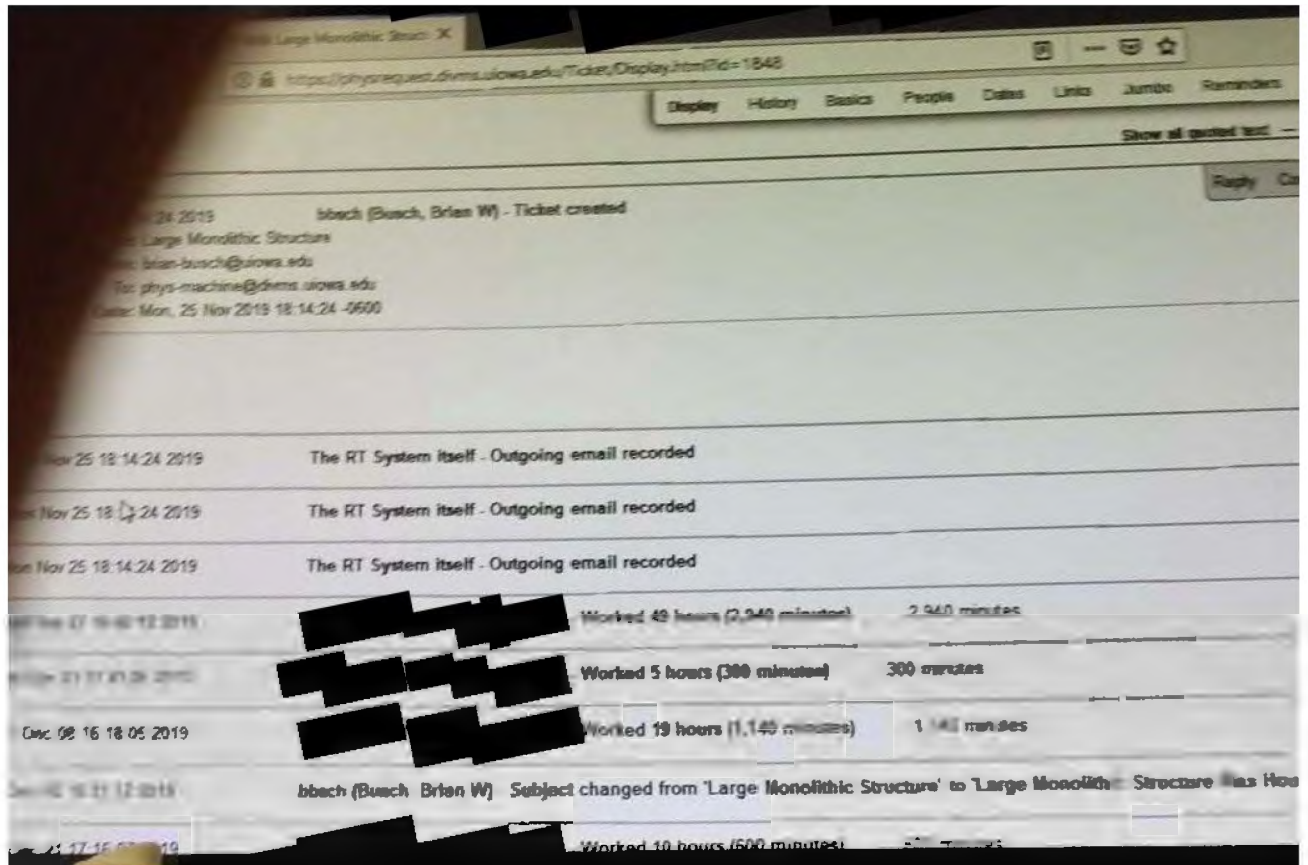
Report on Special Investigation of the University of Iowa Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J001A88B



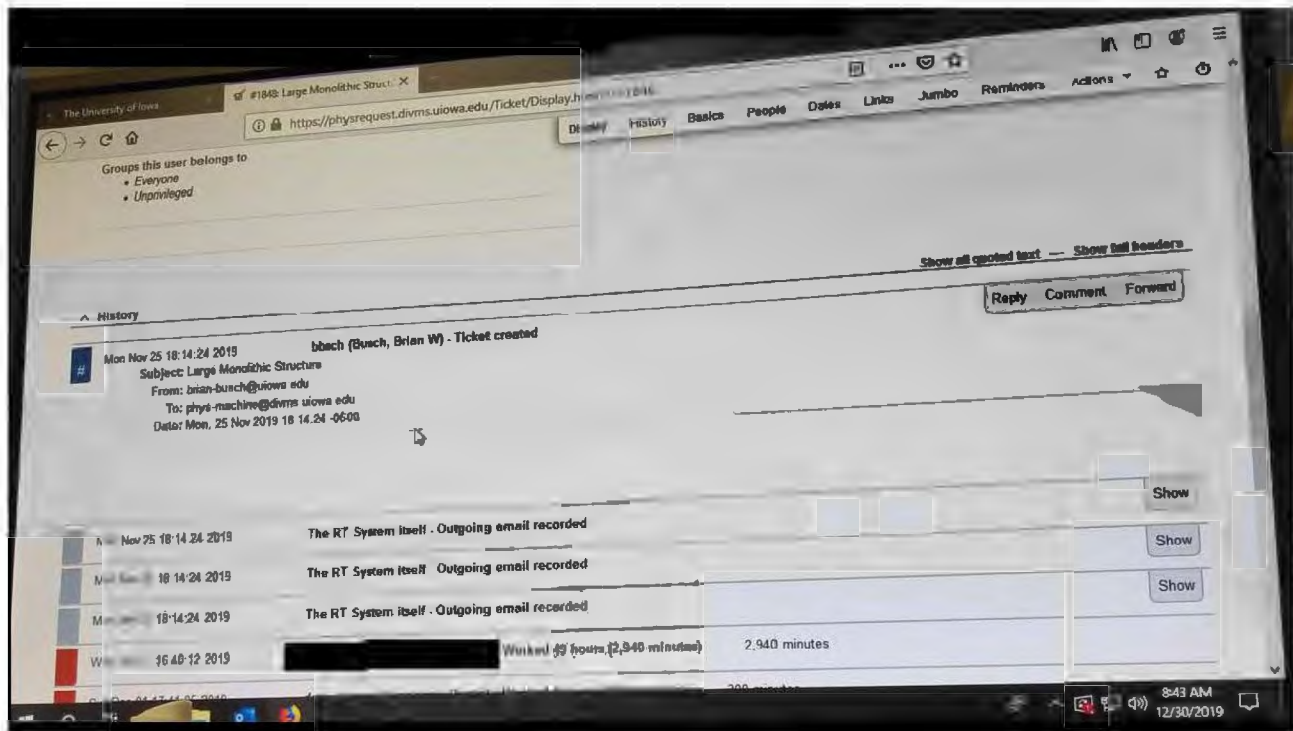
Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J001A88B



Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J001A88B



Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J001A88B

Date	Event	Worked	Minutes
Mon Nov 25 18:14:24 2019	The RT System itself - Outgoing email recorded		
Wed Nov 27 16:40:12 2019	[Redacted]	Worked 49 hours (2,940 minutes)	2,940 minutes
Sun Dec 01 17:41:05 2019	[Redacted]	Worked 5 hours (300 minutes)	300 minutes
Sun Dec 08 16:18:05 2019	[Redacted]	Worked 19 hours (1,140 minutes)	1,140 minutes
Fri Dec 20 10:31:12 2019	bbsch (Busch, Brian W) - Subject changed from 'Large Monolithic Structure' to 'Large Monolithic Structure Max Hours 100'		
Sat Dec 21 17:16:07 2019	[Redacted]	Worked 10 hours (600 minutes)	600 minutes
Sun Dec 22 14:27:48 2019	[Redacted]	Worked 12 hours (720 minutes)	720 minutes
Tue Dec 24 10:59:52 2019	[Redacted]	Worked 5 hours (300 minutes)	300 minutes
Tue Dec 24 10:59:52 2019	Status changed from 'new' to 'resolved'		
Tue Dec 24 10:59:52 2019	The RT System itself - Outgoing email recorded		

BEST PRAC
RT 4.4.1 Copyright 1996-2016 Best Practical Software

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J001A88B



Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J001A88B



Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J001A88B

11/14/2019 12:37 PM

I'll take a look at it this evening and let you know

11/14/2019 12:42 PM

Brian Work

Probably will be gone by then. I gotta make a decision soon. I didn't realize but we are running out of work a little. It's a hard job but there's time and money to spend on it

11/14/2019 1:23 PM



If those can be 1/2 instead of 7/16 and we have a sine plate that's 24" by 12" then I could probably do it in that amount of time

11/14/2019 1:35 PM

How would we handle the material considering a block that big weighs 300lbs

11/14/2019 1:35 PM (Viewed 11/14/2019 1:44 PM)

Brian Work

With big nuts

11/14/2019 1:36 PM (Viewed 11/14/2019 1:44 PM)

Brian Work

After a few ops it's much lighter

11/14/2019 1:37 PM (Viewed 11/14/2019 1:44 PM)

Brian Work

It's ours I had to decide. I will see if we can make changes needed to make part a tiny bit easier material won't be here till mid next week anyway

11/14/2019 1:45 PM

Ok we'll need a sine plate atleast 24x12 preferably one bigger

11/14/2019 1:50 PM (Viewed 11/14/2019 1:52 PM)

Brian Work

Got any hookups for one we can rent for a day or 7

11/14/2019 1:53 PM

Not really

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J001A88B

11/14/2019 1:57 PM

Did you order material yet?

11/14/2019 2:03 PM (Viewed 11/14/2019 2:05 PM)

Brian Work [REDACTED]

Working on it...u got a source?

11/14/2019 2:06 PM

No there might be a way to get around using a sine plate but the block we start with would have to be pretty big

11/14/2019 2:08 PM (Viewed 11/14/2019 2:09 PM)

Brian Work [REDACTED]

I think we can get creative and use large angle plate along with brackets and use holes in part to bolt to

11/14/2019 2:12 PM (Viewed 11/14/2019 3:27 PM)

Brian Work [REDACTED]

What about using middle bore to rotate around If it's at correct angle...the we could doing center bore in fixture and pin at various angles

11/14/2019 2:22 PM (Viewed 11/14/2019 3:27 PM)

Brian Work [REDACTED]

Honestly we could just make a jig to guide a tool to make the hole and cb that spins in the bore and indexes off of the ears...maybe simplest easiest

11/14/2019 4:54 PM

If the holes can be drilled then we won't need a sine plate I'll just adjust the head to the right angle on the mb30 and use the quill

11/14/2019 4:56 PM (Viewed 11/14/2019 5:00 PM)

Brian Work [REDACTED]

That's probably the easiest

11/14/2019 6:04 PM

Gonna need that .75x8 Harvey em also

11/14/2019 7:56 PM (Viewed 11/14/2019 8:03 PM)

Brian Work [REDACTED]

It's here

11/14/2019 7:56 PM (Viewed 11/14/2019 8:03 PM)

Brian Work [REDACTED]

Or u need something else

11/14/2019 8:05 PM

Are you thinking about the Fullerton? I didn't think we ordered the Harvey em, gonna need to have 7in of cutter hanging out

11/14/2019 8:18 PM (Viewed 11/14/2019 8:25 PM)

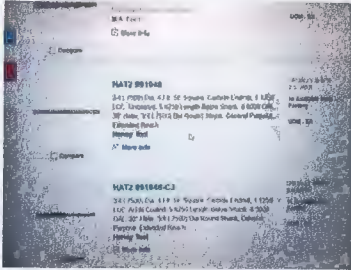
Brian Work [REDACTED]

Yeah it right I'll get it coming so U can start next week. Good timing though if U want a lil extra over thanks giving

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J001A88B

Brian Work [REDACTED] 11/14/2019 9:40 PM (Viewed 11/14/2019 9:44 PM)



Brian Work [REDACTED] 11/14/2019 9:40 PM (Viewed 11/14/2019 9:44 PM)

That one?

[REDACTED] 11/14/2019 9:46 PM

If they had a 45 degree helix it would be optimal but if I remember right they didn't make one like that

Brian Work [REDACTED] 11/14/2019 9:51 PM (Viewed 11/14/2019 9:52 PM)

30 looks to be it

[REDACTED] 11/14/2019 9:52 PM

Ok

Brian Work [REDACTED] 11/14/2019 9:54 PM (Viewed 11/14/2019 10:27 PM)

We could try long reach insert maybe just shallow depth passes anyway

Brian Work [REDACTED] 11/14/2019 10:06 PM (Viewed 11/14/2019 10:27 PM)

20hrs this weekend?

[REDACTED] 11/14/2019 10:28 PM

For sure

[REDACTED] 11/15/2019 11:00 AM (Viewed 11/15/2019 11:15 AM)

Brian Work [REDACTED]

Going to send u email for this weekends work. Take a look and let me know what u think. Quantities are in the file name and all parts are 6061

Brian Work [REDACTED] 11/15/2019 11:10 AM (Viewed 11/15/2019 11:15 AM)

Btw I will go pick up matl next Wednesday for big job

[REDACTED] 11/15/2019 11:17 AM

Ok that works

[REDACTED] 11/15/2019 2:36 PM

Would you be able to get a 1.031-40 bolt before the weekend? A couple of those parts have that thread

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J001A88B

Brian Work [REDACTED] 11/15/2019 3:27 PM (Viewed 11/15/2019 3:34 PM)

Thread mill

Brian Work [REDACTED] 11/15/2019 3:34 PM

Gonna have to make a thread gage on lathe to check them I did buy some thread wires tho

11/15/2019 3:35 PM

Ok was there specific stock to use for the flat plates? I was going to put the pit bulls in the fixture plate tonight and use that

Brian Work [REDACTED] 11/15/2019 3:37 PM (Viewed 11/15/2019 3:39 PM)

There is some 1/2" plate in office Willie will know where it's at. I also have 3 more 5/8 x18x18 plates if u need more

11/15/2019 3:50 PM

Is there a laminator we can use? I was thinking we could laminate a tool list and the tools that don't get changed we could have printed off then the tools that change with every job write on the list with a dry erase marker

Brian Work [REDACTED] 11/15/2019 3:51 PM (Viewed 11/15/2019 5:25 PM)

Maybe can check into it Monday perhaps office peeps can help me

Brian Work [REDACTED] 11/15/2019 4:51 PM (Viewed 11/15/2019 5:25 PM)

Did you have a chance to look for material there

11/15/2019 5:26 PM

I'm just walking out of class now I'll be there in 5

Brian Work [REDACTED] 11/15/2019 5:45 PM (Viewed 11/15/2019 5:47 PM)

Gotcha lmk if u need something

11/15/2019 5:47 PM

Brian Work [REDACTED] 11/15/2019 5:48 PM

Does that mean something...I'm old

11/15/2019 5:48 PM

👍

Brian Work [REDACTED] 11/15/2019 5:49 PM

👍

Brian Work [REDACTED] 11/15/2019 5:49 PM

👍

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J001A88B

Brian Work [REDACTED] 11/15/2019 6:35 PM (Viewed 11/15/2019 6:36 PM)
[REDACTED] did some of those parts do U k ow which ones are left?

11/15/2019 6:36 PM
[REDACTED]
Yeah

Brian Work [REDACTED] 11/15/2019 6:36 PM (Viewed 11/15/2019 6:38 PM)
Good deal this might just work out

11/16/2019 9:27 AM
[REDACTED]
So where is the laptop?

11/16/2019 9:39 AM
[REDACTED]
Also what was the name of the website with the threading stuff?

11/16/2019 9:41 AM
Brian Work (3193256772)
In the office? Or back room [REDACTED] May have been using it

11/16/2019 9:41 AM
Brian Work [REDACTED]
Theoretical machinist

11/16/2019 9:41 AM
Brian Work [REDACTED]
On my way in

11/16/2019 9:41 AM
[REDACTED]
Ok

11/16/2019 9:47 AM
Brian Work [REDACTED]
Did I find it?

11/16/2019 9:47 AM
Brian Work [REDACTED]
U

11/16/2019 9:48 AM
[REDACTED]
[REDACTED] using it

11/16/2019 9:49 AM (Viewed 11/16/2019 9:51 AM)
Brian Work [REDACTED]
OK no big deal I guess one of US news the one in the office and one of you has to use the laptop

11/16/2019 9:54 AM (Viewed 11/16/2019 9:55 AM)
Brian Work [REDACTED]
U can use that usb thing to transfer files

11/16/2019 9:55 AM
Brian Work [REDACTED]
But so could [REDACTED]

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J001A88B

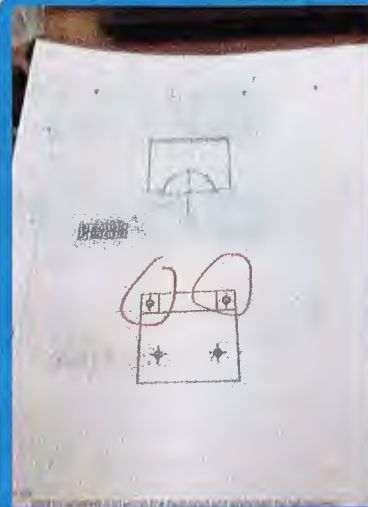
Brian Work [REDACTED]
Everything come out ok?

11/16/2019 5:04 PM (Viewed 11/16/2019 5:05 PM)

11/16/2019 5:05 PM

So far

11/17/2019 11:00 AM



11/17/2019 11:00 AM

What are these?

11/17/2019 11:02 AM (Viewed 11/17/2019 11:03 AM)

Brian Work [REDACTED]
Are they in the model... if not don't do em

11/17/2019 11:02 AM (Viewed 11/17/2019 11:03 AM)

Brian Work [REDACTED]
If so just make to model

11/17/2019 11:03 AM

They are but they look like a tapped hole so I'm not sure what size to make them

11/17/2019 11:44 AM (Viewed 11/17/2019 1:42 PM)

Brian Work [REDACTED]
Model size and then I'll ask ...we can helicoil then if needed...not our fault

Appendix 12

Report on Special Investigation of the University of Iowa Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J001A88B

11/17/2019 5:29 PM



Gotem all

11/17/2019 5:42 PM (Viewed 11/17/2019 5:48 PM)

Brian Work [REDACTED]

U da man

11/18/2019 9:31 PM

I was asking [REDACTED] today if he could update mastercam on Willy's itar computer it would be nice to be able to dnc from that computer to the mb30 because the programs for that big job are going to be to big to put in a usb and the laptop wasn't really liking the big file

11/18/2019 9:31 PM (Delivered 11/18/2019 9:32 PM)

I know that computer has mastercam on it but it's 2018 and the 2020 version code editor works better

11/18/2019 9:42 PM

Plus then I can get a couple programs made to get it running the be sitting next to it while I program the rest

11/19/2019 7:20 AM (Viewed 11/19/2019 7:33 AM)

Brian Work [REDACTED]

Will try to get Er done

11/19/2019 12:31 PM

Might have to tell willy to bring back that vise he "borrowed" so I can use it this weekend also

11/19/2019 12:38 PM (Viewed 11/19/2019 12:42 PM)

Brian Work [REDACTED]

Will do. Btw that vise in the back room belongs to Willie. I may be too easy going when it comes to borrowing/using things but it gets made right

11/20/2019 1:20 PM

I'll be in Sunday instead of Saturday this weekend Sarah want to go to dinner Saturday

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J001A88B

11/20/2019 1:22 PM

Thanks for getting the itar computer unlocked in the office, it's easier for me to see the icons on the bigger monitor and it computes way faster and has enough USB ports for everything

11/20/2019 1:22 PM (Viewed 11/20/2019 1:25 PM)

Brian Work [REDACTED]

Ok so I can get matl in Sat maybe ???

11/20/2019 1:23 PM (Viewed 11/20/2019 1:25 PM)

Brian Work [REDACTED]

Compute is moved and set up and working in cabinet...All systems go

11/20/2019 1:26 PM

Sweet yeah I won't need material until Sunday

11/20/2019 1:27 PM

Is there a specific Ethernet port in the shop the computer has to be plugged into?

11/20/2019 1:33 PM (Viewed 11/20/2019 1:37 PM)

Brian Work [REDACTED]

Already done...just anything marked LSA I think

11/20/2019 1:37 PM

Sounds good

11/20/2019 4:44 PM (Viewed 11/20/2019 5:27 PM)

Brian Work [REDACTED]

So will you be able to get enough hours in to complete part...as long as you can do that then ur good to go

11/20/2019 5:27 PM

I'll try

11/20/2019 6:48 PM (Viewed 11/20/2019 6:50 PM)

Brian Work [REDACTED]



11/20/2019 9:22 PM

I'm not going to lie I'm pretty stoked to have the computer in the shop then I can do everything from that computer and on the weekends the new guy and/or [REDACTED] can use the laptop

11/20/2019 9:44 PM

Brian Work [REDACTED]

Bout time I did that

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J001A88B

11/20/2019 9:45 PM

Tomorrow we'll have to plug a monitor back into the computer in the office with Internet access

11/20/2019 9:46 PM (Viewed 11/20/2019 9:48 PM)

Brian Work

Yessir just didn't finish the job yet

11/20/2019 9:51 PM

It's actually kinda nice not having internet access on the computer in the cabinet, then someone won't come up and start using it when you're in the middle of something, that was the downside of the laptop I'd come in the next day planning on continuing where I left off and somebody else grabbed it

11/21/2019 6:40 AM (Viewed 11/21/2019 8:11 AM)

Brian Work

I understand what ur saying

11/21/2019 12:11 PM

If you or willy are bored before the weekend you guys could take the plate off the table of the mb30, I'll need as much travel as possible for standing the pig on end plus then I can use the the t slots in the table and tie clamps

11/21/2019 12:21 PM (Viewed 11/21/2019 1:42 PM)

Brian Work



11/21/2019 12:27 PM (Viewed 11/21/2019 1:42 PM)

Brian Work

Before you get too far down the rabbit hole that project I would definitely take the time to sweep that head and make sure everything's nuts on it could be off a bit who knows it's been a while since it was looked at I think

11/21/2019 1:43 PM

Sounds good

11/21/2019 8:43 PM

Do you think [redacted] would have the time tomorrow to make a set of setup blocks for me tomorrow afternoon if I come in tomorrow morning for a couple hours and get them drawn up?

11/21/2019 8:44 PM

They would be a lot o bit more rigid for doing the first side of the big pig

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J001A88B

11/21/2019 8:49 PM (Viewed 11/21/2019 8:52 PM)

Brian Work [REDACTED]
Probably a big can do if we have material

11/21/2019 8:53 PM

[REDACTED]
Ok I have a used fixture he could probably saw up and make some out of

11/22/2019 10:22 AM

[REDACTED]
What size was that block again?

11/22/2019 10:33 AM (Viewed 11/22/2019 10:46 AM)

Brian Work [REDACTED]
12 x 13 x 22

11/22/2019 12:08 PM (Viewed 11/22/2019 12:20 PM)

Brian Work [REDACTED]
Is the BF to still running and the bit still intact

11/22/2019 12:20 PM

[REDACTED]
Yes

11/22/2019 12:30 PM (Viewed 11/22/2019 12:33 PM)

Brian Work [REDACTED]
Thank u

11/22/2019 1:49 PM

[REDACTED]
I got [REDACTED] lilis for the blocks today so I can going on the pig Sunday

11/22/2019 1:50 PM (Viewed 11/22/2019 2:09 PM)

Brian Work [REDACTED]
Sounds like a plan enjoy your day off you deserve it

11/23/2019 11:24 AM

[REDACTED]
So who's this work study you hired?

11/23/2019 12:31 PM

Brian Work [REDACTED]
Jo Momma

11/23/2019 12:31 PM

[REDACTED]
Mexican?

11/23/2019 12:31 PM (Viewed 11/23/2019 12:32 PM)

Brian Work (3193256772)
[REDACTED]

11/23/2019 12:32 PM

Brian Work [REDACTED]
If he were Mexican he'd be Jorge Momma

11/23/2019 12:32 PM

[REDACTED]
Is he a engineering student?

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J001A88B

Brian Work [REDACTED] 11/23/2019 12:33 PM (Viewed 11/23/2019 12:34 PM)

He is a biomed engineer in student but not anything like the last one he understands and I was very clear about what the expectations are hand at least 30% of his time will be spent cleaning and organizing

Brian Work [REDACTED] 11/23/2019 12:36 PM (Viewed 11/23/2019 12:37 PM)

He actually qualifies for work-study which tells me one of two things he's not a rich kid or he's on his own either way those are two good things

11/23/2019 12:44 PM

[REDACTED] said he got those blocks done, is the aluminum plate still on the mb30?

11/23/2019 12:45 PM

Brian Work [REDACTED]

Aluminum play is still on the MB 30 as of now but I'll go in early take it off [REDACTED] has a box of material so by the time you get in you should be able to start your thing

11/23/2019 12:46 PM

That works, I got enough programming done yesterday I can get it running then get a couple tools around and continue programming

11/23/2019 1:03 PM (Viewed 11/23/2019 1:20 PM)

Brian Work [REDACTED]

Just don't hurry be deliberate and fo sho about each pgm

11/24/2019 2:31 PM (Viewed 11/24/2019 5:12 PM)

Brian Work [REDACTED]

Lmk if The Vf2 stops please.

11/24/2019 5:12 PM

Can do

11/24/2019 5:12 PM (Viewed 11/24/2019 5:29 PM)

Brian Work [REDACTED]

Should be done

11/24/2019 5:30 PM

It's still running

11/26/2019 9:43 PM (Viewed 11/27/2019 3:31 AM)

Brian Work [REDACTED]

All good? Ima get some breakfast pizza in Morning u a sausage or bacon guy?

11/27/2019 3:32 AM

No problems so far, I like them both the same

11/28/2019 1:54 PM (Viewed 11/28/2019 3:41 PM)

Brian Work [REDACTED]

Just approved ur hours..hoping it in time if there's an issue lmk

12/1/2019 10:13 AM (Viewed 12/1/2019 10:37 AM)

Brian Work [REDACTED]

U coming in?

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J001A88B

12/1/2019 10:42 AM

Yeah it'll be a couple hours we're leaving Des Moines now

12/1/2019 11:10 AM (Viewed 12/1/2019 11:22 AM)

Brian Work [REDACTED]

Ok we gotta get a plan this is Due the 12th...no ifs ands or buts about it so I can get sides done today we're on track

12/1/2019 11:24 AM

I'm planning on working till 7 tonight then I'll be back in Saturday

12/1/2019 12:33 PM

Be there in a hour

12/1/2019 12:33 PM

I'll be

12/1/2019 12:36 PM (Viewed 12/1/2019 12:59 PM)

Brian Work [REDACTED]

U d u. U know the goal. I'll help out during week ...just need to know where zeros are and the like. It may take long weekend hours next weekend depending on how edm progress goes so be where.

12/1/2019 8:24 PM

Got 4 of the pockets cut down to Z-4.75, I left a note sitting on your laptop with a disc that has the stock model and a program to finish roughing out the pockets to Z-4.75 nothing is finished on the sides except Z0 on tl = current setup

12/1/2019 8:53 PM (Viewed 12/1/2019 8:54 PM)

Brian Work [REDACTED]

10-4 good buddy

12/2/2019 4:23 PM (Viewed 12/2/2019 5:23 PM)

Brian Work [REDACTED]

Should I finish anything of leave .007 on all surfaces and finish all later you think?

12/2/2019 5:24 PM

I'd finish the sides complete

12/3/2019 8:56 AM (Viewed 12/3/2019 9:15 AM)

Brian Work [REDACTED]

There's 49 hours on this part already FYI

12/3/2019 8:57 AM (Viewed 12/3/2019 9:15 AM)

Brian Work [REDACTED]

Take that back 54

12/3/2019 9:02 AM (Viewed 12/3/2019 9:15 AM)

Brian Work [REDACTED]

There were 49 hours charged on one day. That math doesn't work out and we gotta do day be day if possible..Max on this project is 60

12/3/2019 9:19 AM

3hrs Friday 10hrs Sunday 12hrs Monday and Tuesday 8 hrs Wednesday, there's going to be 60hrs of cycle time plus 12 setups in this thing before it's done so 60hrs to do this job isn't possible, I have 30hrs of cycle time already and when it's a 300lb block setups take a minute

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J001A88B

Brian Work [REDACTED] 12/3/2019 9:23 AM (Viewed 12/3/2019 9:26 AM)
I get ya we can just talk and figure it out later. Was just surprised at 55 hours already and have to figure it out

12/3/2019 9:28 AM
[REDACTED]
If you get the sides done this week then Saturday and Sunday I could probably have it ready for or on the last setup by Monday

Brian Work [REDACTED] 12/3/2019 9:37 AM (Viewed 12/3/2019 9:49 AM)
By my Math though that's 33 hours plus 5 on Sunday and that 38 what on the ticket is

Brian Work [REDACTED] 12/3/2019 9:37 AM (Viewed 12/3/2019 9:49 AM)
49

Brian Work [REDACTED] 12/3/2019 9:38 AM (Viewed 12/3/2019 9:49 AM)
54 total now

Brian Work [REDACTED] 12/3/2019 9:41 AM (Viewed 12/3/2019 9:49 AM)
Nevermind 12 min and Tuesday

Brian Work [REDACTED] 12/3/2019 9:53 AM
It's all good you're doing fine my apologies just stressful and was surprised at the 49 hours but in reality it's what it took

12/3/2019 9:57 AM
[REDACTED]
I think I added 2hrs to much on the ticket now that I look again I could put a couple hours on shop time this weekend to balance it out

Brian Work [REDACTED] 12/3/2019 10:37 AM (Viewed 12/3/2019 12:24 PM)
Sounds good

Brian Work [REDACTED] 12/4/2019 5:26 PM (Viewed 12/4/2019 5:27 PM)
Any chance of Friday night or day hours since ur not working in lab?

Brian Work [REDACTED] 12/4/2019 5:26 PM (Viewed 12/4/2019 5:27 PM)
This is sloooooow going.

12/4/2019 5:27 PM (Delivered 12/4/2019 5:28 PM)
[REDACTED]
Yeah I was thinking coming in for a few hours

12/5/2019 5:51 PM
[REDACTED]
It might be best to not go onto the other side tomorrow, you could finish up the current side then this weekend I could probably get the side with the angled holes done then start on the side that's currently against the table

Brian Work [REDACTED] 12/5/2019 5:53 PM (Viewed 12/5/2019 5:57 PM)
I'm still here so u think wait on that.. does it somehow make it easier or unthink its waste of time cuz setup etc.

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J001A88B

12/5/2019 6:00 PM

I wouldn't be able to finish the side that's against the table now and the side with the angled holes by Monday, I could get the side with the angled holes done first then start on the side that's currently against the table then next week you could finish the sides up on not have to mess with the angled holes

12/5/2019 6:02 PM

If it was ready to start on the side with the angled holes tomorrow when I come in that would be optimal

12/5/2019 6:04 PM

It kinda sucks because to do that side we'll have to take the angle plate back off the table but then you'll have all next week to get the sides done then next weekend I could start on the side with the wedge shape

12/5/2019 6:04 PM

Brian Work [REDACTED]

Gotcha no matter what we can stop and u can do angled holes...nbd

12/5/2019 6:05 PM (Viewed 12/5/2019 6:23 PM)

Brian Work [REDACTED]

It takes what it takes. Was really hoping to be farther along for you but...basically I'm slow and nervous about fuvking it up

12/5/2019 6:07 PM (Viewed 12/5/2019 6:23 PM)

Brian Work [REDACTED]

What time u think you'll be in? I plan on coming in tomorrow to work on it but if you have a plan the we can stop and I take over

12/5/2019 6:08 PM (Viewed 12/5/2019 6:23 PM)

Brian Work [REDACTED]

U take over that is

12/5/2019 6:24 PM

I have class until 5:20 so probably 5:30

12/5/2019 6:37 PM (Viewed 12/5/2019 6:38 PM)

Brian Work [REDACTED]

That works out ok. I should be able to have most of it roughed on that side at least

12/6/2019 6:28 PM (Viewed 12/6/2019 6:32 PM)

Brian Work [REDACTED]

U there? Part was about .01 out of parralell as best as I could measure . I did my best to get it back in. You'll see there's a blend on the surface. I couldn't quite reach all the way to the edge against the surface plate and I had to go. Anyway it should be good to go.

12/6/2019 6:32 PM

I'm here home nizzle

12/7/2019 9:24 AM (Viewed 12/7/2019 2:37 PM)

Brian Work [REDACTED]

[REDACTED] should be there around 10 I'm coming in but I'll be a little late for the time being just let him observe what you're doing please or show him the brooms and dust pans get them to work

12/7/2019 9:28 AM (Viewed 12/7/2019 2:37 PM)

Brian Work [REDACTED]

Please make sure the shop door is unlocked for him

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J001A88B

Brian Work [REDACTED] 12/7/2019 4:59 PM (Viewed 12/7/2019 5:00 PM)
All good?

[REDACTED] 12/7/2019 5:01 PM
Yep, it should be running the side you got stared on Friday when you come in Monday morning

Brian Work [REDACTED] 12/7/2019 5:01 PM (Viewed 12/7/2019 5:08 PM)
Sweet

[REDACTED] 12/8/2019 10:51 AM
Was the edm pockets going to be wired out or done in the sinker in the back of the shop? If it's not going to be wired out I'll rough out the pack of the pockets so it's easier to burn but if it is going to be wired out I'll leave the material in there

Brian Work [REDACTED] 12/8/2019 12:45 PM (Viewed 12/8/2019 12:47 PM)
I'm a come in tonight if that's side is ready to run

[REDACTED] 12/8/2019 12:47 PM
Ok

Brian Work [REDACTED] 12/8/2019 1:11 PM (Viewed 12/8/2019 1:13 PM)
Plan is to sinker so roughing it out is preferred

Brian Work [REDACTED] 12/8/2019 1:12 PM (Viewed 12/8/2019 1:13 PM)
Either way it can be wired if sinker doesn't work

[REDACTED] 12/8/2019 1:14 PM
Sounds good

Brian Work [REDACTED] 12/8/2019 1:40 PM
Big hole? When's that happen you think?

[REDACTED] 12/8/2019 1:40 PM
It's pretty much done

Brian Work [REDACTED] 12/8/2019 1:41 PM
U da man...Santa's gonna be good to you this year

[REDACTED] 12/8/2019 1:42 PM
When do you plan on coming in tonight?

Brian Work [REDACTED] 12/8/2019 1:45 PM
Time you leaving?

[REDACTED] 12/8/2019 1:45 PM
5:30

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J001A88B

Brian Work [REDACTED]
It'll be after that for sho

12/8/2019 2:02 PM (Viewed 12/8/2019 2:06 PM)

12/8/2019 5:54 PM
[REDACTED]
I'm gonna go to homework now, willy is here so I'm going to leave the mb30 running when it gets done the pockets will be roughed down to -.45 with the .750 em

12/8/2019 7:23 PM (Viewed 12/8/2019 9:36 PM)

Brian Work [REDACTED]
Awesome u da man

12/13/2019 3:52 PM

Brian Work [REDACTED]
That side is pretty well done holes need drilled and the chamfer is around the boss boss is at the top other than that you can check and see if you want to clean up something but it should be done

12/13/2019 3:53 PM
[REDACTED]
10-4

12/14/2019 8:15 AM (Viewed 12/14/2019 8:46 AM)

Brian Work [REDACTED]
Have [REDACTED] text me when he gets there..he should be there around 10

12/14/2019 8:46 AM
[REDACTED]
Ok

12/14/2019 9:28 AM (Viewed 12/14/2019 10:34 AM)

Brian Work [REDACTED]
Charge fixture building to shop time. Btw basically were at max project charge time at this point so it's shop time, training from here on

12/14/2019 10:22 AM (Viewed 12/14/2019 10:34 AM)

Brian Work [REDACTED]
Is he there?

12/14/2019 10:35 AM
[REDACTED]
Not yet

12/15/2019 3:05 PM
[REDACTED]
On second thought maybe I should cut the wedge surface with the way it's setup now so hopefully it'll be parallel, with it up at an angle I won't have anyway of knowing if the bow is out of it or not with it clamped down to the table it still won't be flat in a free starve but hopefully it'll be parallel

12/15/2019 3:09 PM (Viewed 12/15/2019 3:16 PM)

Brian Work [REDACTED]
I just figured you were going to ball millet and leave maybe 5000s set it up and then dusted off

12/15/2019 3:11 PM (Viewed 12/15/2019 3:16 PM)

Brian Work [REDACTED]
You just tell me what you want me to do I can work on it Monday through Thursday

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J001A88B

Brian Work [REDACTED] 12/15/2019 3:12 PM (Viewed 12/15/2019 3:16 PM)
I will finish all the pockets on that side and then ball mill that angle into different directions so that you can indicate it in and then finish it

12/15/2019 3:18 PM (Delivered 12/15/2019 3:19 PM)
[REDACTED]
That works, just be sure and finish the whole surface to dimension

Brian Work [REDACTED] 12/15/2019 3:23 PM (Viewed 12/15/2019 3:27 PM)
To be clear than you don't want me to leave any material on the surface to finish

Brian Work [REDACTED] 12/15/2019 3:27 PM
Or do you want me to send my finished and leave like 7000's

Brian Work [REDACTED] 12/15/2019 3:27 PM
Semi finish that is

12/15/2019 3:27 PM
[REDACTED]
To the number home nizzle no material left

Brian Work [REDACTED] 12/15/2019 3:28 PM (Viewed 12/15/2019 3:51 PM)
Can do

Brian Work [REDACTED] 12/18/2019 3:33 PM (Viewed 12/18/2019 5:02 PM)
Are u around today?

Brian Work [REDACTED] 12/18/2019 3:53 PM (Viewed 12/18/2019 5:02 PM)
Also I was wrong on number more time can be charged to project. Ur time for last weekend can be charged to it. I though we were already over 100

Brian Work [REDACTED] 12/20/2019 6:28 PM (Viewed 12/20/2019 6:31 PM)
Part HAS to ship Tuesday morning at latest Monday night more better

12/30/2019 6:24 PM
[REDACTED]
Don't forget to submit my hrs, also I should be done with those tubes Friday morning is there anything ready for with the rolling mill?

Brian Work [REDACTED] 12/30/2019 6:28 PM (Viewed 12/30/2019 7:33 PM)
Waiting on [REDACTED] for rolling mill info

12/30/2019 7:33 PM
[REDACTED]
Ok

12/31/2019 5:41 PM (Delivered 12/31/2019 5:45 PM)
[REDACTED]
I might have a couple days worth of work for skiff, I might be able to meet with home Thursday or Friday to get the info

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J001A88B

University of Iowa - Protostudios

Coralville, IA 52241 US

protostudios

INVOICE

BILL TO

Brian Busch
D3signTech LLC

INVOICE # 1303

DATE 03/03/2020

DUE DATE 04/02/2020

TERMS Net 30

ACTIVITY	QTY	RATE	AMOUNT
Product [ExGen] Machining Services - 02/04/2020 - Protostudios Membership / Spencer Kuhl: Protostudios Membership – Protostudios membership from 12/13/19 - 3/13/19	3	75.00	225.00
Product [ExGen] Machining Services - 02/28/2020 - Machining Services / Spencer Kuhl: 1848 - Large Monolithic Structure		3,978.00	3,978.00
Protostudios Service Fee (15%) 15 % Protostudios Service Fee	0.15	3,978.00	596.70
PAYMENT			4,799.70
BALANCE DUE			\$0.00

Warranty/Indemnification

All product and services delivered are delivered to Client at Client's sole risk and are "as is" without warranties of any kind, either express or implied, including all implied warranties of merchantability, fitness for a particular purpose, title, non-infringement, and any warranties arising from a course of dealing, usage or trade practice.

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J001699C

 <small>300 Vassar Avenue Northampton, MA 01061 413.253.1131</small>						P.O. No. J001699C
						Date: 07/26/2019
To: DSignTech Williamsburg, VA 22861 United States			Ship To: Somerville, MA 02143 United States		P.O. number should appear on all packages and correspondence. Please submit all invoices to partnerinvoices@xometry.com	
Partner Quote ID: N/A			Ship Date*: 09/01/2019		Shipping Method: FedEx 2 Day	
Requirements: Standard Inspection						
Notes: N/A						
Item	Code	Part ID**	Order ID	Description	Qty.	
1	CHC-S	01.09A.00	08306-15033	04_602_01_SingleBoard_HeatSink_STEP Material: Aluminum 6061-T6 Finish: Standard Inspection Requirement: Standard Inspection Notes: N/A	10	
					SUBTOTAL	\$3,975.00
					TOTAL	\$3,675.00

* Ship Date refers to the date on which Xometry expects you to ship the parts. All shipments must receive an origin scan (e.g., they cannot be deposited in a drop box).
** The Xometry-provided part ID and revision are equivalent to the part number and revision in the CAD or PDF file, unless stated otherwise.

Note: Please submit all invoices to partnerinvoices@xometry.com. For terms and conditions, please see the Partner Manufacturing Services Agreement: <https://www.xometry.com/industries/terms-of-service/>

Approved By:	Date: 07/26/2019
--------------	---------------------

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J001699C

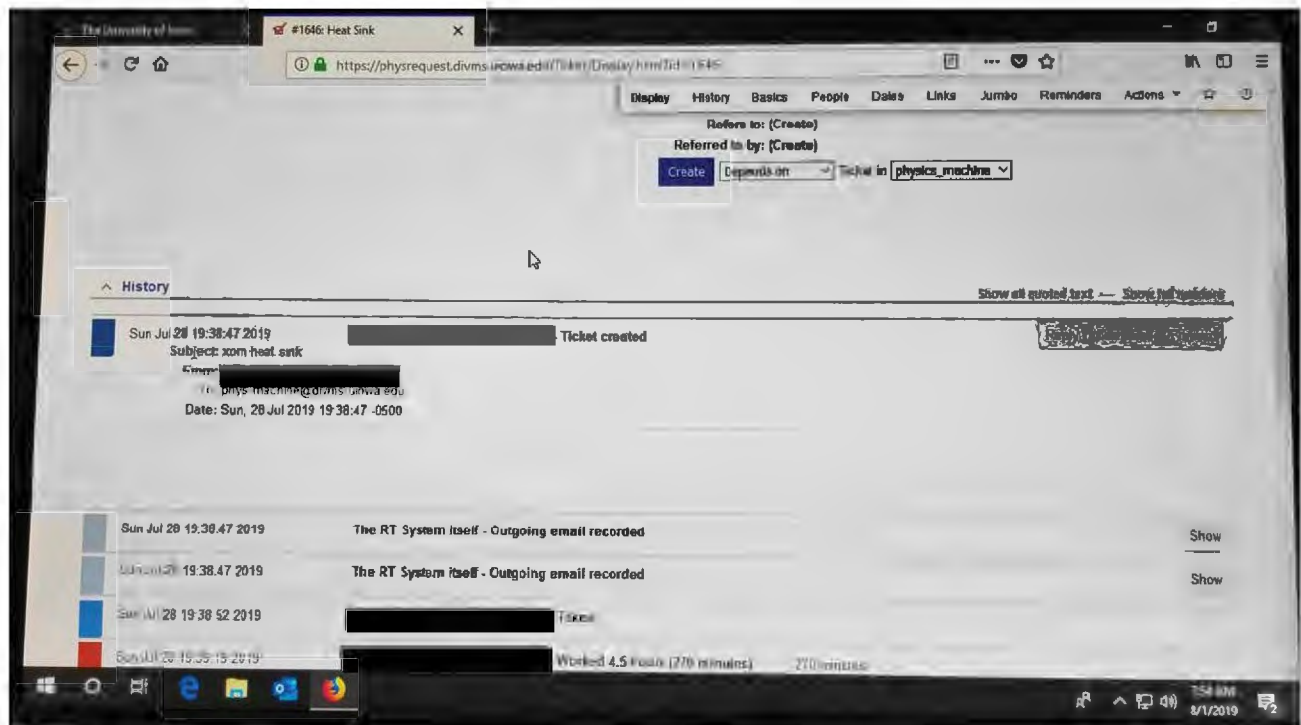
The screenshot shows a web browser window with the URL <https://physrequest.dvms.uiowa.edu/Ticket/Display.html?id=1646>. The page title is "#1646: Heat Sink". The browser's address bar shows the URL. The page has a navigation bar with links: Home, Search, Articles, Assets, Tools, Logged in as [redacted], RT for physrequest.dvms.uiowa.edu, and BEST PRACTICAL. The main content area is divided into several sections:

- Ticket metadata**:
 - The Basics**:
 - Id: 1646
 - Status: open
 - Worked: 215 hours 1,290 minutes
 - Users: [redacted]
 - Priority:
 - Queue: physics_machine
 - Custom Fields**:
 - Funding Source: (no value)
 - People**:
 - Requestors: [redacted]
 - Cc:
 - AdminCc:
- Reminders**:
 - New reminder:
 - Subject: [text input]
 - Owner: [dropdown menu]
 - Due: [text input]
 - Save button
- Dates**:
 - Created: Sun Jul 29 19:38:47 2019
 - Starts: Not set
 - Started: Tue Jul 30 10:21:29 2019
 - Last Contact: Tue Jul 30 10:34:17 2019
 - Due: Not set
 - Closed: Not set
 - Updated: Tue Jul 30 19:25:43 2019 by r1stansben, i1stansben, Dustin1
- Links**: [button]

The Windows taskbar at the bottom shows the Start button and several application icons. The system clock in the bottom right corner displays 7:54 AM on 8/1/2019.

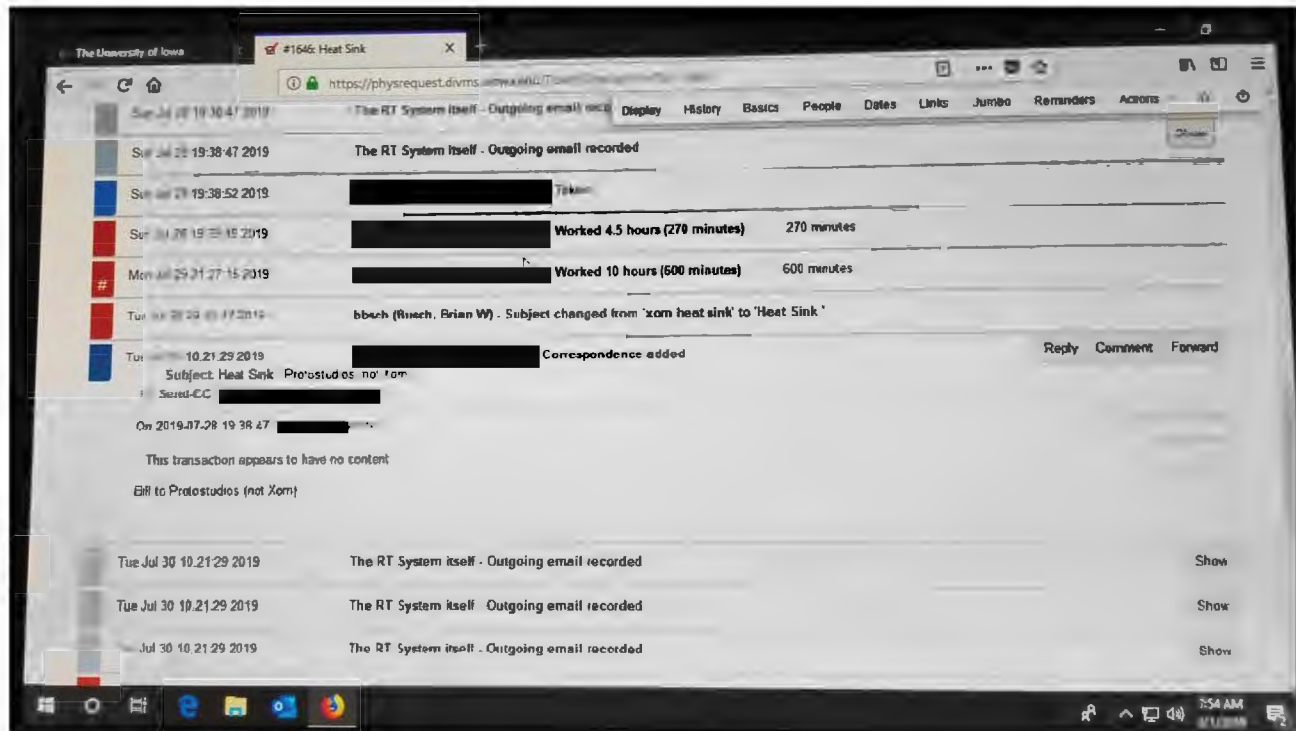
Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J001699C



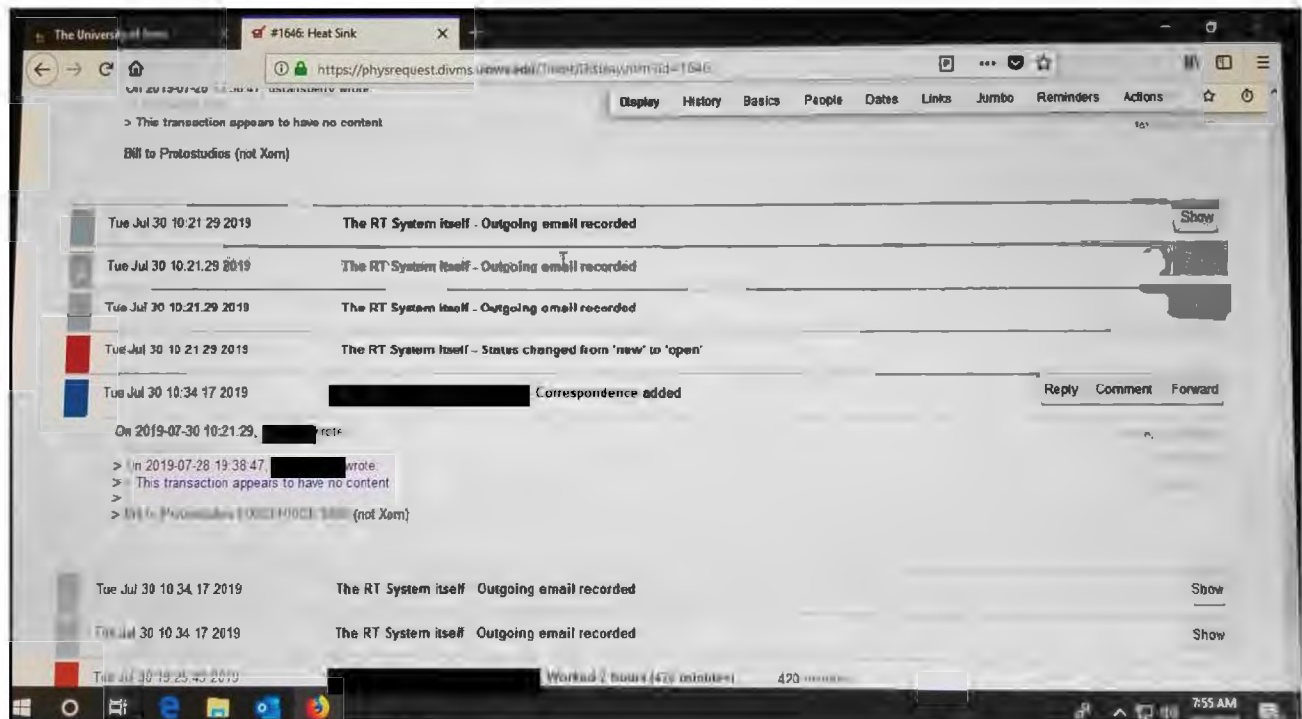
Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J001699C



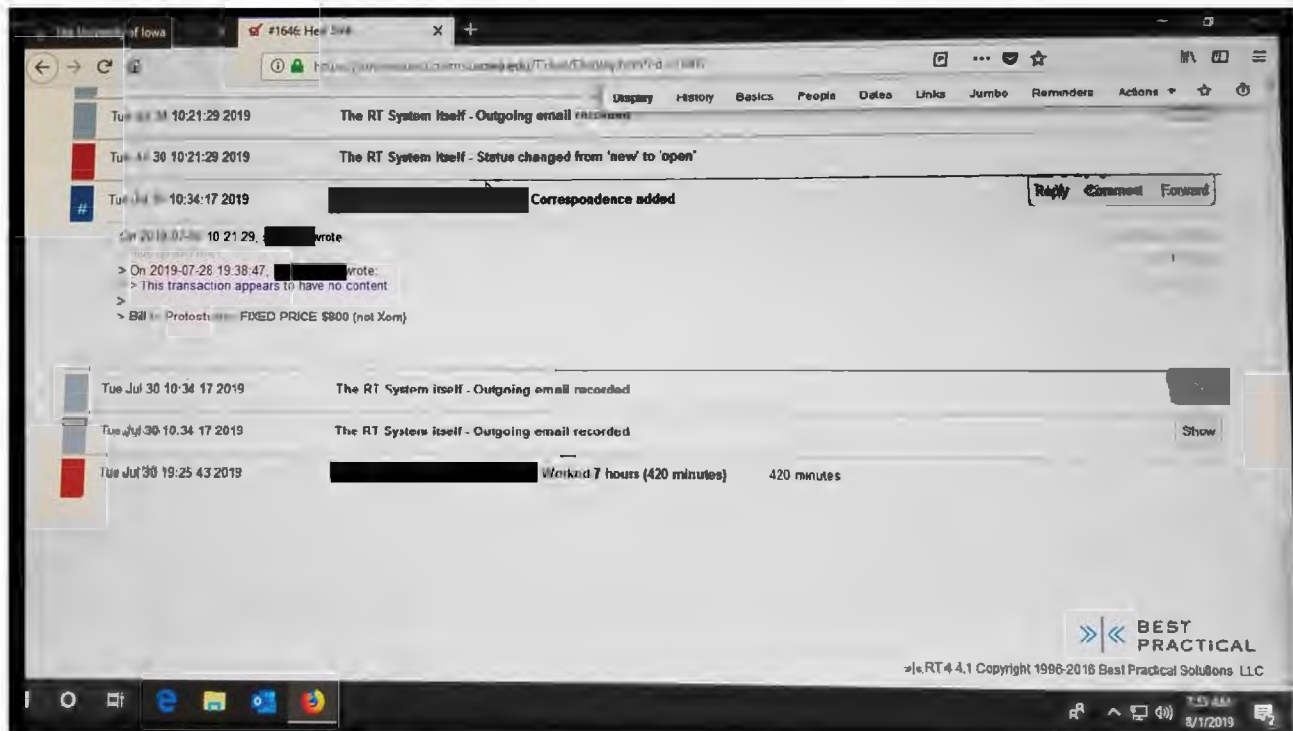
Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J001699C



Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J001699C



Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J001699C

7/26/2019 2:21 PM (Viewed 7/26/2019 2:25 PM)
Brian Work [REDACTED]
That makes sense to me...we can slug or order round stock large enough if needed as well.

7/26/2019 2:25 PM (Delivered 7/26/2019 2:26 PM)
[REDACTED]
There's more of chunks like the one I grabbed the other day in the back room that'll work fine

7/26/2019 2:26 PM
[REDACTED]
They look like there we wired out of something

7/26/2019 2:27 PM (Viewed 7/26/2019 2:35 PM)
Brian Work [REDACTED]
Ok yeah use them up

7/27/2019 12:03 PM
Brian Work [REDACTED]
I don't think that you HMW part is all that bad will see if we can send it a little bit but I don't know if it's worth remaking as long as we're within tolerance

7/27/2019 12:04 PM (Viewed 7/27/2019 12:06 PM)
Brian Work [REDACTED]
I have some other work we can get up and going and I bought a spindle speed or for the shop

7/28/2019 12:56 PM (Delivered 7/28/2019 1:55 PM)
[REDACTED]
I have a couple hours left on this plastic part then what was the next job?

7/28/2019 2:00 PM (Viewed 7/28/2019 2:08 PM)
Brian Work [REDACTED]
Heat sinks Willie is going to wj

7/28/2019 2:07 PM (Viewed 7/28/2019 2:08 PM)
Brian Work [REDACTED]
I will be in in 20 minutes to give you the DL on the heat slings hoping you can get them running today

7/28/2019 5:17 PM (Viewed 7/28/2019 5:22 PM)
Brian Work [REDACTED]
Sounds like wj is a no-go...u got a plan to mover forward without?

7/28/2019 5:19 PM (Viewed 7/28/2019 5:22 PM)
Brian Work [REDACTED]
Anything Wille has set up on that mill can come off it was supposed to be lasered anyway

7/28/2019 5:22 PM
[REDACTED]
I got bunches of hunches

7/28/2019 5:27 PM
[REDACTED]
I found some .04 cutters that should work

7/28/2019 5:29 PM (Viewed 7/28/2019 6:32 PM)
Brian Work [REDACTED]
Sweet... bunches of hunches!!!

7/28/2019 6:17 PM (Viewed 7/28/2019 6:32 PM)
Brian Work [REDACTED]
10 of those due Thursday if I keep them going r we good u think?

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J001699C

University of Iowa - Protostudios

Coralville, IA 52241 US

protostudios

INVOICE

BILL TO
Brian Busch
D3signTech LLC

INVOICE # 1208
DATE 09/23/2019
DUE DATE 10/23/2019
TERMS Net 30

ACTIVITY	QTY	RATE	AMOUNT
Outsource Machining services for Heat Sink	1	1,655.50	1,655.50
Protostudios Service Fee Protostudios Service Fee (15%)	0.15	1,655.50	248.33
PAYMENT			1,903.83
BALANCE DUE			\$0.00

PAID

Warranty/Indemnification

All product and services delivered are delivered to Client at Client's sole risk and are "as is" without warranties of any kind, either express or implied, including all implied warranties of merchantability, fitness for a particular purpose, title, non-infringement, and any warranties arising from a course of dealing, usage or trade practice.

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0018FD2

PURCHASE ORDER

				P.O. No. J0018FD2	
<small>7550 Science Meadows, Hendersonville, NC 28039 704.444.5444 www.xometry.com</small>				Date: 10/02/2019	
To: DesignTech [REDACTED] Williamsburg, IA 52091 United States [REDACTED]		Ship To: [REDACTED] Perry, OK 73077 United States [REDACTED]		PO number should appear on all packages and correspondence. Please submit all invoices to: partnerinvoices@xometry.com	
Partner Quote ID: N/A		Ship Date: 10/16/2019		Shipping Method: FedEx Standard Overnight	
Requirements Finishing Certification Standard Inspection					
Notes: N/A					
Item	Code	Part ID**	Order ID	Description	Qty
1	CHCS	011838E	T918E-15001	451-43213 SLOPRT Material: Aluminum 6061T6 Finish: Black Hardcoat Anodize Features: Inserts: 11 Threads/Tapped Holes: 1 Surface Roughness: Finish 32uin/0.8um Ra, specific area Tolerances: precision +/- .001 (+/- .025mm) 3 locations Part Markings: Bag and Tag: 1 Certification: Finishing Certification Inspection Requirement: Standard Inspection Notes: N/A	3
					SUBTOTAL \$3,250.00
					TOTAL \$3,250.00

* Ship Date refers to the date on which Xometry expects you to ship the parts. All shipments must receive an origin scan (e.g. they cannot be deposited in a drop box).

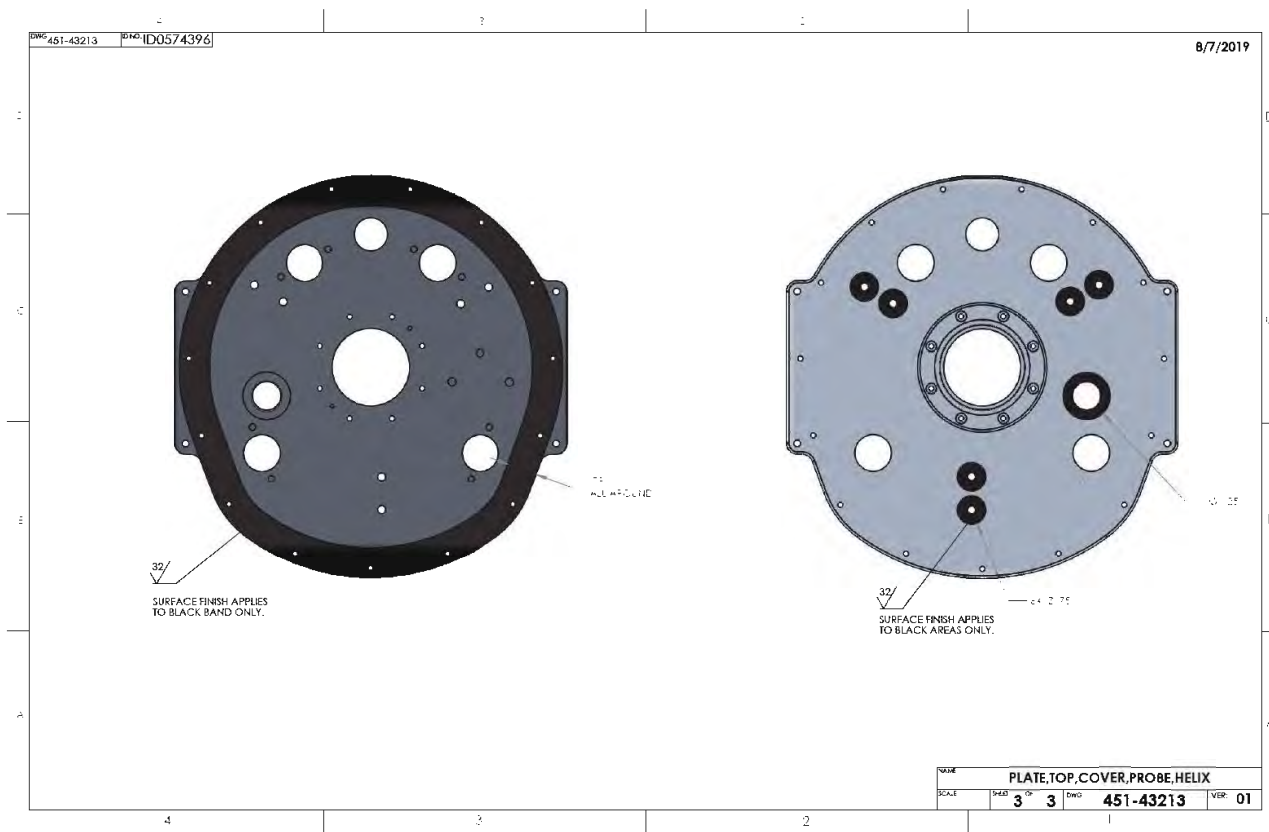
**The Xometry-provided part ID and revision are equivalent to the part number and revision in the CAD or PDF file, unless stated otherwise.

Note: Please submit all invoices to partnerinvoices@xometry.com. For terms and conditions, please see the Partner Manufacturing Services Agreement: <https://www.xometry.com/docs/terms-of-service/>

Approved By:	Date: 10/01/2019
---------------------	----------------------------

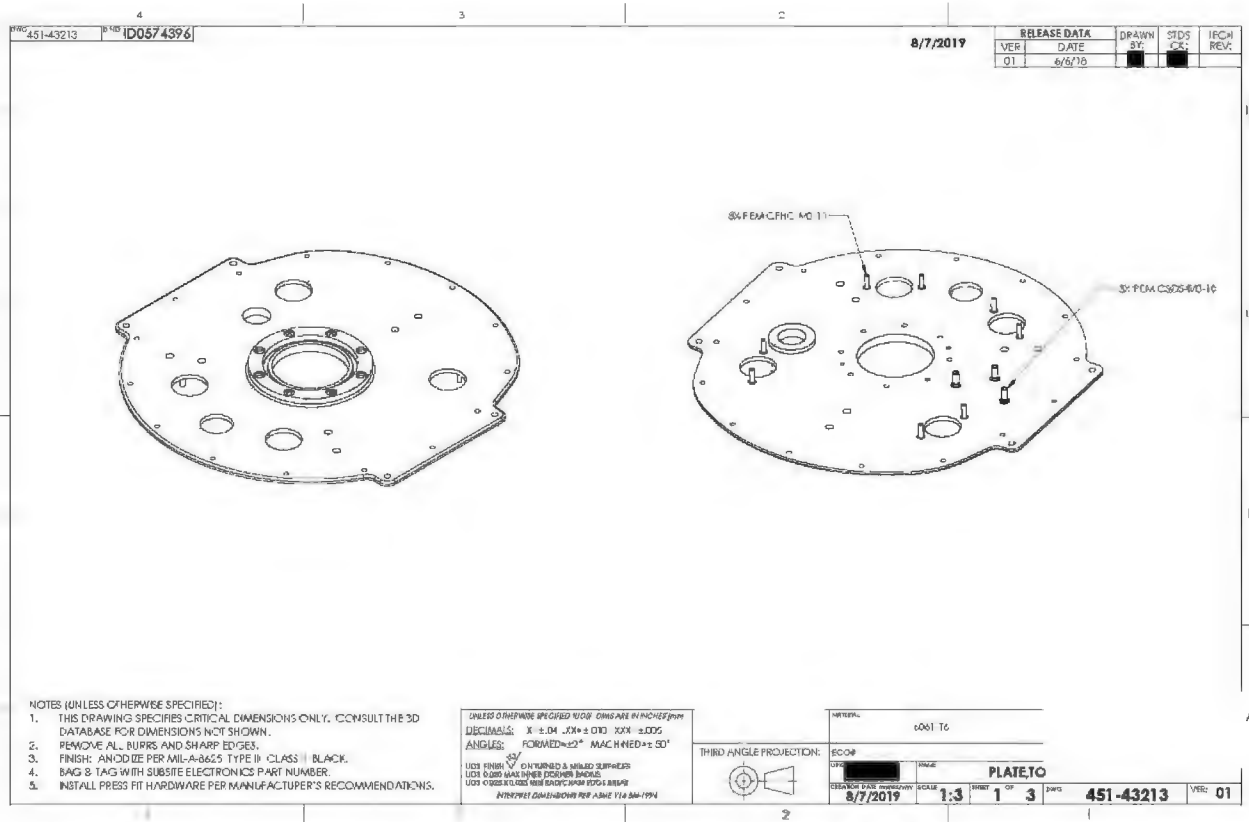
Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0018FD2



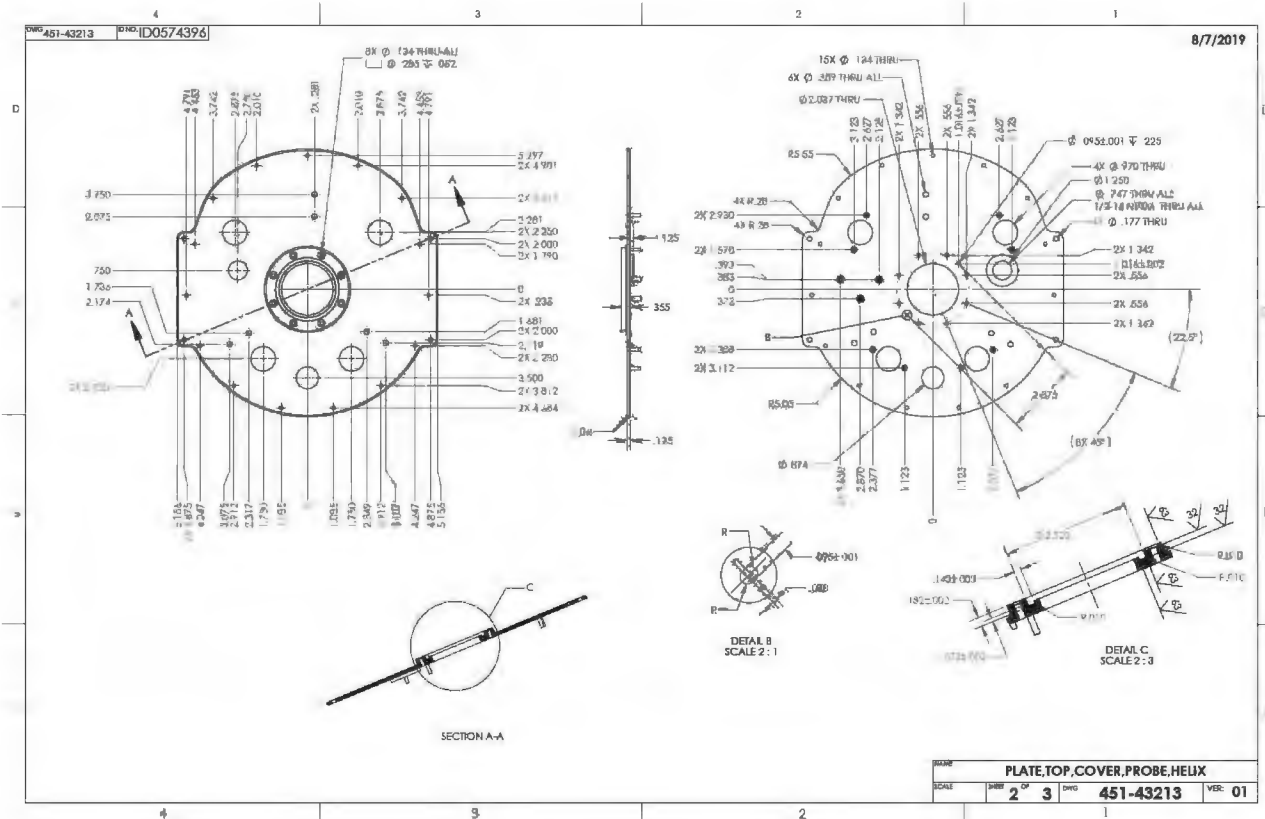
Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0018FD2



Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

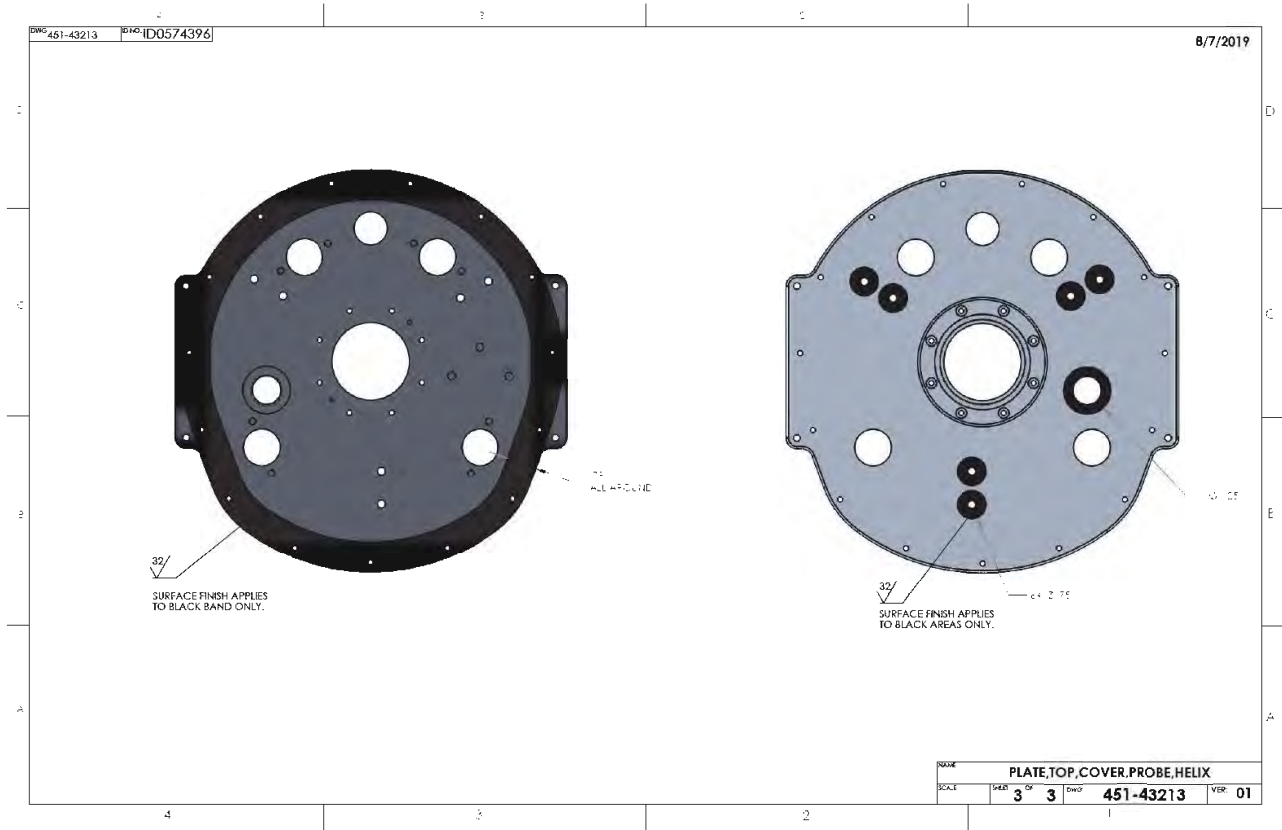
Copy of Purchase Order Number J0018FD2



Appendix 14

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0018FD2



Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0018FD2

9/29/2019 4:11 PM

I put the fixture up on the granite plate and the long sides are parallel and the short sides have about .005 of taper per side

9/29/2019 4:17 PM (Viewed 9/29/2019 4:22 PM)

Brian Work [REDACTED]

Ok maybe square on mb-30

9/29/2019 6:17 PM

I'm walking into tutoring, I got that fixture done it's sitting on the black granite plate on the shelf

9/29/2019 7:12 PM (Viewed 9/29/2019 7:34 PM)

Brian Work [REDACTED]

Ok

10/1/2019 8:14 PM

Brian Work [REDACTED]

So ur working Sat and Sun total 16+hours?

10/1/2019 8:14 PM

Yeah I was planning on 10 Saturday and 9 Sunday

10/1/2019 8:15 PM (Viewed 10/1/2019 8:17 PM)

Brian Work [REDACTED]

Ok got a job for yas then

10/1/2019 8:17 PM

Sounds super

10/1/2019 8:48 PM (Viewed 10/1/2019 8:49 PM)

Brian Work [REDACTED]

Should be some long runtimes though so u can study but u gotta get er done or mostly anyway will send u pdf and model tomorrow

10/1/2019 8:51 PM

Ok maybe Friday after class I could come in then if there something I could leave run when I go home I'd have to option

10/2/2019 7:24 AM (Viewed 10/2/2019 7:59 AM)

Brian Work [REDACTED]

That'll work

10/2/2019 10:50 AM

I made a program for changing tools so it moves over the bucket it's in the control called tool change with bucket, I think it's the second program on the list

10/2/2019 2:08 PM

If you're ordering stuff you should get one of those usb hubs

10/3/2019 3:02 PM

Brian Work [REDACTED]

I put the job in ur queue please limit charged hours to 12. I can't imagine u would have more actual [REDACTED] time in them...machine run time I'm sure u will.

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0018FD2

10/3/2019 3:02 PM
[REDACTED]
Ok

10/3/2019 3:04 PM
Brian Work [REDACTED]
If u want to take laptop home to program u can. If we can make this work where u can plan on ur time and schedule machine time it should be a good thing for u also

10/3/2019 3:06 PM
[REDACTED]
Yeah normally working Sunday and Tuesday works well, this week was kinda screwed because of tests

10/3/2019 3:12 PM
[REDACTED]
Normally I could do 10hrs on Sunday and 5 hours on Tuesday

10/3/2019 3:13 PM
[REDACTED]
If I were to work 18 hrs this weekend what should I put the other 6 towards?

10/3/2019 3:23 PM (Viewed 10/3/2019 3:24 PM)
Brian Work [REDACTED]
Shop time just do some cleaning and organizing while things are running. Point I am trying to make is I don't super care as long as things get done and we can charge 80 percent of ur time weekly

10/3/2019 3:25 PM
[REDACTED]
Oh I see

10/3/2019 3:27 PM
Brian Work [REDACTED]
As u move along in school I wanna be flexible and allow u to still earn a living. We need to perfect the lights out stuff as much as we can anyway

10/3/2019 3:28 PM
[REDACTED]
We can try

10/3/2019 3:38 PM (Viewed 10/3/2019 4:15 PM)
Brian Work [REDACTED]
So thinking aloud here if u come get laptop and files. Take home tonight..plan it out come in set up and run tomorrow... lights out one side then ur halfway there

10/3/2019 4:19 PM
[REDACTED]
Tonight I have a test at 6:30 and homework after that, if we could figure out a set price for programming that might work. The catch is during the week I don't really have any free time aside from the time set aside for work on Tuesday

10/3/2019 4:23 PM (Viewed 10/3/2019 4:46 PM)
Brian Work [REDACTED]
Whatever works just a suggestion. The parts get anodized so they need done Monday. It's more the point of agreeing on projects and charging things out so they match up with it hours.

10/3/2019 5:39 PM
[REDACTED]
File attachment with MIME type: image/jpeg
<https://www.miteebite.com/products/pitbull-clamps/>
(Sent with URL)

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0018FD2

10/3/2019 5:39 PM

We should add these to that fixture

10/3/2019 5:47 PM (Viewed 10/3/2019 5:53 PM)

Brian Work

I was saying that to willie the other day I'll get some coming

10/3/2019 5:54 PM

Brian Work

The main thing is I don't wanna have to put a bunch of pockets in it I don't know if you can use those without a pocket or if we can just pull something else on to make it work but to do plates and things for facing and not have to glue them down would be nice

10/3/2019 5:55 PM

We could put a couple pockets in so if the stock was a nominal size it would fit

10/3/2019 5:57 PM

Used them allot at Geater they work well

10/3/2019 6:03 PM

Brian Work

Have to do in between...no 10-24 size

10/3/2019 6:09 PM

We could open up a couple of the holes that are already there, this weekend I could modify the model to show you what I mean in cad form

10/3/2019 6:11 PM

I thought they made textured rails to go on the other side of the stock but I didn't see them, maybe they made those at Geater they worked well because the clamps and rails dig in the sides of the stock a little

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0018FD2

Brian Work [REDACTED] 10/3/2019 8:42 PM (Viewed 10/3/2019 8:44 PM)

2 of 2



Brian Work [REDACTED] 10/3/2019 8:42 PM (Viewed 10/3/2019 8:44 PM)

Rails look like that?

10/3/2019 8:45 PM

Similar I think they were mild steel and the face that was against the stock was rough so they would grab a little

Brian Work [REDACTED] 10/5/2019 8:48 AM (Viewed 10/5/2019 8:54 AM)

U look at those parts? Material is in office...they have to be done Monday

10/5/2019 9:30 AM

There runnin

Brian Work [REDACTED] 10/5/2019 9:34 AM (Viewed 10/5/2019 11:02 AM)

U da man

Brian Work [REDACTED] 10/5/2019 10:38 AM (Viewed 10/5/2019 11:02 AM)

What kind of run time u expecting per side

10/5/2019 11:02 AM

I'm not sure yet

10/5/2019 11:08 AM

Brian Work [REDACTED]

Assuming u were ok on material and tooling etc?

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0018FD2

10/5/2019 11:09 AM

Fur sure

10/5/2019 11:15 AM

Probably looking at 2.5hrs a piece for run time

10/5/2019 11:27 AM (Viewed 10/5/2019 11:32 AM)

Brian Work

U using fixture plate in vf2?

10/5/2019 11:32 AM

There wasn't room to get 2 on it so I used one of the old ones

10/5/2019 11:33 AM

And I had to put a clearance pocket in the fixture

10/5/2019 11:36 AM (Viewed 10/5/2019 11:42 AM)

Brian Work

Gotcha do what u have to

10/5/2019 11:41 AM (Viewed 10/5/2019 11:42 AM)

Brian Work

I am
Hoping vf2 proves to be faster and more accurate than anything we currently have. Will get y
axis looked at

10/5/2019 11:42 AM

Well it's definitely faster!!!

10/5/2019 1:27 PM

File attachment with MIME type: video/quicktime
Yeah just a little faster

10/5/2019 1:34 PM (Viewed 10/5/2019 1:37 PM)

Brian Work

I thought these parts would be a decent test.

10/5/2019 1:35 PM (Viewed 10/5/2019 1:37 PM)

Brian Work

I was haulin some ass the other day on this small parts Cutting at 50 ipm on a .0625 is new to
this guy

10/5/2019 1:53 PM

You should order a few extra 1/4 and 1/8 collets also

10/5/2019 1:55 PM (Viewed 10/5/2019 1:58 PM)

Brian Work

Done already

10/5/2019 2:24 PM

It's looking more like 3.5 hrs of runtime per part

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0018FD2

10/5/2019 2:25 PM (Viewed 10/5/2019 2:26 PM)
Brian Work [REDACTED]
Ok per side is that total?

10/5/2019 2:27 PM

Total

10/5/2019 2:30 PM (Viewed 10/5/2019 2:34 PM)
Brian Work [REDACTED]
That's pretty damn good

10/5/2019 2:35 PM

I thought it was a little long lol

10/5/2019 5:14 PM (Viewed 10/5/2019 5:18 PM)
Brian Work [REDACTED]
Make sure on those tight slots that you make them about 1000 bigger so that anodizing will bring them into size

10/5/2019 5:19 PM

Ok

10/5/2019 5:49 PM (Viewed 10/5/2019 5:54 PM)
Brian Work [REDACTED]
How much [REDACTED] time do U think. Charge out the hours up the 12 accordingly just curious about my estimate. Seems like the vf2 make get us closer to goals

10/5/2019 6:29 PM

I think 8 hrs, according to mastercam one part both sides should run for 3.5 hrs, figure 3.5 hrs to program. If we had a plate with some of those pit bull-clamps it would help, if the stock can go from saw cut to a complete part with one cycle it makes a big difference

10/5/2019 6:30 PM

Tomorrow I might make a holder for the probe to sit in

10/5/2019 6:38 PM

I might have to come in next Saturday also instead of Tuesday this week again. I have one more test this Wednesday

10/5/2019 7:02 PM (Viewed 10/5/2019 7:13 PM)
Brian Work [REDACTED]
Ok sounds good...will get some pit bulls coming. There are some options for sizes though...what u thinking. The talon grips are also the bomb and we might be able to integrate those easily into the existing fixture...maybe we do it again on one side of it

10/5/2019 7:15 PM

Probably whatever is close to 10-24

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0018FD2

10/6/2019 11:21 AM (Delivered 10/6/2019 11:22 AM)



10/6/2019 11:36 AM (Viewed 10/6/2019 11:41 AM)

Brian Work [REDACTED]

Nice...accurate?

10/6/2019 11:41 AM

Within spec

10/6/2019 11:47 AM (Viewed 10/6/2019 1:32 PM)

Brian Work [REDACTED]

Well that's accurate in my book

10/6/2019 11:48 AM (Viewed 10/6/2019 1:32 PM)

Brian Work [REDACTED]

Did you mostly use a half inch cutter or were you able to use like the three-quarter that you normally use for material removal in those cases

10/6/2019 12:49 PM (Viewed 10/6/2019 1:32 PM)

Brian Work [REDACTED]

Do you still have your couch

10/6/2019 1:25 PM (Viewed 10/6/2019 1:32 PM)

Brian Work [REDACTED]

Can you run a DA over those parts and polish them a little with 3M so that the anodize is a uniform finish

10/6/2019 1:53 PM

So I got my work offset switched around and scrapped one of these mofoes out, should I grab a piece of stock from the back?

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Copy of Purchase Order Number J0018FD2

University of Iowa - Protostudios

Coralville, IA 52241 US

protostudios

INVOICE

BILL TO

Brian Busch
D3signTech LLC

INVOICE # 1252

DATE 11/08/2019

DUPLICATE DATE 12/08/2019

TERMS Net 30

ACTIVITY	QTY	RATE	AMOUNT
Product [ExGen] Machining Services - 11/08/2019 - Machining Services / Spencer Kuhl: 1792 - (3) Plates anodize, bag & tag - 10/10/19	1	936.00	936.00
Protostudios Service Fee (15%) Protostudios Service Fee (15%) for [ExGen] Machining Services - 11/08/2019 - Machining Services / Spencer Kuhl: 1792 - (3) Plates anodize, bag & tag - 10/10/19	0.15	936.00	140.40
Product [ExGen] Machining Services - 11/08/2019 - Machining Services / Spencer Kuhl: 1797 - (3) Plates anodize, bag & tag - 10/15/19	1	780.00	780.00
Protostudios Service Fee (15%) Protostudios Service Fee (15%) for [ExGen] Machining Services - 11/08/2019 - Machining Services / Spencer Kuhl: 1797 - (3) Plates anodize, bag & tag - 10/15/19	0.15	780.00	117.00
Product [ExGen] Machining Services - 11/08/2019 - Machining Services / Spencer Kuhl: 1809 - ProtoStudios ball parts - 10/27/19	1	936.00	936.00
Protostudios Service Fee (15%) Protostudios Service Fee (15%) for [ExGen] Machining Services - 11/08/2019 - Machining Services / Spencer Kuhl: 1809 - ProtoStudios ball parts - 10/27/19	0.15	936.00	140.40
PAYMENT			3,049.80
BALANCE DUE			\$0.00

Warranty/Indemnification

All product and services delivered are delivered to Client at Client's sole risk and are "as is" without warranties of any kind, either express or implied, including all implied warranties of merchantability, fitness for a particular purpose, title, non-infringement, and any warranties arising from a course of dealing, usage or trade practice.

**Report on Special Investigation
of the
University of Iowa
Department of Physics and Astronomy – Machine Shop**

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Text Messages from Brian Busch to Employee – Time Entry

1/27/2019 8:05 PM
[Redacted]
No he said he was going to check in later this week
1/27/2019 8:07 PM (Viewed 1/27/2019 8:11 PM)
Brian Work [Redacted]
Ok for today put in 3 hours to project and the rest to
Protostudios training u will have to make ticket fro that

1/27/2019 8:12 PM
[Redacted]
Ok sounds good
1/27/2019 8:40 PM
[Redacted]
For the ticket going to Protostudios do I put my name as the requestor?
1/27/2019 8:40 PM (Viewed 1/27/2019 8:41 PM)
Brian Work [Redacted]
Spencer Kuhl

1/27/2019 8:41 PM
[Redacted]
Ok
1/27/2019 8:49 PM
[Redacted]
I left a note sitting by your laptop
1/27/2019 8:49 PM (Viewed 1/27/2019 8:51 PM)
Brian Work [Redacted]
Sounds good have a night cap

1/27/2019 8:51 PM
[Redacted]
You know it!!
1/28/2019 7:54 AM (Viewed 1/28/2019 8:01 AM)
Brian Work [Redacted]
Is the program for the half inch cutter ready to go and if so what is the program number and is
it loaded in the control everything looks good and I understand your note

1/28/2019 8:02 AM
[Redacted]
There isn't any more programs made, I'm just about to walk out the door so I'll stop in there in
about 30 min
1/28/2019 8:03 AM
[Redacted]
Brian Work [Redacted]
Np is this .498 tool touched off? I can figure it out

1/28/2019 8:08 AM
[Redacted]
It is but I can't remember the tool number, I think I used it in program o0002 that s in the
control. I had it touched off the back of the vise and a positive number in the z setting on
coordinates page. It might be easier to clear that number out of z in the coordinates page
and touch the tool off the part
1/28/2019 1:08 PM
[Redacted]
They canceled class on Wednesday so I can work from 8-4 on Wednesday, Spencer was
wanting to make another lid so he can see the whole process

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop
Text Messages from Brian Busch to Employee – Time Entry

Brian Work [REDACTED] 3/23/2019 4:58 PM (Viewed 3/23/2019 7:16 PM)
Sent u a bastardized step file to look at... its just a thought

Brian Work [REDACTED] 3/23/2019 4:58 PM (Viewed 3/23/2019 7:16 PM)
Email

Brian Work [REDACTED] 3/24/2019 11:07 AM (Viewed 3/24/2019 12:12 PM)
Please use RW-12 on those parts...hoping inside can get done today so we stay on track...btw
don't log these hours...

3/24/2019 12:14 PM (Delivered 3/24/2019 12:13 PM)
[REDACTED]
Do we have 2 matching vises I could put in there

Brian Work [REDACTED] 3/24/2019 12:14 PM
Just take off mb20 I will order 2 more

3/24/2019 12:14 PM
[REDACTED]
Ok

3/24/2019 12:21 PM
[REDACTED]
I just had a thought scenes how that machine has a tool changer what if I just saw the price of
material up into 4 pcs

Brian Work [REDACTED] 3/24/2019 12:21 PM (Viewed 3/24/2019 12:28 PM)
If u gotta plan run with it

Brian Work [REDACTED] 3/24/2019 12:22 PM (Viewed 3/24/2019 12:28 PM)
Like most things time is of the essence

Brian Work [REDACTED] 3/24/2019 12:27 PM (Viewed 3/24/2019 12:28 PM)
If u want to size drill and bolt to table it's up to u

Brian Work [REDACTED] 3/24/2019 12:28 PM
Vises ordered

3/24/2019 12:29 PM
[REDACTED]
Ok I'll let you know where I'm at with these when I'm leaving

Brian Work [REDACTED] 3/24/2019 12:32 PM (Viewed 3/24/2019 1:09 PM)
Sounds good...was thinking with t.c. If we started with inside at least long run time of doing
inside in all of them could be done but really if u have a solid plan just run with it

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Text Messages from Brian Busch to Employee – Time Entry

3/24/2019 8:39 PM
[REDACTED]
In case the email didn't work I left the flash drive stick with willy that has the files in the brass parts folder

3/24/2019 8:40 PM
Brian Work [REDACTED]
Looks like it doing more than pocket must Also be sound flats outside the pocket

3/24/2019 8:41 PM
[REDACTED]
Yeah that was the back of that ear that was at a different z level then the rest

3/24/2019 8:42 PM
[REDACTED]
It'll make sense when you see the models

3/24/2019 8:42 PM
Brian Work [REDACTED]
Ok have a good one

3/24/2019 8:43 PM
[REDACTED]
I used the model you had made up but extended the surfaces to the edge of the parts so there's more room for bolts

3/24/2019 8:43 PM (Viewed 3/24/2019 8:49 PM)
Brian Work [REDACTED]
Gotcha

3/25/2019 8:25 AM (Viewed 3/25/2019 8:29 AM)
Brian Work [REDACTED]
So for some reason I can't open your Files so is your date him in the center of the bar or the center of the parts

3/25/2019 8:31 AM
[REDACTED]
The ones that are on the flash drive or in email

3/25/2019 3:48 PM (Viewed 3/25/2019 3:51 PM)
Brian Work [REDACTED]
Go ahead and log ur time yesterday as training. I had to throw those back as there is no way we could deliver and they were suggesting it so I had no legs to stand on

3/25/2019 3:48 PM (Viewed 3/25/2019 3:51 PM)
Brian Work [REDACTED]
Too short of a pull this time

3/25/2019 3:52 PM
[REDACTED]
Ok

3/27/2019 6:00 PM
[REDACTED]
Should I charge time to a ticket for today?

3/27/2019 6:23 PM (Viewed 3/27/2019 6:26 PM)
Brian Work [REDACTED]
Yes it's a u xom job

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop
Text Messages from Brian Busch to Employee – Time Entry

4/14/2019 3:10 PM



4/14/2019 3:10 PM

Mummy

4/14/2019 3:10 PM

Nummy

4/14/2019 3:30 PM (Viewed 4/14/2019 4:13 PM)

Brian Work

There are black barrels up front label that used oil that you can put that into and then the HS will come take it

4/14/2019 5:04 PM

What should I put time on today?

4/14/2019 5:07 PM (Viewed 4/14/2019 5:08 PM)

Brian Work

What did u work on? If it was some cleaning machine etc. charge that to shop time... if it was playing with water jet training. Other than that don't charge it. I will take care of u

4/14/2019 5:10 PM (Delivered 4/14/2019 5:16 PM)

Ok I'll put hrs on shop time then that'll leave 2 not put on anything. I just screwed up that aluminum part willy had jetted out so we just cut out another one

4/14/2019 5:17 PM (Viewed 4/14/2019 5:18 PM)

Brian Work

Ok it happens to us all I still got u. How far did u get on it cuz it has a due date

4/14/2019 5:19 PM

The side with the counter bores is done

4/14/2019 5:19 PM (Viewed 4/14/2019 5:21 PM)

Brian Work

Ok sounds good

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Text Messages from Brian Busch to Employee – Time Entry

5/9/2019 1:35 PM (Viewed 5/9/2019 1:37 PM)

Brian Work ██████████

Bottom line any hours you want paid for need to be billed

5/9/2019 1:39 PM

██████████

I think the materials won't be here to start in ██████████ stuff till next week so if there's 20 hrs worth of work I could do in the machine shop that would be good

5/9/2019 1:41 PM (Viewed 5/9/2019 1:43 PM)

Brian Work ██████████

You have basically two options one look at the parts that ██████████ put in the queue or to get on ours on the tree account and pick something

5/9/2019 1:44 PM

██████████

Is the tree account the xom stuff?

5/9/2019 1:45 PM (Viewed 5/9/2019 1:48 PM)

Brian Work ██████████

It sure is Wille can help you get logged on

5/9/2019 1:47 PM (Viewed 5/9/2019 1:48 PM)

Brian Work ██████████

Sorry man we're just really scraping the bottom of the barrel at this point

5/9/2019 1:53 PM

██████████

It's ok I'll see if ██████████ has anything and if he does then I'll look on xom

5/9/2019 1:53 PM

██████████

Doesn't I mean

5/9/2019 2:08 PM (Viewed 5/9/2019 2:11 PM)

Brian Work ██████████

██████████ already put some work in the queue all you need to do is logon to the job order system and look at the most recent unknown tickets

5/9/2019 2:09 PM (Viewed 5/9/2019 2:11 PM)

Brian Work ██████████

Wille can I help you with the job water system if you need help

5/9/2019 4:58 PM (Viewed 5/9/2019 5:00 PM)

Brian Work ██████████

Are you wanting to work this weekend I see that there is a zombie tree job that's really simple that you could do

5/9/2019 5:04 PM (Delivered 5/9/2019 5:05 PM)

██████████

I gotta fix my dumb car again this weekend, I was going to look on there in the morning and see what there is, Monday is ██████████ birthday and we were going to look at a couple apartments that day. I was planning on working 10 hrs tomorrow and Tuesday to get an xom job done then after that ██████████ stuff should be ready to go

5/9/2019 5:20 PM (Viewed 5/9/2019 5:30 PM)

Brian Work ██████████

Well how about this do you want to work tomorrow and work as many hours on it is you need tomorrow probably get it done

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop
Text Messages from Brian Busch to Employee – Time Entry

Brian Work [REDACTED] 7/23/2019 5:56 PM (Viewed 7/23/2019 6:21 PM)
That box u can add hours to that work order...not sure how it goes together exactly

[REDACTED] 7/23/2019 6:22 PM
Oh ok I thought those were for Spencer along with that oval thing do last night I made a ticket up for it and today he didn't have any idea what they were

[REDACTED] 7/23/2019 6:23 PM
The oval thing is gone today though so someone must have grabbed it, is there a way to credit his account for four hours?

Brian Work [REDACTED] 7/23/2019 6:27 PM (Viewed 7/23/2019 6:33 PM)
It doesn't matter that much cuz I'll get the bill for both so nbd...I just didn't have the time to run the box through spencer

[REDACTED] 7/23/2019 6:34 PM
Ok

[REDACTED] 7/23/2019 6:34 PM
Maybe you could let him know so he's not confused

Brian Work [REDACTED] 7/23/2019 6:41 PM (Viewed 7/23/2019 6:42 PM)
He just gets to Bill me for doing nothing really but I'll let h know

[REDACTED] 7/23/2019 7:35 PM
There's no way I'm getting this box done tonight there's programs to run it's just taking a while

Brian Work [REDACTED] 7/23/2019 7:36 PM (Viewed 7/23/2019 7:40 PM)
What's going to be left. Can u finish tomorrow night?

Brian Work [REDACTED] 7/23/2019 7:36 PM (Viewed 7/23/2019 7:40 PM)
Guesstimate hours left I guess

Brian Work [REDACTED] 7/23/2019 7:38 PM (Viewed 7/23/2019 7:40 PM)
What time u leaving I may come in and finish if all it needs is ran

[REDACTED] 7/23/2019 7:41 PM
I was planning on working till 10 or 11 tonight and probably 12 hrs tomorrow so I could come in at 9 or so tomorrow morning

[REDACTED] 7/23/2019 7:42 PM
There's not a ton of Work so I'll leave it for u

[REDACTED] 7/23/2019 7:43 PM
If the card reader was working I could leave it run but I have to break up the programs so small it only runs for 10 min then I load the next program

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Text Messages from Brian Busch to Employee – Time Entry

And we probably had this discussion and I forgot...ur doing it right then

10/25/2019 10:07 AM (Viewed 10/25/2019 10:13 AM)

Brian Work [REDACTED]

I put the Threadmill on your toolbox I'm not in today so you'll have to go upstairs at some point and grab the stuff from the shop there should be a T-slot cutter in there that will work

10/25/2019 10:47 AM (Viewed 10/25/2019 11:07 AM)

Brian Work [REDACTED]

From the shipping room that is

10/25/2019 11:07 AM

Ok

10/25/2019 11:08 AM (Viewed 10/25/2019 12:11 PM)

Brian Work [REDACTED]

Turns out I bought it personally so now I own a t slot cutter so I'll bring it tomorrow

10/25/2019 12:11 PM

Ok

10/25/2019 12:19 PM (Viewed 10/25/2019 12:26 PM)

Brian Work [REDACTED]

How many hours u need this weekend? Basically this job is 10 charged [REDACTED] hours and then u can do some 5s stuff if u want

10/25/2019 12:27 PM

I was thinking 15 who should I charge the ticket to?

10/25/2019 12:31 PM (Viewed 10/25/2019 1:20 PM)

Brian Work [REDACTED]

Protostudios make on and make Spencer Kuhl the requestor

10/25/2019 12:32 PM (Viewed 10/25/2019 1:20 PM)

Brian Work [REDACTED]

Actually marry comes to more like 12

10/25/2019 12:33 PM (Viewed 10/25/2019 1:20 PM)

Brian Work [REDACTED]

But 3 hours of shop time etc is fine

10/25/2019 2:15 PM

Do I need to go the mail room to get anything then?

10/25/2019 2:19 PM (Viewed 10/25/2019 2:21 PM)

Brian Work [REDACTED]

If I have time it would help if you could grab whats there for the shop and put in my office

10/25/2019 2:23 PM (Viewed 10/25/2019 2:26 PM)

Brian Work [REDACTED]

U have time that is

10/25/2019 2:26 PM

I'll run up there

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop
Text Messages from Brian Busch to Employee – Time Entry

5/8/2020 8:16 PM

Brian Work [REDACTED]
What dates...I think so let me check with [REDACTED]

5/8/2020 8:17 PM

[REDACTED]
Sun-wed all summer

5/8/2020 8:58 PM (Viewed 5/8/2020 8:59 PM)

Brian Work [REDACTED]
What date do U want to start??

5/8/2020 9:01 PM

[REDACTED]
The 16th would be good, it's looking like skiffs lab is going to be closed for a while and summer classes are online so I was hoping to work extra and get some cash saved up

5/8/2020 9:24 PM (Viewed 5/8/2020 9:25 PM)

Brian Work [REDACTED]
I get ya and it would seem like it's good timing as we are quoting some work...it may be a week or 2 later than the 16th because o am not sure on the timing of the work. However if I wanna make some extra scratch I got opportunities at my shop...I'd pay u driving time..You could work when I'm not here maybe idk..

5/8/2020 9:29 PM

[REDACTED]
If I'm not working in the shop I'll probably cut firewood for my dad his woodpile is getting low

5/8/2020 9:30 PM (Viewed 5/8/2020 9:33 PM)

Brian Work [REDACTED]
Ur a good son

5/9/2020 10:07 AM (Delivered 5/9/2020 12:05 PM)

[REDACTED]
When did you plan on coming in today? I didn't plan on being here much past noon

5/9/2020 12:21 PM (Viewed 5/9/2020 12:29 PM)

Brian Work [REDACTED]
Hard to keep up with you bro...Probably not gonna make it by then

5/11/2020 8:21 AM (Viewed 5/11/2020 8:24 AM)

Brian Work [REDACTED]
No need to make new ticket for clean up just charge to whatever project it is u are working on at the time

5/11/2020 8:24 AM

[REDACTED]
Ok

5/12/2020 1:02 PM (Viewed 5/12/2020 1:14 PM)

Brian Work [REDACTED]
U have any time to look at these parts?? Basically it would be ur work so if u want some say it would be a good idea

5/12/2020 1:15 PM

[REDACTED]
Could you send me the files? Or is it all secret stuff?

5/12/2020 1:43 PM

[REDACTED]
If it's something that could be sent through email I could look at it on [REDACTED] computer

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Text Messages from Brian Busch to Employee – Time Entry

Brian Work [REDACTED] 5/12/2020 1:45 PM (Viewed 5/12/2020 1:46 PM)
Can do gimme a couple hours

[REDACTED] 5/12/2020 9:18 PM
How about that file

Brian Work [REDACTED] 5/12/2020 9:34 PM (Viewed 5/12/2020 9:36 PM)
Tomorrow had to work on Covid response stuff today...we might now be making a bunch of stuff for return to work protective equipment

[REDACTED] 5/12/2020 9:37 PM
Ok

[REDACTED] 5/13/2020 5:15 PM
I'd like to work from the 16th to the 20th to get some hours made up, I'm assuming that stuff for UCLA wouldn't be for a couple weeks so I'm not sure what's on the agenda

Brian Work [REDACTED] 5/13/2020 5:16 PM (Viewed 5/13/2020 5:17 PM)
Ok We are good with the hours increase provided u will take necessary Xom jobs if need be...you can choose which jobs u take...all I would ask is a heads up so that I can try to get the u more money for the jobs ahead of time..This may be a bull point if the work flows anyway

[REDACTED] 5/13/2020 5:19 PM
Ok how many jobs are normally listed on the xom website? I looked the other night and there was only 9 listed so I'm guessing I wasn't looking in the right place

Brian Work [REDACTED] 5/13/2020 5:22 PM (Viewed 5/13/2020 5:23 PM)
That's possibly about right... there is rolling mill stuff for now though

[REDACTED] 5/13/2020 5:23 PM
Ok

[REDACTED] 5/13/2020 5:28 PM
I only got 7 hrs in last week so I won't be much over my normal about by the end of next week but I assumed after that I would have to do xom stuff

[REDACTED] 5/13/2020 5:29 PM
It would be cool if we got that UCLA stuff cuz that would take just about a couple weeks to do

Brian Work [REDACTED] 5/13/2020 5:29 PM (Viewed 5/13/2020 5:30 PM)
Hang up is ur gonna have to do it after 4:30 due to vivid shit but that should be ending in a couple weeks only m-w though

Brian Work [REDACTED] 5/13/2020 5:30 PM (Viewed 5/13/2020 5:32 PM)
Not ideal I know

[REDACTED] 5/13/2020 5:33 PM
You mean work after 4:30 m-w or the rest of the week?

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Text Messages from Brian Busch to Employee – Time Entry

Brian Work [REDACTED] 6/1/2020 12:16 PM (Viewed 6/1/2020 12:28 PM)

I had someone come to me with some titanium parts to make I would like to run them through Proto studios and have you make them are you interested

[REDACTED] 6/1/2020 12:30 PM

I'll look at them tonight, you could leave a model on a disc and leave it on my box

Brian Work [REDACTED] 6/1/2020 12:31 PM (Viewed 6/1/2020 2:46 PM)

OK I'll leave the models on the box for you they are fairly simple leave parts with a little bit of milling I don't think you'll see a problem with them

[REDACTED] 6/1/2020 5:11 PM

Those parts don't look to bad, I've never messed with titanium so I'm not really sure how it cuts

Brian Work [REDACTED] 6/1/2020 5:13 PM (Viewed 6/1/2020 5:19 PM)

Between Alu and stainless... will work harden but if using proper speeds and feed not bad at all.. mills easily drilling can be tricky so we should get carbide drills for it

[REDACTED] 6/1/2020 5:20 PM

Would they be made from round stock or from a plate?

Brian Work [REDACTED] 6/1/2020 5:20 PM (Viewed 6/1/2020 5:24 PM)

Round will be best use of material imho

[REDACTED] 6/1/2020 5:26 PM

Doing the round stuff on the lathe would probably be better but my lathe skills aren't that great and because they have to go on the mill anyway I'd rather do them all on the mill, I don't know how that would effect the cost of material though

Brian Work [REDACTED] 6/1/2020 5:26 PM

Out of squares??

[REDACTED] 6/1/2020 5:27 PM

Yeah just one plate then I could do all 15 at once

Brian Work [REDACTED] 6/1/2020 5:30 PM (Viewed 6/1/2020 5:31 PM)

Can you fixture round vertical and do?

Brian Work [REDACTED] 6/1/2020 5:31 PM

1" round?

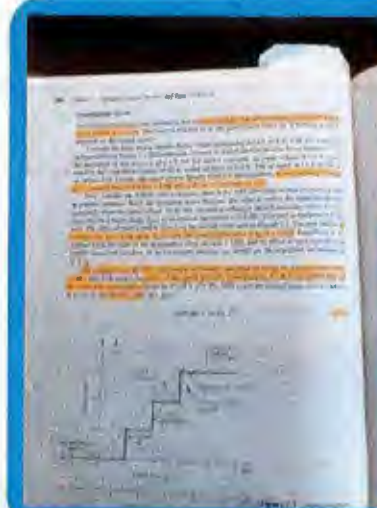
[REDACTED] 6/1/2020 5:34 PM

I don't know how I would hold onto it, the only way I can think of to do it in the allotted amount of time is to use one plate, use tabs and do them all at once granite it is very wasteful but it would save allot of time

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Text Messages from Brian Busch to Employee – Time Entry

10/12/2020 4:38 PM (Delivered 10/12/2020 7:46 PM)



10/12/2020 4:39 PM (Delivered 10/12/2020 7:46 PM)

As a analog to digital converter*

10/14/2020 9:11 AM (Viewed 10/14/2020 9:14 AM)

Brian Work

It's all based on ppr but the accuracy also is coming from stuff like ballscrew mapping and thermal adjustment etc.

10/14/2020 9:12 AM (Viewed 10/14/2020 9:14 AM)

Brian Work

Hey I took a few simple Xom jobs to keep work going for u. Lmk what u think... really cake stuff btw

10/14/2020 12:14 PM

If you really want to know what I think here it is, Xom stuff as a whole is a pain if everyone in the shop had to do it then it would be allot more bearable but if you look at the work that has been through the shop in the last year and a half probably 50% of the stuff I've done has been xom which requires severe efficiency's while the salary people have done 0 xom and sat around milking out everything they could so they "don't run out of work" while the fact is they can do xom stuff to they just start crying if they have to do anything they don't want to. If you want to take advantage of the fact I've proven myself to be the most capable so I have to do xom so the full time guys don't get sand in there vaginas it's whatever just know I'm there 15hrs a week regardless if the job is done or not

10/14/2020 12:55 PM (Viewed 10/14/2020 12:59 PM)

Brian Work

Dude I'm doing xom work right now... that's not an accurate statement.

10/14/2020 12:58 PM (Viewed 10/14/2020 12:59 PM)

Brian Work

If you don't want to work just say so.

10/14/2020 1:00 PM

Is it under your account or the schools?

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Text Messages from Brian Busch to Employee – Time Entry

Brian Work [REDACTED] 10/14/2020 1:01 PM (Viewed 10/14/2020 1:02 PM)

The schools Bro...we've discussed this.

Brian Work [REDACTED] 10/14/2020 1:03 PM (Viewed 10/14/2020 1:05 PM)

U should probably look at the jobs before freaking out...cuz they are easy.

Brian Work [REDACTED] 10/14/2020 1:05 PM (Viewed 10/14/2020 1:08 PM)

Willie and I have 0 problem doing Xometry work when it's needed. Ur first statement was not accurate. I don't control work flow. If u can find another pt job that pays 24/hr and let's u work when u want...go for it.

Brian Work [REDACTED] 10/14/2020 1:32 PM (Viewed 10/14/2020 1:37 PM)

I don't know what u want me to do. Untill we start another project it's either xometry work or moving stuff or shop improvement. But we can only spend so much time on shop improvement as we don't have budget for it.

[REDACTED] 10/14/2020 1:39 PM

How about this during the school year xom stuff gets spread out to everybody

Brian Work [REDACTED] 10/14/2020 1:41 PM (Viewed 10/14/2020 1:44 PM)

Ideally no one does it. I get u about the 15 hours. The work I took for u is less than that and easy. Let's just talk at some point. I am trying to help u out believe it or not

[REDACTED] 10/14/2020 1:47 PM

We could talk but just so your aware [REDACTED] and willy have both said to me "if we speed up we'll run out if work and xom is great as long as I don't have to do it"

Brian Work [REDACTED] 10/14/2020 1:52 PM (Viewed 10/14/2020 1:56 PM)

Honestly who cares. People talk say dumb shit. U have a pretty good gig... as we all do

[REDACTED] 10/14/2020 1:58 PM

And there was another time where a direct quote from willy was "I don't have to do xom, perks a being full time" scenes how we're getting it all out there thought you should know

Brian Work [REDACTED] 10/14/2020 1:59 PM (Viewed 10/14/2020 2:07 PM)

He was fucking with you... cuz he doesn't care for all the bullshit

Brian Work [REDACTED] 10/14/2020 1:59 PM (Viewed 10/14/2020 2:07 PM)

Willy doesn't care what he does. He just does it

Brian Work [REDACTED] 10/14/2020 2:01 PM (Viewed 10/14/2020 2:07 PM)

I get that ur stressed out: the xometry work I picked is cake. Honestly take yes for an answer

Brian Work [REDACTED] 10/14/2020 2:04 PM (Viewed 10/14/2020 2:07 PM)

When we are slow...Xometry can allow us some relief also. Just don't pick hard ass jobs

[REDACTED] 10/14/2020 2:10 PM

I just let it go, you can let me know Thursday what you want me to work on over the weekend

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Text Messages from Brian Busch to Employee – Time Entry

Brian Work [REDACTED] 10/14/2020 2:12 PM (Viewed 10/14/2020 2:19 PM)

Last thing on this. I know not everyone will be happy and I'll get the blame for more than my share. I really don't care about that. [REDACTED] is a team player as am I. Things are moving in a positive direction just go with the flow. I want you on board for tracers and it's starting to come through. Everyone in our shop respects your abilities. Don't worry about things beyond ur control. Bottom line is this job is perfect for u right now...don't let other bs get in ur way. Life is good.

10/15/2020 7:47 AM
[REDACTED]

Turns out there isn't anything for me to do in the lab today so I could come in and work on whatever in the shop this morning for a few hours. Is the machine open today?

10/15/2020 7:52 AM
[REDACTED]

Or I could start organizing the stock shelf in the back room

Brian Work [REDACTED] 10/15/2020 8:07 AM (Viewed 10/15/2020 9:00 AM)

Ok haas will be lopen about 10

Brian Work [REDACTED] 10/15/2020 9:17 AM (Viewed 10/15/2020 11:40 AM)

Scratch that mb20 is down. Need haas

Brian Work [REDACTED] 10/16/2020 8:11 AM (Viewed 10/16/2020 8:14 AM)

Time u be in today?

10/16/2020 8:14 AM
[REDACTED]

About 1:30

Brian Work [REDACTED] 10/16/2020 11:48 AM (Viewed 10/16/2020 12:34 PM)

Btw we have until the 28th to deliver that brass job...so as little "pressure" as possible.

10/16/2020 12:34 PM
[REDACTED]

Sweet, I'll be in in about 30 min

10/16/2020 4:08 PM
[REDACTED]

Did the reamer come in for those holes?

10/16/2020 5:09 PM
[REDACTED]

Those are here right?

Brian Work [REDACTED] 10/16/2020 7:52 PM (Viewed 10/16/2020 7:59 PM)

We have wire size reamers yes

10/16/2020 8:00 PM
[REDACTED]

I see I thought you ordered reamers specific for this job

Brian Work [REDACTED] 10/16/2020 8:02 PM (Viewed 10/16/2020 8:15 PM)

I can... tell me what u want

**Report on Special Investigation
of the
University of Iowa
Department of Physics and Astronomy – Machine Shop**

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop
Text Messages from Brian Busch to Employee – Enticements

10/22/2018 8:31 AM
[REDACTED]
I'll be in at 2:30 today instead of 1:30 I'll also fill out the hours I plan on working this week on the white board
10/22/2018 8:31 AM (Viewed 10/22/2018 8:32 AM)
Brian Work [REDACTED]
Sounds good

10/22/2018 5:32 PM
[REDACTED]
Did you want me to hit the feedhold button on the machine that is roughing out that chassis
10/22/2018 5:38 PM (Viewed 10/22/2018 5:41 PM)
Brian Work [REDACTED]
What depth is it at? Should be about done

10/22/2018 5:39 PM (Viewed 10/22/2018 5:41 PM)
Brian Work [REDACTED]
Sorry phone had to update

10/22/2018 5:42 PM
[REDACTED]
It just got done
10/24/2018 6:26 PM (Viewed 10/24/2018 7:24 PM)
Brian Work [REDACTED]
Forgot to check in with u before I left sorry bout that

10/24/2018 7:24 PM (Delivered 10/24/2018 7:25 PM)
[REDACTED]
It's ok I left right after you
10/26/2018 10:25 AM (Viewed 10/26/2018 10:50 AM)
Brian Work [REDACTED]
U interested in side gig work? I have a potential opportunity for u.

10/26/2018 10:50 AM
[REDACTED]
Possibly we can talk about it this afternoon I'll be in at 1:30

11/4/2018 3:05 PM
[REDACTED]
I going to have to come in tomorrow at 3:00 instead of 1:30 to get ready for a test on Tuesday, if there's someone around I could work 8-2 Friday and Saturday to try and get some hours in
11/4/2018 4:48 PM (Viewed 11/4/2018 5:01 PM)
Brian Work [REDACTED]
Ok

11/6/2018 7:14 PM (Delivered 11/6/2018 7:30 PM)
[REDACTED]
I forgot to ask you earlier today do you know if next semester I'll be able to work more on the weekend?

11/12/2018 8:12 AM
[REDACTED]
I should be in at 3 today I have to meet a tutor at 1:30

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop
Text Messages from Brian Busch to Employee – Enticements

Brian Work [REDACTED] 1/30/2019 5:10 PM (Viewed 1/30/2019 5:12 PM)
U got the same thing as [REDACTED]?

[REDACTED] 1/30/2019 5:12 PM
Hopefully not

[REDACTED] 2/3/2019 7:12 PM
I just left work, I got a few more of those parts ran, and I got the 2 liter parts done I was working on but only got 1 of them inspected. I put the parts and prints on the shelf in the office

Brian Work [REDACTED] 2/3/2019 7:13 PM (Viewed 2/3/2019 7:14 PM)
Ok...I will do inspection

[REDACTED] 2/3/2019 7:15 PM
Ok I gotta go get all smart now

Brian Work [REDACTED] 2/3/2019 7:17 PM
Enjoy

Brian Work [REDACTED] 2/3/2019 7:17 PM
How many parts r done?

[REDACTED] 2/3/2019 7:17 PM
I'm not sure how many are done but I think there was 5 left

Brian Work [REDACTED] 2/3/2019 7:17 PM (Viewed 2/3/2019 7:23 PM)
Sweet

Brian Work [REDACTED] 2/5/2019 8:11 AM (Viewed 2/5/2019 8:44 AM)
Do you have any room in your schedule for some extra time this week I got a cash bonus situation for you

[REDACTED] 2/5/2019 10:11 AM
I better not, I have a test on Friday so I was going to have to work from 3:30 to 8:30 Friday and do homework Saturday

Brian Work [REDACTED] 2/6/2019 7:23 AM (Viewed 2/6/2019 7:28 AM)
If u r working today... please finish the inspection of those parts. Also There are a few new parts I want u to do they may need water jetted our first... up to u will send u email

[REDACTED] 2/6/2019 7:29 AM
Ok, I'll be in at 10am

[REDACTED] 2/6/2019 10:45 AM
I got those parts inspected, do you have a email for me with the next job?

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop
Text Messages from Brian Busch to Employee – Enticements

Brian Work [REDACTED] 3/24/2019 2:12 PM (Viewed 3/24/2019 2:32 PM)

Btw if u want to work long enough to get them done if possible I will make it more than worth ur time... like triple+ what u normally get. I just don't have time.

3/24/2019 2:33 PM [REDACTED]

I really can't this week I have 4 tests in the next week and a half that are 20% of my grade each

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop
Text Messages from Brian Busch to Employee – Enticements

3/27/2019 6:41 PM

I don't know much about the different coatings

Brian Work [REDACTED]

Was it dark in color or yellow?

3/27/2019 6:41 PM

3/27/2019 6:42 PM

I don't think it was coated, I was silver and shiny

Brian Work [REDACTED]

Hmm probably not then

3/27/2019 6:45 PM

4 flute cutters are great when there isn't allot of chips but in aluminum if your getting after it I prefer 2 flute

Brian Work [REDACTED]

Agreed

3/27/2019 6:46 PM (Viewed 3/27/2019 6:54 PM)

Brian Work [REDACTED]

3 flute are nice but hard to measure diameter on

3/27/2019 8:42 PM

I'm not going to be able to come tomorrow I have to go to tutoring and get ready for my test on Friday

Brian Work [REDACTED]

Ok

3/27/2019 10:31 PM

I just stopped into the shop and started the last program I had made. the only thing left is to cut the small through pocket and tab them out

Brian Work [REDACTED]

Sweet...thanks man

3/27/2019 10:35 PM (Viewed 3/27/2019 10:39 PM)

Brian Work [REDACTED]

Ur her tomorrow at 3:30?

3/28/2019 4:32 PM (Viewed 3/28/2019 4:46 PM)

3/28/2019 4:46 PM

Yep

Brian Work [REDACTED]

3/28/2019 6:55 PM (Viewed 3/28/2019 6:56 PM)

Brian Work [REDACTED]

I have your nectar of the gods you must remind me to give it to you

3/28/2019 6:56 PM

Fur sure

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop
Text Messages from Brian Busch to Employee – Enticements

Brian Work [REDACTED] 4/14/2019 7:04 PM (Viewed 4/14/2019 7:20 PM)
U good with 400\$ paid current

4/14/2019 7:21 PM
[REDACTED]
That'll be plenty

4/14/2019 7:32 PM
[REDACTED]
I put some pig mats on the top of the coolant tank to try and get some of the oil off, should I throw them in the dumpster?

4/14/2019 9:38 PM (Viewed 4/14/2019 9:54 PM)
Brian Work [REDACTED]
Smart thinking

4/17/2019 7:50 AM (Viewed 4/17/2019 8:10 AM)
Brian Work [REDACTED]
I put a new project in your cute and sent you an email let me know if you need anything else

4/17/2019 8:10 AM
[REDACTED]
Ok

4/17/2019 8:37 AM
[REDACTED]
Was there a cad file? I see the print on the website but not a cad file

4/17/2019 8:37 AM (Viewed 4/17/2019 8:38 AM)
Brian Work [REDACTED]
No cad file pretty simple if you want to redraw it for whatever reason you can but if there's missing dimensions or anything which I think it was all there let me know

4/17/2019 8:38 AM
[REDACTED]
Can do

4/17/2019 8:44 AM (Viewed 4/17/2019 9:28 AM)
Brian Work [REDACTED]
This should be a perfect job for you it's a lot like they'll work relax drink your coffee make part

4/17/2019 8:44 AM (Viewed 4/17/2019 9:28 AM)
Brian Work [REDACTED]
But if the parts for [REDACTED] aren't done finish those up first

4/17/2019 9:28 AM
[REDACTED]
Ok

4/17/2019 12:56 PM
[REDACTED]
I got the brackets and I beam done and closed out this weekend I'm going to have to work Saturday instead of Sunday to get a paper done in time

4/17/2019 1:00 PM (Viewed 4/17/2019 1:06 PM)
Brian Work [REDACTED]
Ok

4/18/2019 3:28 PM
[REDACTED]
Did you have anything specific you wanted me to do for a couple hours tonight?

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop
Text Messages from Brian Busch to Employee – Enticements

Brian Work [REDACTED] 7/22/2019 7:43 PM



Brian Work [REDACTED] 7/22/2019 7:44 PM

Says air alone for tight tolerance is best

[REDACTED] 7/22/2019 7:44 PM

Maybe just air would be better than

Brian Work [REDACTED] 7/22/2019 9:51 PM

I do have a part u can finish tomorrow night... I will just pay the 100/hr for u to do it as it needs done and I'm outa time

[REDACTED] 7/22/2019 9:51 PM

This one u can get the scotch for

[REDACTED] 7/22/2019 9:57 PM

As long as your boss is ok with it it doesn't really matter to me what I do

Brian Work [REDACTED] 7/22/2019 10:01 PM (Viewed 7/22/2019 10:04 PM)

Boss' don't care as long as I pay

[REDACTED] 7/22/2019 10:05 PM

Ok what is it?

[REDACTED] 7/23/2019 6:33 AM (Viewed 7/23/2019 8:21 AM)

Brian Work [REDACTED]

A big box...will send u model and pdf. Needs holes put in 4 sides holes tapped and radio added to edges

Brian Work [REDACTED] 7/23/2019 8:23 AM

Can u do the inspection in the bracket u made please. I printed off the pdf and put it under the part. Just mark yo the pdf. Also be sure part is fully debured and clean and I will send out tomorrow

[REDACTED] 7/23/2019 8:25 AM

Yeah, do they want numbers for every dimension on the print?

Brian Work [REDACTED] 7/23/2019 8:26 AM

Measure what they have on the print unless it is gd&t

[REDACTED] 7/23/2019 8:27 AM

Ok

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Text Messages from Brian Busch to Employee – Enticements

10/18/2019 11:10 PM
Brian Work [REDACTED]
15 hours of run time then? If we can get both vices running then cycle time is 2 hours? Did 2 sets of vice jaws get made?

10/18/2019 11:13 PM
[REDACTED]
I think willy was going to finish up the other set on Sunday, if you can you should stop in and look at the finish it might be better than it needs to be so if it is I could increase the step over also if you knew of a radius dovetail cutter that might get the small stuff around the dome good enough

10/18/2019 11:16 PM (Viewed 10/18/2019 11:34 PM)
Brian Work [REDACTED]
Basically it's all aesthetic in that feature so just taking a dovetail cutter around a few different steps then it's good to go

10/18/2019 11:17 PM (Viewed 10/18/2019 11:34 PM)
Brian Work [REDACTED]
As long as finish is ok there was no specific call out so if it saves a few hours of run time just increase stepover

10/19/2019 10:29 AM (Viewed 10/19/2019 11:48 AM)
Brian Work [REDACTED]
Since the cycle times on those parts are so long can you handle starting another project for me it's another box but it just needs hollowed roughed out if you can start that on the RW 12 that would be greatly beneficial

10/19/2019 10:29 AM (Viewed 10/19/2019 11:48 AM)
Brian Work [REDACTED]
I'll send you the file just leave 30,000s on all surfaces simply rough it out for now I just need to get it started

10/19/2019 11:51 AM
[REDACTED]
Sure

10/19/2019 12:41 PM (Viewed 10/19/2019 12:43 PM)
Brian Work [REDACTED]
I'll make it worth the effort

10/19/2019 12:52 PM
[REDACTED]
I'll try

10/19/2019 12:58 PM (Viewed 10/19/2019 1:02 PM)
Brian Work [REDACTED]
Just slap block in and cube....pretty simple. 1 cutter and rough thing. Then I'll cut extra off of bottom at end

10/19/2019 1:09 PM (Viewed 10/19/2019 1:13 PM)
Brian Work [REDACTED]
Also have some other parts I want u to give me ur opinion on

10/19/2019 1:14 PM
[REDACTED]
Ok

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop
Text Messages from Brian Busch to Employee – Enticements

Brian Work [REDACTED] 10/25/2019 3:47 PM (Viewed 10/25/2019 4:22 PM)

T slot hasn't shown up yet u may have to grind something or hopefully we have something on hand

10/25/2019 4:22 PM

Ok

Brian Work [REDACTED] 10/25/2019 5:31 PM (Viewed 10/25/2019 5:32 PM)

How much band width do u have this weekend? I have some other parts I could run on mb30...Simple simple. I would make it right with u for the extra effort. I can do them np but I though I'd offer cuz u might need the \$

10/25/2019 5:34 PM

I have no idea on the bandwidth thing but I don't really have much time to spare this weekend, if I get those round parts done early I could probably mess with them then

Brian Work [REDACTED] 10/25/2019 5:37 PM (Viewed 10/25/2019 5:38 PM)

Ok just thought u might have down time in between cycle time on haas. Those other parts ship Monday and really the other thing is not time sensitive at all

10/25/2019 5:39 PM

I grabbed a couple boxes from the shipping room and put them in the office today, was there a working pdf for the round parts? The one that was in the initial e-mail won't open

Brian Work [REDACTED] 10/25/2019 5:44 PM (Viewed 10/25/2019 5:48 PM)

Ok I'll resend

Brian Work [REDACTED] 10/25/2019 5:48 PM

Sent u new pdf

10/25/2019 5:50 PM

That one worked

10/25/2019 5:50 PM

We wouldn't happen to have a 12 deg cutter would we?

Brian Work [REDACTED] 10/25/2019 5:52 PM (Viewed 10/25/2019 5:53 PM)

No just gonna have to z level finish it with a flat em and super shallow step down

10/25/2019 5:53 PM

Ok

10/25/2019 5:56 PM

Does it matter if they call out that under cut as a 90deg drain feature?

10/25/2019 5:56 PM

Brian Work [REDACTED]

Hopefully speedy haas can help

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop
Text Messages from Brian Busch to Employee – Enticements



Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop
Text Messages from Brian Busch to Employee – Enticements

10/26/2019 4:03 PM

While the machine runs

10/27/2019 11:56 AM

So I just noticed the sides of these things have a 1 deg draft which means we're going to have to put them on a arbor and cut the sides because the way I initially am doing it there isn't a way to cut the draft

10/27/2019 11:56 AM (Viewed 10/27/2019 11:57 AM)

Brian Work [REDACTED]

Can we use the stem that sticks out to clock them and the center hole to hold them down

10/27/2019 11:57 AM

I think so

10/27/2019 11:57 AM

Brian Work [REDACTED]

Also check the tolerances on the PDF if the tolerance for the angles plus or -1 and don't worry about it

10/27/2019 11:59 AM

It's + - 2 so we're good they'll just need a little sanding

10/27/2019 12:00 PM (Viewed 10/27/2019 12:07 PM)

Brian Work [REDACTED]

Awesome that's gonna work out pretty easily then

10/27/2019 6:07 PM (Viewed 10/27/2019 6:45 PM)

Brian Work [REDACTED]

Things working out?

10/27/2019 6:48 PM

I didn't get as far as I hoped but the first bar is running the back and I'll have setup sheets made and programs posted out to run, I'll save a step file of the model also so you have it for reference, I don't have the thread mill programmed because it'll probably need the diameter changed to get the threads to work

10/27/2019 6:51 PM

Hopefully the dnc works tomorrow because there's 140 toolpaths

10/27/2019 7:31 PM

Brian Work [REDACTED]

So can u squeeze time tomorrow to come in early and figure out threadmill... serious about the Lagavulin

10/27/2019 7:32 PM

Brian Work [REDACTED]

I have a nightmare on my hands as is

10/27/2019 7:33 PM

I have class at 8:30, and homework to do after that

10/27/2019 7:34 PM (Viewed 10/27/2019 7:47 PM)

Brian Work [REDACTED]

So what time can we meet and go over the current plan. I can get there as early as I need to

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop
Text Messages from Brian Busch to Employee – Enticements

1/25/2020 5:26 PM (Delivered 1/25/2020 5:27 PM)

A photograph showing a metal bowl or dish placed on a wooden surface, likely a table or workbench. The background is slightly blurred, showing some workshop equipment.

Got er going

1/25/2020 5:29 PM (Viewed 1/25/2020 5:35 PM)

Brian Work [REDACTED]

Nice work broseph

1/25/2020 5:36 PM

I'm leaving work now

1/25/2020 5:37 PM (Viewed 1/25/2020 6:05 PM)

Brian Work [REDACTED]

Ok thanks for letting me know

1/26/2020 8:54 AM (Viewed 1/26/2020 8:55 AM)

Brian Work [REDACTED]

U working today?

1/26/2020 8:56 AM

No, I'll be in again Friday

1/26/2020 8:56 AM (Viewed 1/26/2020 9:10 AM)

Brian Work [REDACTED]

Ok that what I thought just double checking

1/26/2020 9:36 AM

I was thinking this semester I was going to work Saturday instead of Sunday so I wouldn't be so brain dead when I go to tutoring Sunday evening

1/26/2020 10:13 AM (Viewed 1/26/2020 12:55 PM)

Brian Work [REDACTED]

Understood

1/27/2020 12:40 PM (Viewed 1/27/2020 1:21 PM)

Brian Work [REDACTED]

Would you be willing to drive to Williamsburg for couple hours of work set up a probe on a hot for me

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop
Text Messages from Brian Busch to Employee – Enticements

Brian Work [REDACTED] 1/27/2020 12:40 PM (Viewed 1/27/2020 1:21 PM)
I'd be willing to pay you hundred bucks to come set the probe up

[REDACTED] 1/27/2020 1:22 PM
I gotta work in the lab this afternoon

Brian Work [REDACTED] 1/27/2020 1:41 PM (Viewed 1/27/2020 1:47 PM)
U

[REDACTED] 1/31/2020 4:17 PM
Do we have any more sand for the water jet?

Brian Work [REDACTED] 1/31/2020 4:20 PM (Viewed 1/31/2020 5:22 PM)
There a few boxes on that shelf other than that no

[REDACTED] 1/31/2020 5:22 PM (Delivered 1/31/2020 5:37 PM)
I found them

Brian Work [REDACTED] 1/31/2020 6:49 PM (Viewed 1/31/2020 6:56 PM)
Whatcha waterjetting? If personal that's cool but u should get a proto membership.

[REDACTED] 1/31/2020 6:56 PM
It was the other block of 4140

[REDACTED] 2/1/2020 5:47 PM
Just got those bearing retainers done and left work home nizzle

Brian Work [REDACTED] 2/1/2020 5:48 PM (Viewed 2/1/2020 6:01 PM)
U able to do those pvc parts

[REDACTED] 2/1/2020 6:01 PM
Didn't know I was supposed to do them

Brian Work [REDACTED] 2/1/2020 6:03 PM (Viewed 2/1/2020 6:28 PM)
Bummer...I'll do them Monday

[REDACTED] 2/3/2020 10:27 AM (Viewed 2/3/2020 11:17 AM)
Not sure how me showing you the other 4 were there and given our previous conversations u didn't know when u said "I'll take the 4th off" I kinda thought u were going to do them. It is what it is we just need to communicate better I guess

Brian Work [REDACTED] 2/7/2020 6:50 PM
U using mb-30 right? Probably should not use haas for steel

[REDACTED] 2/7/2020 6:50 PM
Yeah

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Text Messages from Brian Busch to Employee – Enticements

7/14/2020 12:36 PM
[Redacted]
Did you plan on coming in today? Everything but the box is ready for inspection

7/14/2020 12:50 PM (Viewed 7/14/2020 2:28 PM)
Brian Work [Redacted]
Yes be in

7/14/2020 1:43 PM (Viewed 7/14/2020 2:28 PM)
Brian Work [Redacted]
Sorry been taking a lot of vacation lately trying to get my house Reno done... daughter grad party etc etc

7/15/2020 10:45 AM
[Redacted]
I got the box off the machine, everything is threaded except the 2-56 holes I started on them but ran out of time the 4-40 tapped pretty easily so I would assume the 2-56 shouldn't be bad assuming the tap is good they have thread depths called out in the print I drilled everything to depth according to the model then bottomed the tap out by hand so hopefully everything is deep enough

7/15/2020 10:46 AM
[Redacted]
Also there's 2 4-40 holes that intersect with the channel along the top that need tapped, I couldn't find another thread mill so there isn't any threads started on those 2 holes

7/15/2020 10:46 AM (Viewed 7/15/2020 10:49 AM)
Brian Work [Redacted]
Ok I will be in to finish the paperwork and ship them

7/15/2020 10:47 AM (Viewed 7/15/2020 10:49 AM)
Brian Work [Redacted]
Check in 203 for threadmill should be there now

7/15/2020 10:50 AM
[Redacted]
I'm already in the lab for the rest of the day

7/15/2020 10:57 AM
Brian Work [Redacted]
Not trying to be an a hole but it doesn't make sense for me to set up and threadmills ur part. If I can tap it I will. I get if ur upset but I am taking vacation to get personal shit done. I appreciate the effort but u gotta finish as much as u can. I am not asking u do the inspection or anything just the physical part. If ur at the University please take the extra time to finish.

7/15/2020 11:01 AM (Delivered 7/15/2020 11:03 AM)
[Redacted]
I'm not upset, I was walking into the lab when I sent that message

7/15/2020 11:04 AM
Brian Work [Redacted]
I get ya...and wouldn't blame u... It was a bitch project with shit that didn't show up. I just really don't wanna eff it up.

7/15/2020 11:07 AM
[Redacted]
I'm on hold with Best Buy right now after I get this pain in the ass taken care of I could probably put t back in the machine and get a few threads in so there's something to start the tap in

7/15/2020 11:08 AM
Brian Work [Redacted]
That would be preferable...I can swing some scotch to thank u in the end

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop
Text Messages from Brian Busch to Employee – Enticements

7/15/2020 11:09 AM

I don't know if I did good enough on this one to warrant some nectar if the gods lol

7/15/2020 11:15 AM

Brian Work

Ya did

7/15/2020 11:19 AM



I'm assuming these are it?

7/15/2020 11:19 AM



7/15/2020 11:20 AM (Viewed 7/15/2020 11:21 AM)

Brian Work

Must be

7/15/2020 11:20 AM (Viewed 7/15/2020 11:21 AM)

Brian Work

If it is for shop it has to be in one of those

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Text Messages from Brian Busch to Employee – Enticements

8/7/2020 3:49 PM
[REDACTED]
I'll be off till the 29th

8/7/2020 4:16 PM (Viewed 8/7/2020 4:19 PM)
Brian Work [REDACTED]
Bummer

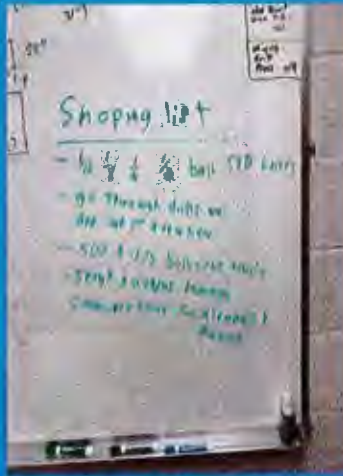
8/7/2020 4:20 PM
[REDACTED]
It's looking like this semester I'll probably be working Saturday and Sunday in the shop

8/17/2020 2:40 PM (Viewed 8/17/2020 3:03 PM)
Brian Work [REDACTED]
I think I fucked up an missed approval of hours. No worries though I will loan u the money np.
Also but u sum scotch for fucking up again... just don't shoot me though. Let me know how
much u need

8/17/2020 3:04 PM
[REDACTED]
I should be good I have some coin saved from working extra this summer and I'll get paid by
the time rent is due again

8/17/2020 3:07 PM (Viewed 8/17/2020 3:59 PM)
Brian Work [REDACTED]
I still owe u thw scotch tho... that's my bad

8/17/2020 6:47 PM
[REDACTED]
It's ok I got a good bottle for my bday

8/18/2020 12:15 PM
[REDACTED]

I made a shopping list of stuff we'd out of in the shop

8/18/2020 12:20 PM
[REDACTED]
[REDACTED] likes to put radius on everything so it would good to have a few different ball cutters
on hand and if possible some ball nose

8/18/2020 1:49 PM (Viewed 8/18/2020 2:03 PM)
Brian Work [REDACTED]
Gotcha... thought u were off until the 29th

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop

Text Messages from Brian Busch to Employee – Enticements

12/3/2020 12:37 PM

10-24

12/4/2020 8:09 PM

What do I if I locked myself out of van Allen with my Id and keys in the shop?

12/4/2020 8:33 PM

I got lucky the janitor saw me

12/8/2020 10:08 AM

Any word on if/when the probe might happen? I was planning on working 35hrs a week over Christmas break. I'm assuming unless for an unforeseen reason the que suddenly fills up or Spencer comes through with those molds it'll mostly be xom. If we were fur sure gonna get one it would be awesome to have it sooner than later. I'm going to stop in the shop this afternoon and print out a calendar to put the hours I plan on working over Christmas break on

12/8/2020 2:11 PM (Viewed 12/8/2020 2:27 PM)

Brian Work

Will have work lined up for u...when do u start Xmas break?

12/8/2020 2:27 PM

The 16th

12/8/2020 2:50 PM



I made a schedule on the white board in the office. I'd like to work roughly those hrs but if the available jobs aren't looking very profitable then we can play it by ear

12/10/2020 11:07 AM (Viewed 12/10/2020 11:18 AM)

Brian Work

If [redacted] and I bought you a TM pause machine do you have a garage it could go in [redacted] fits his in a garage with 8 foot ceilings

12/10/2020 11:19 AM

No, I don't even have a house lol

Report on Special Investigation of the
University of Iowa
Department of Physics and Astronomy – Machine Shop
Text Messages from Brian Busch to Employee – Enticements

Brian Work [REDACTED]

12/10/2020 11:20 AM (Viewed 12/10/2020 11:21 AM)

Nether does [REDACTED] but he's got a machine in a garage

Brian Work [REDACTED]

12/10/2020 11:20 AM (Viewed 12/10/2020 11:21 AM)

Ur missing an opportunity

12/10/2020 11:23 AM

Thanks anyway I'll have more than enough on my plate for the next 4 or 5 years with school and the stipulations of getting into grad school

Brian Work [REDACTED]

12/10/2020 11:45 AM (Viewed 12/10/2020 12:13 PM)

Just trying to help a brother out you'd make way better money but I get it if you don't wanna make the commitment

Brian Work [REDACTED]

12/11/2020 9:44 AM (Viewed 12/11/2020 10:26 AM)

Got u a part... will have Spencer send u files

Brian Work [REDACTED]

12/11/2020 9:45 AM (Viewed 12/11/2020 10:26 AM)

My guess is 18 hours to make them

Brian Work [REDACTED]

12/11/2020 9:46 AM (Viewed 12/11/2020 10:26 AM)

Sorry 4 all the same though should be able to picture frame and tab them

12/11/2020 10:29 AM

Maybe I should have specifically said I'm not working again till Wednesday, all my finals are Monday and Tuesday so I gotta have the weekend to get ready for them

Brian Work [REDACTED]

12/11/2020 11:01 AM

Umm well that definitely sux

12/15/2020 11:22 AM

If I take a job on xom can you get some 1.25x.625 6061 bar stock here by tomorrow

Brian Work [REDACTED]

12/15/2020 11:26 AM (Viewed 12/15/2020 11:27 AM)

I have a job lined up for u already

12/15/2020 11:27 AM

Ok that works. I just finished up my last final so I'll be in tomorrow

Brian Work [REDACTED]

12/15/2020 11:27 AM (Viewed 12/15/2020 11:28 AM)

Cool can u make a long day tomorrow then?

Brian Work [REDACTED]

12/15/2020 11:28 AM

I will send you the files in a second

12/15/2020 11:28 AM

I probably could