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## Rent and How to Pay it

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Rent and How to Pay it

Grant Austin Prodan

Thesis submitted  
to the College of Creative Arts  
at West Virginia University

in partial fulfillment of the requirements for the degree of

Master of Fine Arts in  
Technical Direction

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School of Theatre and Dance

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## **ABSTRACT**

Rent and How to Pay it

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This Document is a record of my process as the Technical Director of West Virginia University School of Theatre & Dance's production of *Rent*. Included in the document is a detailed description of my budgeting, planning, and execution of the build as designed during a pandemic. The document is supported by images, schedules, drafting, and other paperwork.

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To my grandmother whose memory drove me to finish this degree.

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## **INTRODUCTION**

When assigned to West Virginia University School of Theatre & Dance's production of *Rent* for my thesis, I was both excited and nervous at the same time knowing the rich history and popularity around this musical. I, and no one else for that matter, could have anticipated something as life-changing as a global pandemic would have affected this production, let alone the new issues, rules, and regulations that followed in its wake.

I will take you through my process as a technical director as I develop and build the director and designers' vision for the stage. Our production was directed by Professor Jeremiah Downes, and scenery was designed by Professor Robert Klingelhofer. I will introduce the rest of the creative team over the course of this thesis document.

Just when I was told *Rent* would be my assignment, news of a new super virus spreading overseas known as COVID-19 began circulating. I, like many others, did not think much of this news at first, but we all soon began to see how deadly this virus was and how quickly it spread across the world. This virus became the backdrop of my life as I began my process in the supervision of building this show.

Eventually, we began our meetings on Zoom at the end of the spring semester in 2020. My colleagues and I received our first glimpse of the designs and proceeded to budget, build, and work off each other in the following months.

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## **CHAPTER 1: PLANNING**

When starting the process as a technical director the first thing to do is to look at initial designs that have been set forth by the scenic designer. This is when a technical director gets the chance to go over the set, ask questions, and understand their perspectives and objectives for the set. These designs consume the next phase of a technical director's life incorporating a thorough planning for the duration of the build process, and to fully investigate if the scenic designer's vision is achievable under the constraints of a given timeline and production budget.

The second step in this process is budgeting. This process involves studying the designers initial designs and breaking them down into their most basic elements to comprehend how much material will be needed, overall cost, and how long it will take for those materials to be assembled and crafted into the structures that eventually come together as a set. This plays into assessing if it's possible to construct the scenic designers vision or if revisions are needed to be made because they exceed the monetary/labor budget.

The director of this show, Professor Downes, along with the design team consisting of scenic designer Professor Klingelhofer, the lighting designer and peer graduate student Colleen Doherty, sound designer Professor Alan Mcwen, and costume designer Mary McClung, collaborated together to bring forth what became the vision for the show. They come together during the course of what is known as the design phase. Here each area presents their designs and uses this time to introduce their ideas to the other fields and create a unified vision. While I attend these meetings to stay informed with the evolving direction of the show, I have no other active role during this process. My advisor, Professor Neuenschwander, observed similarly. After these meetings are complete, the designers are required to give their final designs, at which point I as technical director step in and start my planning and budgeting stage.



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We started this process for *Rent* with a Zoom meeting. At this meeting Professor Klingelhofer and Professor Neuenschwander were in attendance, as well as my undergraduate assistant technical director (ATD) Charlie DiGiorgio. Charlie was assigned to assist me, follow my lead, and if need be take over. Meeting on Zoom was a new hurdle for me but was necessary due to the current state of the world. It put the production team as a whole in uncharted waters. It also made things especially hard when it came to trying to communicate what questions I had about the set. Instead of being able to physically point to specific items on a piece of paper and ask questions, I would have to describe and hope the designer knew what I was talking about. I did at times use screen control to show specific items and ask a question, the communication challenges still remained.

The set appeared to be straight forward. There was a downstage platform for the band, and an upstage catwalk that spanned behind most of the set – including a gap covered by chain link fence. The catwalk also had its own downstage wooden fence. Connected to this catwalk was a building façade known as the abandoned building. In front of it was a metal tower called the Toy Tower, which was reminiscent of a structure in the East Village neighborhood of New York City. Directly across from this was a two story loft with the bottom serving as an open room for a band and the top story for an apartment. On the second floor was an archway, multiple windows that would require rigging, and a stove. When the show was first scheduled, it was going to be performed in the Metropolitan theatre located in downtown Morgantown and the back brick wall of the theater was to be exposed as part of the design, however amidst the process this venue changed. The last pieces of the set were several folding tables that would be utilized in the middle of all the action. When these were presented, I was advised by Professor Neuenschwander build our own tables to look similar to the designs of the common folding

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tables of today but more secured. He added I should watch a YouTube video of the dance number these tables would be used in. After watching the video I saw his point in the fact that a regular folding table would not have been able to withstand the abuse of the dance number.

After reviewing the designs with the scenic designer I then entered the budgeting stage. With having an ATD for this show we split up budgeting duties and as it usually goes the things we budget are what we draft. When it came to this point to split things up between Charlie and Myself we started out with a conversation asking what each other wanted to work on within the set. After relatively easy deliberation we ended up having equal amounts of scenic pieces between us to budget while I took the more complex pieces.

When starting to budget each set piece I initially sketch them out, then label what items are needed or what materials are used. Then while looking at the sketch I make a list of what quantities are needed. I put all this on a pre-made sheet so that this information is organized and easily interpreted (See appendix A for my complete budget). I also then entered the information from these sheets into Excel so that I can easily use the tools within Excel to calculate data, change data, and collect all scenic elements prices into one source. The best aspect of this program is being able to easily change something, after the set is broken apart and all the data is entered, I am able to easily change to easily change data and automatically update estimates if something is cut or modified. Also with this budgeting, load-in time is also taken into account.

I had the first and second floor of the loft, the abandoned building, the downstage fence, and the toy tower to budget. While these items were pretty straight forward they did require interesting build methods and I needed to do some math to make sure they would be structurally sound to carry the weight of the actors. This also lead to some struggles in budgeting where I had to figure out construction technique in advance of the build and drafting. These techniques may

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change from the time of budgeting to the time of drafting, and if this happens it is important to be aware of what initial monetary value was given for the item in the sketching phase. This reason is actually why it is important to build contingencies into the budget, so you can make these slight adjustments.

Things seemed to go well through the budgeting process however there was a communication drop between the ATD and I. Not being able to speak and work with him in person due to quarantine guidelines made it tough for a lot of the same reasons the initial budgeting meeting was hard. When talking on the phone and speaking on Zoom things were lost in translation. From my end, it was hard answering questions without seeing what was being talked about. Also without inter-person communication I felt he didn't want to ask as many questions as he probably should have. This led to our biggest challenge which was figuring out the gap he needed in his stud walls for the catwalk platforms. The question had been asked several times during the initial budgeting phase but unfortunately what we thought were the right answers turned out to be wrong. We eventually had to email Professor Klingelhofer for clarification. This still didn't clear up the issue, as we again thought we had the right answer but in actuality it wasn't until we saw him in person during the drafting stage that we found out we were still wrong and had to make a last minute adjustment.

Another small hurdle I had was considering construction tactics for the decking on the second floor loft. The entire first floor was going to be open leaving only the outside stud walls to support the structure. I knew theoretically this would work based off the area that was open however I still needed to run the math to be sure. This however is where my problem stood as I was not sure what kind of equation to run on such a large surface. I talked with Professor Neuenschwander and was then able to discover the right equation that was needed for the area.

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Unlike previous shows I had worked on at WVU where I had a set budget, I was informed that there was no set budget for *Rent*. With the previous semester ending with the classes transitioning to online and the final show of the semester being cancelled, and the uncertainty of the next semester funds, put me in a strange place in trying to figure out contingencies and material choices. I was instructed to find and submit the figure amount needed to build the entire set. After this the department would see if it fit the realm of feasibility. Some things that helped with the budget was the fact that there were so many left over materials from the previous semester's unfinished show *Head Over Heels*, our show inherited them which decreased the amount that we needed to buy. It had an ominous feel to it when this task was complete just for the fact that normally I knew changes would need to be made or not made, but by just submitting the number I was left not knowing what the outcome would be. In my first pass I made the rookie mistake of missing an item and not accounting for trucking the set to the venue from our shop, thankfully though both were easy fixes. On the second pass, I made some math errors within my budgeting sheets and submitted a wrong number. With Excel I was able to easily discover and change these mistakes and resubmit my budget for a third pass.

The number was approved with no revisions, this was good for me just for the fact that I didn't have to worry about budgeting revisions to the design and I could start working on my build calendar. This item is used during the course of the build to keep carpenters streamlined on what their tasks were from day to day to keep track if you were ahead or behind schedule, and also to create an awareness for preparation before the next day or week.

The build calendar was something I had not strictly followed in the past and I was determined to strictly adhere by it for this show. When starting on putting this together I looked back at my budgeting because I had to build estimates for the production. By looking at these I

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was able to assign adequate time to each carpenter for their role in particular set pieces as I moved forward. I also had to take into account each person's experience as I assigned jobs giving the older and more experienced carpenters more complex items. When I was finished with assigning roles and building the calendar, I reviewed week by week through until load-in, this gave me my draft schedule. I was going to draft over the summer but now with the build schedule, I knew what I was going to need each week before heading into the shop as I was able to know what was being built. We had enough time to give ourselves a week to test fit the set and find any problems that may be lurking in it before load-in, I as well found we may have some extra time after looking at a labor estimate based off who was in the shop for the duration of build. With these contingencies I put as much spare time as I could at the end of the calendar so that I had as much test fit time as possible for potential errors. See appendix B for my build calendar.

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## CHAPTER 2: DRAFTING

Before returning to school to begin build on *Rent* a change was made to the venue due to COVID-19, instead of *Rent* being performed at the Metropolitan Theater downtown it was changed to the Lyell B. Clay Concert Theatre in the Canady Creative Arts Center. This was good and bad news. It was good for the fact that load-in would become easier and the budget would be lowered because we no longer needed a truck. However it was a bad sign for things to come, if the venue changed over the summer then a lot more might change before the show ever gets off the ground.

As the summer progressed, I found out that the first show of the season had been cancelled. This clearly meant that we would see changes in the production calendar for the semester – and maybe, even the year. I also found out we had to apply social distancing guidelines to what we were building in the shop. What this meant for us in the shop was that we had to wear masks and face shields while working with other students, as well as trying to apply a six foot distance between us. We also had to disinfect tools at the end of each work shift and monitor who we worked with that day for contact tracing. This meant that we would need more time to clean and disinfect before and after lab started, while also making it harder to work in close quarters with students.

After looking at my original build calendar, I realized changes needed to be made. Remaking my calendar did not take much time and I was able to apply my knowledge for how many students were slated for lab at this point in the summer. I developed a schedule with this in mind, and with the added awareness that I would have extra time since the first show was cancelled. With these changes I was able to hand out tasks with more ease knowing more time and experienced labor would be present. However as we approached closer to fall semester, we were informed of

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a virtual return to campus – instead of in-person. At this point, I made further changes to the calendar but also waited for more news on this front.

After the venue change, for drafting purposes, I was advised by Professor Neuenschwander to check for sight lines in the new space. These refer to areas the audience shouldn't see during the show. It was something I over looked so I checked them and after a review with Professor Neuenschwander we concluded that there was insufficient masking to adequately cover sightlines. After this issue came to light I talked to Professor Klingelhoefer about adding more masking to combat this issue. We then discussed adding additional stock chain-link to the areas such as actor cross-overs instead of masking, this would tie in with the industrial design already incorporated into the stage.

The drafting phase starts what I have come to recognize as my least favorite aspect of this process. Drafting is the process of putting the construction designs for a scenic piece down onto paper. This process is what guides the shop on how to build a piece of scenery to the designer's specifications. The technical director with these drawings tries to make it easier for the carpenters to build the set pieces as fast as possible while using the least amount of material. These draftings can be very complex or very simple and for *Rent* it seemed to be 50/50.

With how much I disliked drafting this made for a long and boring time to finish. Not the actual act of drafting but bringing myself to do it. After giving this some deeper consideration I decided to settle with the approach of tackling a smaller set piece, such as the archway on the second floor loft, and then to find my way to the rest. Ironically it came to pass that this became the last wooden set piece to be built during the build process. Drafting at first went pretty smooth, I generally look at my budget sheets to see what my initial construction ideas were and draft based on those making minor or major changes along the way. As I developed each set piece from

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those sheets, I found that sometimes when you plan and draw how each set piece is built and put together you see things that you perhaps did not see before in the budgeting phase and I discovered items that had unfortunately not been accounted for. This was especially true when I started to draft the archway on the second level of the loft. I realized that I needed to make changes and add some materials from my ideas during budgeting. Some of these changes included construction techniques were to make objects stronger or to hide seams, and with these added changes more material was needed and more time to add those materials. Usually, as I stated earlier in the budgeting phase, you have a set contingency and these changes would take away from that contingency unless I found scrap wood in the shop or have extra left over from another set piece.

After the loft was complete I switched to drafting the downstage fence of the catwalk. It was a simple design with the plywood being cut down to six feet five inches in height from its original eight feet length and left at its width at four feet. There were five identical plywood pieces to the fence. The central challenge during drafting became how they would be secured to the deck. I knew that we could not screw into the deck of the Clay so I designed a scenic jack so it could hold a stage weight inside of it while not falling out. However upon returning to school I found we could lag to the deck and fill the holes from the screws, so securing it to the main deck was no longer a concern. The final problem I found with this piece was that I had misunderstood what Professor Klingelhofer had meant by distressed wood, as called for in his design. It came to pass he wanted the edges



Figure 2.1: Chipped Fence



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knocked off and sides chipped up to make it look as if the fence was just a “quick build” with a lot of wear. See figure 2.1.

I then moved to the loft stud walls for my next drafting. These were basic stud wall designs that called for  $\frac{3}{4}$ ” CDX plywood to cover the front. In the budgeting stage, I chose to cover the inside part of the studs with  $\frac{3}{4}$ ” CDX plywood after running the idea by Professor Neuenschwander. This would add structural support because of the immense weight of the loft deck that would be placed on top. These stud walls along with the downstage fence proved to be the easiest and fastest things to be drafted for the build.

Next I moved to drafting the second floor loft deck. I initially thought to draft this as one entire piece and have it placed on the studs as a whole. This was pointed out as a bad idea by Professor Neuenschwander that could upset some of my peer builders. The idea for the original construction was the same as a house deck. However after the startling revelation of its weight I opted for a platform construction technique. I split the loft into three sections and built them as platforms. The plan would then be to bolt these three sections together from underneath and add the ceiling. The platform construction made the item easier to draft and I moved through it quickly. I drafted the composite view in my drawings of this piece over the top of the stud walls in my CAD, so that I could get the third platform to sit on the outer most stud wall. I could then screw from the bottom of the stud wall into the deck. With the one foot over hang on two sides, and the inner span being unsupported, made the lining up of the last platform important for added support and stability. As I drafted the unit I redesigned my initial construction idea to include a second set of horizontal toggles because it was suggested I do it this way in order to take away some flex in the center of the platforms. However, I faced a challenge with these

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horizontal toggles in my drafting. I did not know how to effectively connect these pieces of wood to the vertical toggles. It was impossible to deploy

normal methods that I would typically use on other items that I constructed due to the length of the span and its unsupported bottom. Trying to devise a plan on my own I came up with several methods. Right as I was struggling to pick an idea to go with I received a phone call



from Professor Neuenschwander which naturally prompted me to ask his opinion on the build. His suggestion turned out to be the exact same idea I had scrapped earlier in the process. I made it so these members would be secured via the method of glue and pocket screw. This new set of members along with what I originally was using as the seam catch also gave more ways to horizontally fasten the floor and ceiling pieces. However, with these being added later to my construction method it ended up requiring more wood than initially budgeted for, and thus caused me to lose some of my contingency funds. See Figure 2.2.

Over the summer it was suggested by the CDC to keep up social distancing and the campus was closed. Taking this into consideration my ATD and I decided to not meet in person and work remotely. When questions emerged, Charlie would send me a text message, these would then usually end riddled with confusion and that confusion eventually led to taking more time than necessary. Luckily, time was something we had an abundance of at that point.

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Whenever the messages reached peak confusion a phone call was arranged and things were cleared up. I think these things could have been solved with a lot more ease had we been working together in-person.

Towards the end of my drafting, I got to the point where I had some questions for the designer which I was unclear on. At this point I decided to draft my last piece of scenery made out of wood, the abandoned building, and left the toy tower for later as I had questions on it. The abandoned building was drafted as a Hollywood flat made of one by three material and half covered with lauan. The only struggle for this set piece was its immense size, the unit's dimensions were bigger than that of what our building materials come in. To combat this issue I decided to cut the unit into four pieces and bolt them together. This would make up the length needed and make it easier to cut and give us the angle we needed between the two units. We also would lose unnecessary seams that might require fixing on the piece.

I went into the first week of school with everything drafted but not paper spaced. Paper spacing is the act of putting the designs onto a piece of virtual paper and giving them enough dimensions and written detail that carpenters would be able to build the pieces. I paper spaced the first two things I had listed on my build calendar and had them ready for the shop to build.

During this time, I was also able to start revisions of items my ATD had drafted. He, like me, was unfinished but he needed more clarity which we hoped the designer would clarify for us. I however was able to review his catwalk drafting along with his ten-foot platform. This was the set piece that gave us the most problems as we tried to figure out what the designer wanted. During a previous production build I had to review other people's draftings and I found it hard for myself to see their errors where as I could see errors within my own draftings. I was determined to change that for this show. On Charlie's first drafting of the catwalk and his

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drafting of the band platform I was able to help him, take the draftings to a point where I thought they were buildable. After looking it over I still missed general notes which would have provided more clarity, but with some more review the draftings could work. When it came to the band platform we had a different problem. Charlie asked if it was possible to change his initial idea on the first drafting of using two stock platforms bolted together on wheels. When referring to stock I mean a piece of pre-built scenery saved from previous shows that is of standard dimensions. Charlie wanted to switch to building a custom platform. He told me the wagon would be made almost entirely from scrap material and the re-drafting would only take a day. The problem he had was that he did not account for the fact that the railing on the platform was supposed to disappear into the platform and not be bolted to the back edge of it. Unlike later set pieces, the railing could not be bolted to the back of the platform because of its closeness to the audience. There was no issue with re-drafting this since it hadn't been built yet. Once he had completed his re-draft I reviewed it. His construction method was not what I would have done but I felt it would suffice for its intended purpose in the show. Once this drafting was printed out and seen by Professor Neuenschwander he raised some additional questions on the construction methods which in part led to a small argument between us, however all was solved by the end of the day and a third drafting was undertaken by Charlie.

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### **CHAPTER 3: BUILD PART 1**

School started on its intended date with no additional delays. We did not begin build during this first week of classes because we had no stagecraft students. Stagecraft is a intro level course usually taken by freshman that teaches the basics of the building and wood working side of theatre with a lab section that gives students hands-on experience in the shop. These students make up the bulk of our workforce and work for 2 two-hour blocks each week in the shop for the lab section. They generally don't work the first week in the shop so they can get acclimated to campus life and go to the class sections of the course first. During the second week of classes in the first two days we have the different labs sections do a shop orientation. This acts as a time to run the students through shop safety protocols, introduce them to who they will be working with in the shop, and train them on tools they will be using. When these students come in they start out green but through the course of the semester most of them learn and grow as carpenters and by the end of the semester are able to build and work efficiently in the shop. For this semester I was in charge of two out of the three lab sections.

During the first week of classes an email was sent out to various carpenters in the tech program asking them to pick a practicum for the semester. A practicum is a one credit course that students take each semester where they work on a show, or for new students work 40 hours in a department within the theatre. With this email, carpenters who had not been assigned to a production in the previous semester were asked to select a show they would like to work on. Chance Roberts asked to be put on *Rent*. He was a sophomore with a genial bed side manner and I was happy to have him. In having him assigned to the show I needed to make slight edits to the build calendar so I could work him into the build, which didn't take too long or cause a lot of re-working. I talked with him on what he expected as well as wanted to do on the show and

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essentially he told me he wanted to hone his craft and take on more of a leadership role. I decided to pair him with another technical direction graduate student and lead build for the flat iron unit. This extra labor would hopefully free up more time for the test fit phase later on in the process.

As the first week ended and second week started there were many reports of house parties and the possibility of a school shut down loomed in the air. Even as one set of students were put on probation and threatened with suspension another group disregarded the rules and threw a party. There was much talk in the shop of how these parties would act as super spreaders and might promote sickness and fear in students on campus. Morgantown also at this time decided to try and re-open bars and get money pumped back into the restaurant industry. However after a photo of over 250 people with no masks waiting in a crowded alley was released, the local bars were shut down. Even with the punishments and swift closures of the bars cases started to rise on campus and in town putting the semester in jeopardy.

Once the two days of tool training were done for the labs we started build on Wednesday September 2<sup>nd</sup> of the second week. Our priorities became to build all the stud walls and ten foot platforms required for the catwalk and lofts as well as build the band platform. During the course of those three days we finished the band platform. However the railing was welded wrong because the drafting called for 90 degree angles instead of 45 degree angles, the later of the two promotes actor safety because it makes it harder for them to cut their hand. This issue did not cause much trouble because we were able to re-cut the railing out of scrap metal in the shop, after the re-weld of the platform was j.c'ed. J.cing is the process of filling staple holes and seams with joint compound so they cover imperfections when the unit is painted.

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With the band platform out of the way the stud walls were next and the carpenters and stagecraft students breezed through these with ease. With stud walls being easy items to build they require 2x4's to be glued, squared up, and nailed together. We did not have any nails for our pneumatic nailer the first few days so the first stud walls were glued and screwed together. Most of these units were completed with the exclusion of a few that needed faced. As these were being worked on Charlie and a few students broke off and built the ten foot long platform required for the catwalk and also pulled the two stock platforms that went on both sides of the ten foot platform, these three would later be screwed on top of the stud walls. We built the ten foot platform with basic 2x4 construction.

Looking at how swiftly the shop was moving I printed out the downstage fence drafting, it would be easy to build and even though we weren't going to begin until the next week I felt we had sufficient labor and leadership to work on these pieces. We had these pieces cut and assembled in one shift. When it came to distressing the edges we beat the plywood like the designer had wanted and called him in to look at the first piece we selected. He told us to lay off on the middle but to beat up the edges more. While distressing the rest we found it hard to do with the scenic jacks already attached so we unscrewed the plywood from the scenic jacks and sat them on the ground. Chance and I found the back end of a claw hammer gave the desired look that the designer wanted with the most ease.

The first week came to a close and gave way to Labor Day weekend. We were sitting at a good spot with the show ahead of schedule as the band platform and downstage fence completed as well as the stud walls almost being completed. The next week seemed promising with how good this one had went and seeing that we had a good group of stagecraft students helping us in the shop. Our final task on Friday was to put stage weights on one of the stud walls that wasn't

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faced as to counter act bowing that was occurring in them which had the possibility of getting worse over the three day weekend. Bowing is when a piece of wood develops a curve in itself.

Each morning over that long three day weekend I woke up and was greeted with an email stating how the president of the university was ashamed to hear there was another party but was still planning to press on with classes. It was later confirmed that students who had tested positive for COVID-19 broke quarantine and attended some of these parties. With this knowledge and mounting pressure from the community it was announced via email on Labor Day that classes would be shifted online for three weeks. In finding out this information I awaited details from my supervisors as how to proceed since unlike the previous semester's shutdown the campus would remain open. It was revealed graduates could continue work on campus without seeking special permission but Professor Neuenschwander decided to close the shop until a meeting about the seasons productions took place on that upcoming Thursday. After this meeting he opted to keep the scene shop closed for the duration of the three weeks classes were switched to online. This decision was made so that stagecraft upon returning would have stuff to work on as opposed to the graduates building the sets unassisted.

During this three weeks it was also revealed that both productions intended for this semester were moved to the Spring semester. This news worried me because I would not be able to finish *Rent* before my intended graduation. I had talked to Professor Neuenschwander about the possibility of this happening prior to the start of the semester in which he developed a plan for me to finish on time. He re-assured me that I would be able to complete my thesis on time, despite the fact that the actual production would take place in the spring. With shows being pushed back the build dates were pushed back as well and upon my return to campus I would have my original time span to finish the build.



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## **RENT CHAPTER 4: BUILD PART 2**

Once the three week online period was over, the university deemed it was safe to return to campus. Upon returning I found out several people were out due to self-quarantining and among them was the scenic painter and technical director because of sickness, potential exposure, and traveling out of state. My first task at hand was figuring out where we had left off that previous Friday before the online period, so I took a few minutes before shop on Monday to talk with Charlie about what projects needed to be finished before moving on and who we could break off with to start on new scenic units. We decided to finish facing the stud walls and to actually test-fit the catwalk unit. Test fitting is the act of putting the set piece or pieces together to make sure it fits the way it's supposed to and to discover potential problems with it before load-in. In addition to this we began build on the loft deck and waited to see how the week would unfold, and then potentially move on to building the abandoned building.

The deck was an easy enough unit to build after breaking it apart into three platforms. However due to the size and span of these pieces they would take up a lot of time to build. I assigned one of the shop carpenters to this task with at least two stagecraft students each day. This was a good project for them to sink their teeth into since the unit was square with precise measurements. We were able to finish two of the three platforms by the end of the first week and stacked them on top of each other until it was time to test-fit the loft. The third platform was finished on Monday of the following week.

Test fitting the catwalk was Charlie's task to complete and he started on it right away. After finishing the facing on the stud walls we began the task of moving all the stud walls and the ten foot platform upstairs to our upper shop. We have two scene shops at WVU: a lower one and an upper one. The lower shop is used for wood working and assembling the set pieces and

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the upper one is where the metal working, painting, and test fitting sets happens. However, sometimes set pieces are test fit in the lower shop and we utilized this route later in the show.

There is a paint frame that runs between the two shops, this is used for the painting of drops but also doubles as a way to transport bigger, thinner pieces of scenery to the upper shop. We loaded all the stud walls for both the loft and the catwalk onto the paint frame as well as the ten foot platform and after a couple of trips everything was in the upper shop.

We were able to set up the stud walls and attach the platforms within a day of lab and have them



Figure 4.1:  
Flex Test

properly spaced to allow for the eight foot gap in the center. The ten foot platform was then installed to span the gap. After it was bolted to the other two platforms, we did a test of how it felt walking on it. Much to our dismay there was a lot of cracking as Charlie walked across it. The platform also had a 1/8" flex in it when Charlie jumped and attempted to dance on it. See Figure 3.1. After consulting with Professor Neuenschwander, we rebuilt the platform out of 2x6. This provided less flex and a sturdier base to walk and dance on. We also realized at this time that one of the stud walls had its CDX put on upside down so more distressing had to occur on that to make it match the other wall.

Before rebuilding the ten foot platform we had to talk with Professor Klingelhofer because the platform would become thicker than what he had initially designed. After approaching Professor Klingelhofer with the problem and explaining to him what needed to be

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Figure 4.2: Stud wall Repair

done to fix it he was ok with changing the thickness of the platform. With this change we had to do what we came to be deemed as surgery on the catwalk. Instead of rebuilding the entire stud walls we just adjusted the units so that the ends were lower to accommodate the new thickness. See Figure 3.2. This repair and change to the platforms ended up taking longer than anticipated and lingered on into the next week. It wasn't hard work we were doing to the platform but it was long and

tedious work that required us to be precise so the three platforms would line up evenly. It was also hard working up in the air with the unit still standing as opposed to laying it on the ground.

During this first week back, I was asked to do a budget projection by Professor Neuenschwander. See Appendix C. A budget projection is where we account for all things purchased for a show, determine what still needs to be bought, and then subtract this number from the initial budget estimate. By doing this task it becomes evident where one is at spending and making sure things are still on-track and under budget. When done with this budget estimate I found I was on pace to come in under budget. However it was discovered I never accounted for paints in my initial budget. This problem found its own solution in the fact that since the venue was changed there was no longer the \$150 dollars needed for the trucking and this \$150 now made our paint budget.

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At the start of the next week while continuing to work on the catwalk we finished up the third loft platform on Monday and started work on the flat iron building. In addition to these pieces we started on our tables. The tables were going to be constructed completely out of metal with a  $\frac{3}{4}$ " MDF top. See Figure 3.3. Upon reviewing Charlie's drafting, it seemed the design was pretty straight forward and wouldn't be too difficult to build. When we completed our first table though, I found I was wrong in this assessment as Professor Neuenschwander looked at the



Figure 4.3: Table Frame

tables and told Charlie he should have the designer take a look at them. In the moment I thought this was a strange request since Charlie had already spoken with the designer on this unit, however as I came to find out it was the right call. With much dismay the designer did not like the table and had Charlie cut them down to make them smaller. We were lucky in the fact that we could reuse all the

components of the table and not have to instead take any new material for it. I asked Charlie what had happened with the tables and he told me he had talked to the designer about the look and what he wanted but unfortunately Charlie never asked specifically about size or dimension. While this angered me slightly I didn't fault Charlie for this mistake because things like this happen. The table was rebuilt in one more extra day than

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intended, it could have taken longer but we luckily had just made the tops but hadn't attached the legs. We lost our welder however to a different show during this span so we were still able to get everything made and attached except one set of legs.

The abandoned building unit also started build in this week and became the one item I was surprised with the most for the fact that it took much less time to build than I initially anticipated. With being just a sophomore, Chance showed great leadership and craftsmanship while building this unit. Even with a graduate student watching over him he took it upon himself to lead the task independently as best he could. He conducted himself in a professional manner and provided adequate instruction so the unit was being made right the first time around. I checked on him periodically over this time and answered whatever questions he had while making slight notes to certain construction procedures he undertook. The unit was a 1x3



Figure 4.4: Back of Abandoned Building

Hollywood flat, Hollywood means the wood was on edge making it thicker and more structural so it could support itself upright as opposed to on its side. See Figure 3.4. The design of the flat itself was bigger than material we could actually order so I drafted the unit into four pieces that connected together. I later found out a

simpler method which would have made the unit stronger and easier to manage; this method will be

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explained in detail in the next chapter. The main trouble Chance had with the unit was cutting a beveled edge into one side of the 1x3, this set piece called for a section of it to be angled giving the appearance that the building was turning and getting smaller from the audience's point of view. However, the graduate student I had watching over Chance walked him through this task and completed it with him. Once the units were finally assembled I looked them over, spotting only two imperfections and upon having them fixed had the separate pieces of this unit loaded onto the paint frame and taken to the upper shop. While we didn't get to test fit this unit until the next week to make certain the seam between the angled and straight wall lined up, I was pretty confident it would be fine. I had some of the students finish making the trim and window sills for this unit after it was loaded up. These pieces wouldn't be attached until the next semester due to painting and the fear of breaking them off since they protruded from the surface. The last thing, other than test fitting, that needed to be done to the unit would be adding the rigging points. I wanted to wait to do this until after the object was test fit so I could make sure nothing needed fixed as a way to minimize work in case something was wrong and we had to move or re-adjust these points.



Figure 4.5: 6 Inch Platform Finished Placement

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Around the same time the abandoned building was finishing up we were able to finally complete the repairs needed on the catwalk and were able to re-test fit the unit. During our test-fit and repairs we also had two sets of steps constructed that went off both sides of the catwalk, we had to opt for construction as opposed to pulling stock items because we had no stock steps that would work for our production needs. Both stairs had two carriages that were cut out of 2x12 material with 2x4s spanning the four foot gap and CDX treads screwed in to walk on. This method had to be used because no other stair construction method would have made up the length and height we needed. We then put on ¼” MDF kick plates so the actors wouldn’t trip and ¼” MDF treads on top on top of the CDX. These steps were bolted on with hogs trough legs placed in the center for added support. Once the 2x6 platform was installed and we were finished bolting and screwing everything back together we took a walk on it. See Figure 3.5. I was very pleased at how solid the ten foot platform was as well as everybody who had worked on the project. Our final question was if the designer wanted the platform faced or not, which he did. He chose ¼” MDF and was going to have it painted silver as to give the front the appearance that it was metal.

Charlie chose to add cross bracing to the inside of the catwalk instead of mini stud walls. The cross bracing made the structure extremely sturdy and it didn’t shake at all while it was being used. A suggestion made by Professor Neuenschwander was to switch out this cross bracing for the mini stud walls, these would produce more cross support for the under sides of the platforms where the cross bracing just strengthened the core and sides of the structure. We added in four mini stud walls all together, two to each side of the catwalk. We placed one in the middle of each seven foot platform, we also added one under each end closest to the ten foot platform. In addition to the end stud walls we added in an additional 2x4 underneath both ends of

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the ten foot platform as a way to relieve some stress. Once these stud walls were added in we conducted a test walk on the catwalk. This time we felt some shaking and wobbling as we walked and jumped on it. Charlie and I decided to add some of the cross bracing at this point. It seemed this was the right call as it took away the unstableness we had previously experienced. The last task we did on the catwalk for the week was to attach the MDF. We utilized four pieces so that we could split the seams of the platforms and have them adequately covered in case they weren't precisely flush as a way to prevent trips and falls.

As the catwalk tasks were done and the week was winding down I had the abandoned building unloaded from the paint frame and the trim and windowsills stored in the prop shop. Realizing we still had to weld and attach the hand rails for the catwalk, I knew we wouldn't be taking this unit down for some time. I chose to have the loft stud walls taken back down stairs so that we could set those up the following week. I also had the bigger two sections of the flat iron building placed back on the paint frame to make it easier for them to be bolted together due to its height.

On Wednesday with how everything was moving I had the loft arches started, these were simple pieces that were to be built as a self-supporting unit. They were self-supporting because they didn't need any additional structural pieces to help it stand up. My construction methods were not the best on this unit as pointed out by Professor Neuenschwander because the way I had intended to build it I added unnecessary weight. He told me that I could have built a double frame system and the weight still would have supported itself. I realized the errors in my approach but with things already in motion that day I went with my initial method and drafting. I did not think this unit would take long or have much difficulty and hoped it would be done on Friday. I, however, was wrong with my assumption, by the end of the day on Wednesday I was



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called down to the lower shop to look at the first frame that had been built for the arches. The issues with it were abundant as every piece of wood used for it was cut to a slightly different length and it made it impossible to attach the top piece of lauan without leaving gaps or some sort of under hang. I also became angered with my carpenters because they tried to shift the blame on me for not drafting plywood to it's actual size which is  $\frac{1}{32}$  smaller than the  $\frac{3}{4}$  of an inch I drafted it too. They realized, however, after I started measuring every piece of wood that the mistake was in their cutting.

That night I re-drafted the unit going with Professor Neuenschwander's suggestion and gave my carpenters the new drafting the next day. It would require slightly more wood than originally budgeted for but it would make it easier for them to build and make the unit lighter. I was also able to re-use the wood they had cut from the previous day which had not been used in the construction of the first frame. This re-draft and them realizing their errors made the making of the rest of the units run smoother. They got all the wood cut on Thursday and one frame assembled by the end of day Friday. That frame was perfect but it took them a lot more time than initially calculated to build those pieces. So at this point while it became that I was trading time for quality in my head it was a fair trade.

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### **CHAPTER 5: BUILD PART 3**

At the end of the previous week I was contacted by our production manager Professor Aubrey Sirtautas to schedule a walk through for the director of the show. She thought it would be a good idea for him to see the set before we took it down since he wouldn't be seeing it until the next semester. I had no objections to this request and set up a time for that Thursday. With our director working remote it became a bit of a challenge for us to settle on a time because of conflicts. He ended up needing to switch days so we re-established ourselves for a meeting in the upper shop on that Friday.

Knowing we had a bigger lab on Monday, I decided to set-up and test fit the loft. I had our shop foreman begin working on two sets of escape stairs for this unit as well, because we ran into the same problem as the catwalk where none of our stock fit our needs. I printed off a drafting copy so I knew how and where the stud wall pieces lined up for the testfit. I wanted to be sure we placed the walls where they needed to go and made their proper connections so the loft deck fit properly. This seems unimportant but it is crucial because if two walls are connected to each other, one of them being placed in front of or beside the other would make a difference of three and half inches which was too significant to overlook if their connection was wrong.

Charlie and I began right away with the first lab on Monday and quickly got the walls up and connected. It went faster than I expected with the only real trouble being making sure their connections were straight and square. Also to my surprise we only got one connection wrong on the first try, I thought this was going to be a more troublesome issue. Upon us finishing, there were some obvious issues that needed to be addressed with this unit. The most blatant was the fact the tops weren't lining up. I was very worried upon discovering this because it could spell disaster for our stud walls and more importantly our time because it could have meant we needed to

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rebuild this entire set of stud walls. This ended up not being the case. Luckily we found that upon measuring the plywood for the fronts of these walls were cut slightly too big and we could just trim those pieces down to size to even them out. Another issues that was found was in our front connection piece, I didn't realize while drafting that the front connection between the two walls didn't have one wall covering the other but instead had one wall butting into the other. This was problematic because it exposed the bare wood in the side stud walls. I needed to fix this error, however that meant cutting down the entire wall down by three quarters of an inch to accommodate that problem and cap the front with a piece of plywood. I also found the same was going to be true for the back wall because when I drafted my initial composite view of the loft stud walls I forgot to add three quarter inch plywood to cover the walls. A composite view in drafting is a aerial view of your unit, this view helps confirm how objects can come together and have no intersecting pieces that would conflict when building them. The last thing I found that was wrong turned out to be the most time consuming. The plywood for the back wall was attached to the wrong side. This issue scared me the most for the fact that I didn't know if we could re-use the plywood for this unit or not since it was glued on, however upon review I felt confident the unit could be fixed without much issue or unnecessary time wasted.

After showing the unit to Professor Neuenschwander and explaining what needed fixed we dismantled all the walls and began fixing each one. While this was going on and the stairs were being built I had Chance bolt the abandoned building together as to get it ready to stand up and see how the two angled walls looked connected together. We also still had the loft arches under way at this time and I was hoping they would get done soon. On Wednesday October 21st I would start losing my labor to the next show being built in the shop and I needed to get things finished while I could.

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The loft stud walls moved faster than I thought they would and we got them down and apart very quickly. We only had to actually modify and fix three and we had them all taken down by end of the day on Monday. On Tuesday, Charlie began taking the facing off the back stud wall to move the plywood to the other side while I fixed a board that was cut too short on the far right stud wall. The removing and switching of the facing on the back stud wall took the most work and was the longest. However, we got all the pieces taken off and one piece re-attached by the end of the day on Tuesday. On Wednesday we were able to get the rest of those pieces re-attached. We took each of the facing pieces that were removed and cut them down using the panel saw. Charlie and I then cut down the top of the plywood facing on the far left stud wall and knocked the back board out. While he cut the side plywood down by  $\frac{3}{4}$  of an inch to make the wall shorter I made the cap for the front. We then re-attached the back board for the shorter wall.

While all this was happening on Wednesday I also worked with Chance to get the abandoned building put together. Prior to us starting, Professor Neuenschwander explained how bolting the two up right pieces together as separate frames was the wrong move and we should have half-lapped two pieces of wood to make the length we needed for the stiles, this would have made for a stronger flat. With how it sat he also advised us to attach long pieces of hogs-trough to the back as a way to stiffen the unit and strengthen the bolted seam. Chance already had the two frames bolted and was going to be making the center connection. It was a meticulous task to make the entire seam line up perfectly especially with needing to hold part of the wall at the angle that was needed. We laid both pieces side by side and had two students in stagecraft hold the wall up at the angle that was needed while we screwed the pieces together. It looked from the back as if there were no gaps and the seam was straight. Chance and I then recruited the help of a few people and lifted the wall up. The seam from the front was almost perfect however there was

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a small gap at the bottom, so we undid the screws around the gap and tried to fix it but this caused more issues. We decided to lay the flat down and reassess the next day.

On Wednesday night we found out our shop foreman would be out due to self-quarantine for a potential exposure to COVID-19. I had to re-utilize my work force after finding this out so we could get more tasks done and not fall behind. I had Charlie take over on stairs and I worked with Chance to finish the abandoned building. I also at this time found out from our scenic painter that an area on the stud walls that I thought was just slatted wall was actually a garage door. While I did not fault myself completely, as this was also overlooked by several other people involved in the process, I was nervous on how to fix the issue. I talked with Professor Neuenschwander who suggested just cutting some angle iron pieces and screwing them to the back of the garage door and then screwing those pieces to the stud wall. This greatly alleviated my stress and I was able to focus again.

On Thursday Chance and I were able to get the abandoned building fixed and made the gap disappear. Charlie first took the stagecraft students in lab to attach the back railing to the cat walk and then moved forward with the stairs and we left the stud walls alone as they were complete that day. We recruited Professor Neuenschwander to help us pick up some slack, he finished welding the second table for us and he also cut out the last stair carriage. We then came in early Friday morning and set up the loft back to where we had it on Monday so we could show the director where we were at. All the issues were fixed and it was looking good, I was happy with how it turned out. Professor Downes and Professor Sirtautaus arrived on time and I took them through the set while answering some of their questions. First we showed them the band platform to which the question of stage brakes were raised but it was concluded that we would see how the unit moves with the actors on it. We next showed them the table, I asked how much

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weight, and movement, would be on it to make sure what we made wouldn't move or flex too much. After Professor Downes saw Charlie and I both on the table, and moving, he concluded the tables would suffice for his needs. We then moved on to the catwalk, Professor Downes liked it and Professor Sirtautaus asked if she could walk across the span to which I agreed. She commented it was solid and safe for the actors. We then showed them the abandoned building, the loft arches which had been finished on Wednesday, and the loft set up down stairs to which no questions were asked and Professor Downes told us things looked good.

With this encouragement we pushed on for the day, as Charlie finished up the stairs for the loft, Chance and I began putting the loft deck on while Professor Neuenschwander cut and welded the cat walk railings for us. When Chance and I started, we had to gather the four of us to be able to



lift the platforms onto the studs, I was jokingly reminded that I wanted to build this deck as one unit and realized how bad an idea that would have been. Chance and I, after the help of getting the platform on top of the stud walls, were easily able to move the platform into place and screw it to the stud walls. We had to adjust the front wall so the platform would have the one foot front over hang that we needed. We then gathered everyone again and placed the second platform on top and screwed it into place. This took us late into our shift on Friday

Figure 5.1: Loft Platform in Process

with other things being worked on. I decided to finish the day by

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taking a test walk on what we had just finished. The unit was solid and walkable which was good and assured me nothing needed to be rebuilt. Refer to figure 5.1.

Over that weekend I was finishing the drafting of the lofts escape stairs railings when I discovered another error. In conversing with Charlie about the stairs he had drafted, we spoke in length about his were four feet wide and I made mine four feet wide too. Upon realizing they were supposed to be three feet wide, I sank in my seat. I was so mad at myself and I couldn't fully fathom how or why I made the mistake, and although I was tempted to not continue I instead focused on finding a solution. I thought of the possibility that since these steps were on the back side that they could be a foot longer and not affect anything. So I called Professor Klingelhofer to see if this was feasible, but I was disheartened to find out it was not. I was so mad with myself that I couldn't work I just shut down. I started to try and think of ideas as to how to fix these steps instead of rebuilding them completely because of all the labor and time spent on them. Monday morning I went to see Professor Neuenschwander to explain to him the issue at hand. His guidance was helpful at this moment as he shared the inevitability of such happenings in the course of building and encouraged me to re-focus on moving forward. After talking with him, I decided to cut the stairs down as that appeared to be the best option to salvage the work.

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I had Charlie start on the stairs right away on Monday hoping it wouldn't take too much time to fix this issue. While he started on this, Chance and I used the help of some of the labor at hand and put the last platform in place on the loft. A suggestion made to us by Professor Neuenschwander was to add support boards for the underside of the platforms that ran along the stud wall. We had decided to stay late and work Monday so this gave us extra time to get more done and focus on other issues. We had some issues with the seam of the last platform lining up because the seam was spanning an empty space and wasn't resting on any surfaces. We originally used carriage bolts but it was pointed out hex head bolts might make it easier for us to level out the seam. So that night Chance and I leveled out the seams and replaced all the carriage bolts with hex head bolts. See Figure 5.2 and 5.3. We accomplished a lot even though it didn't feel like it once we were done. I learned a lot from building the loft and its deck especially after the trial and error process.



Figure 5.2: Finished Deck



Figure 5.3: Deck Under side



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The escape stairs were a bit of a challenge but Charlie got them pulled apart and cut down, it just took time. I was lucky they didn't break apart, become unusable, or that the carriages didn't crack under the rough treatment. Even with the cutting down and repairs the steps were finished by end of day on Wednesday. Early on Wednesday before lab I also had a work-study student sand the back of the wall where the plywood was pulled off because there



was dried glue and slivers of plywood left behind. It was essential to sand this off so we could take away potential splinters for actors and as a way to make a smooth surface for the steps to be placed against. On Thursday we were able to get both sets of escape steps up and

Figure 5.4: Escape Stairs

bolted/screwed into place. See figure 5.4. We also were able to leg up the platforms that we had pulled from stock the first week for the loft and add skirting to them so that the legs were stable.

In addition on Wednesday, Chance and I also put the MDF floor to the top of the deck. We ran it opposite of the platforms so it would cover the seams and prevent trip hazards. In total it took six pieces to cover the top. We started out by flushing the MDF to the front part of the loft closest to the audience and then put the back MDF down. Once the back MDF was down we routed it to the back of the loft to make sure it fit perfectly and didn't leave any overhang. We did the same to the escape stair platforms as well.

I had talked to Professor Klingelhoefler and we scheduled a walkthrough of the shop that Thursday. He seemed pleased with the set as he walked through and told me things looked good.

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Professor Neuenschwander posed the question of potential masking underneath the inside spans of the cat walk where the 2x6 platform was to which Professor Klingelhoefer said he hadn't thought about but agreed could use it. Other than this, things ran straightforward and Professor Klingelhoefer seemed pleased with everything until he saw the stove pipe. In his rendering it called for six inch pipe so I ordered six inch PVC pipe but upon seeing it he thought it was too big and didn't like it. So I had to return the PVC and re-order something more suitable to what he thought would work.

Since the meeting went well with the designer, we were in high spirits on Friday and started early again. Chance and I began by test-fitting the ceiling of the loft, I scrapped my original idea and just put the ceiling directly inside the loft walls as opposed to not entirely covering the bottom of the platforms. During work on Thursday I had screwed in some blocks to



Figure 5.5 Loft Test-Fit

make this process easier. I had Charlie finish up some skirting left over from Friday on the stair platforms and then start making the front covering of the loft, this front covering wrapped around the two down stage edges and made the loft look like an I-beam. Charlie also helped attach the MDF ceiling as Chance and I held it up. We discussed what to use to keep the pieces in the air and settled on screws. We were met with a lot of trouble while we were hanging the MDF as the pieces were extremely heavy and if they weren't supported just right they broke. We

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got two pieces hung before I realized we were losing Chance at the half day mark so I stopped the ceiling temporarily to put together the arches. It was hard finding a place to be able to set the pieces up due to their height. At which point I realized we had the loft at our disposal so Chance and I stood on the loft, as Charlie set up the two supporting pieces. Then Charlie erected the top piece and Chance and I hauled it into place. We screwed the top piece into the two side pieces as I felt it was sturdy enough. The arches turned out good and were extremely light despite how big the unit was over all (figure 5.5). After Chance left, Charlie and I continued on the ceiling leaving it about three quarters of the way done by the end of day.

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## **Chapter 6: FINISHING**

Over the weekend of October 24<sup>th</sup> and 25<sup>th</sup> I developed a sore throat and was experiencing some difficulty with swallowing. I did not report to the shop on that Monday and went to seek medical attention, however the doctor was unsure about my condition – and to avoid speculation advised a COVID-19 test. This became a common occurrence on campus; throughout the course of the semester I was subjected to six tests over all. Upon finding out what the doctor advised I spoke to Professor Neuenschwander and was told not to return to campus until my test results came back. When scheduling my test, the first open block I had was on Wednesday of that week and with how long it was taking test results to come back I would be lucky to hear anything before Friday. At the same time, I found out Chance was also sick and he too was instructed to go receive a COVID-19 test. I found it odd we were sick at the same time and wondered if we caught our sickness from the same source. Upon discovering Chance and I would be out for most of the week, I called up Charlie to form a plan of action on what to do with his time since he would be shorthanded while also moving forward with the show.

It was tricky and stressful working remotely for the shop. Charlie would send me pictures of things as he finished them, ask questions, and even call me at the end of most days to summarize the events of the day with regard to shop activities and progress. The questions he posed were usually the source of my anxiety as I worried if I understood his question properly or if he understood my answers, in the end I found I just needed to trust that we were both on the same page. It was also hard receiving text messages because they never had enough detail and I always had to ask for more or call him for more effective communication. For instance, Charlie informed me about certain material we needed that had not been ordered but upon speaking with him it seemed it just hadn't been requested during the initial order of all our materials in

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September. He also texted and told me at one point Professor Neuenschwander looked at the loft ceiling and told him that he didn't like how we did it and wanted it changed. It was stressful at this point because I wasn't sure what was being re-done and how long it would take. Luckily, it wasn't too much and Charlie had it completed by the time I returned. During this time I found out I probably wouldn't get my test results back until Friday and therefore I wouldn't come back until that Monday. Things got done but I was left wondering how much more could have been achieved if I had been there.

As I returned the next Monday, I entered the scene shop and found Charlie, who gave me a rundown of everything he had accomplished so far and we set a plan for the week. Chance was also able to return that Monday so our team was back to full strength. I started to make the molding for the loft arch while Charlie and Chance began cutting steel. As the university was closed the next day for the 2020 presidential election, I took the time to develop a more secure plan moving forward. Since Chance and I were not able to cut and weld steel for the toy tower last week, I was hoping we could get some cut and welded this week. Or at least get the loft railings completed. I finished the molding on Wednesday as Charlie and Chance continued to cut steel. Luckily Charlie was just cutting what he needed for a test piece so he finished this task and I was able to use him the next day. We prepped the MDF sign for the loft down stairs but were unable to hang it. Chance and I decided to stay late that night to finish cutting and drilling holes in the hand rails for the loft upstairs. We ran into trouble with this as all our 7/16" bits were dull and we were unable to drill through the steel. It took a lot of scavenging, and we found a few bits that worked, but we were unable to finish the task that night.

On that Friday morning, I came in and found an extra drill bit and finished drilling the bolt holes for the railing. After this, Charlie and I were able to finish hanging the sign downstairs

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and started prepping the loft arch for rigging. Rigging the arch was not originally planned but was suggested by Professor Neuenschwander, so we had to make some alterations to the inside of the arch columns. As we worked on this, Chance began work on setting out the railing. I had to leave early that day for a graduate training opportunity, so I left Chance and Charlie to continue on their work. I was disheartened to hear that Chance no longer felt confident in his welding abilities and so no welding was undertaken. I didn't blame him for this and tried to take the weekend to make a new plan, but I unexpectedly began to feel sick again, went to see a doctor, and was notified I now had tonsillitis. Upon this discovery, I was told my antibiotics would start working by Wednesday so I took off until then so I didn't potentially infect anyone else. I also found out Chance hurt his knee during the weekend and he would be out the rest of the semester from the shop. I felt bad for Charlie as he was once again alone.

At the start of the week, Charlie began cutting steel for his windows which took him until Friday to complete. During that time, Professor Klingelhoefler and Professor Neuenschwander did a walkthrough of the set and everything seemed to be in good order, however Professor Neuenschwander was unhappy with how we hung the sign. So on Thursday, the first thing I did was re-hang the sign using a hog trough leg that I built with lab students. On Friday we continued cutting steel and finished on Monday. The following Tuesday we were re-assigned to the next show ending the build for *Rent* that semester.

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## **CHAPTER 7: THEORETICAL LOAD-IN**

Planning load-in for the next semester after a show build is over is almost the same as planning one as if it were next week. The same things need to be considered and taken into account as well as the set pieces that are being loaded in. A few things differ between the two projects that cannot be accounted for due to the impact of COVID-19, such as exposure to the disease itself, its impact to the shop, and the inevitable university wide shutdown if things continued to get worse. The shutdown would complicate the calendar for an actual load-in date. The shutting down doesn't affect the plan as a whole just when the execution occurs, someone who might be out due to quarantine does because we might be down some essential leadership. Another variable that does affect the plan is how many stagecraft students we have. This could change the order of how some of the heavier set pieces are loaded in depending on lab size. So I laid forth is a plan of how I would execute load-in based on conditions I experienced during my final semester.

Prior to the start of load-in a conversation should be had with lighting to discuss their needs for load-in and to make sure we worked opposite of them on the stage so we didn't get in the way of each other. It would also be imperative to coordinate with them in case they needed to light a specific unit so they knew when it was going in. In the case of this show it would also need to be discussed how the windows were being back lit and if the battons being used for this would need to be behind windows, if this is the case those lights would need to be hung first. After this was sorted I would request they start at the back of the stage and move forward so that we could set up the catwalk as soon as possible.

The first thing I would do after talking and coordinating with lighting would be hanging the soft goods. These would be put up using the battens. One at a time each batten with

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a soft good on it would be hauled in. Next the batten would be tied off while bricks are added to the arbor, this would be so the batten was kept in weight and could be operated by a crew member with ease. Once the soft good was tied on and the specified amount of bricks were added we would let the batten out slowly as to make sure it was in weight and could be operated. After they were up I would make sure they provided adequate coverage and then have them dusted off. The last thing for these soft goods is I would have them flown out so they weren't in the way of the scenery getting loaded in.

With how spread out the set is over the stage I would then start rigging every piece that floats in the air first, these pieces would be our loft window, skylight, and stove pipe. They would have already had the hardware that is needed to connect the aircraft cable pre-attached to themselves. Aircraft cable is what we use in the industry to hang objects above the stage. Calculations were done during budgeting based on design factors to ensure the proper aircraft cable for the show was ordered. In addition, their stingers would have already been pre-made. A stinger is the aircraft cable that attaches to the grid or batten and the scenic unit. For these two floating windows I would have them attached to battens so they could be raised and lowered as needed while other elements were loaded in and as a way to use less cable. The battens would be flown in and trim chain would be wrapped around them to which the stinger would then be secured and then be flown out raising the windows.

Prior to this I would draft a ground plan of the set and where each set pieces goes taking dimensions from specific areas in the space such as the center line and the back wall. After these were hung and out of the way, I would start with stage right set pieces and work my way stage left. As the Clay's load doors are located on the stage left side of the room, everything loaded in stage right would be the farthest away from the doors. If I were to start stage left I would block



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the entrance and make loading in other units unnecessarily harder. With this being said I would bring in and set up the loft stud walls first. When setting up the loft stud walls I would look at the ground plan and measure out where the side points of the back stud wall closest stage right is first and once I had each corner marked on stage I would use a chalk line and snap it so that we could have a straight line to lay the stud wall on. I would then do this to the other side but just for the back two stud walls. We are not allowed to screw into the Clay deck so lag bolts would be needed so we could fill the holes after we were done. It would be crucial that the minimum amount of lags be used as to minimize time after strike filling the holes in. After this, I would bring in the loft deck and install it, it would require more time and man power due to it being in three pieces and the amount of weight each piece would be. I would bring the first platform in and screw it from the stud wall into the underside of the platform and make sure these platforms were flush. I would then bring in the second platform and level it out against the first and bolt them together while I then screwed it in and then do the same to the third. The escape stairs would be attached next as to make access to the deck easier. These would be bolted on to a board that's connected to the landing platform. I would then screw the carriages of the steps directly to the stud walls. After this was done I would re-install the MDF floor to the top of the loft. Next would be installing the deck floor so we would have it finished to begin setting up the arch.

Once the floor started being placed for the loft deck, I would have items that required no set-up to be brought in such as the band platform and the tables. Note, this would be dependent on lab size and the number of shop workers we had this semester. With how easy it is to move these units and their positions never being exact I would leave them down stage in their rough placement until tech. This would be a good move as to promote some work and not have

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potential labor sitting around while a key piece in the loft deck was being leveled. Once these were done I would start having the pieces of the catwalk brought in but not set up.

Once the loft floor was on, I would have the arch set up and its aircraft cable pick points dead hung from the grid. I would have the two columns of the arch set up first and placed their appropriate distance from each other. Without having the added height of the loft to help us out I would have some people go to the grid and lower down two ropes to which I would tie the ends of the ropes around the top of the arch using the bowline knot. The bowline knot is a type of knot used for lifting and with this knot secured around the top piece I would be able to lift the arch in the air. Next, two people on ladders would be on opposite ends of the arch and have people down below moving the columns if needed and then have the top piece bolted back on. I would re-check the seams on the arch to make sure they still looked good as they had during the test fit and move on. With the main pieces being up for the loft I would start having people re-attach the ceiling on the under part of the deck.

With the heavy lifting done on the loft I would have the catwalk set up. I would do it similar to how we set it up in the shop with having both sets of stud walls standing up and attached first with their inside connections and then spreading them out to make the size of the gap that they needed. Next, I would have the ten foot platform installed because its MDF front would act as a guide to where the stud walls needed placed underneath it. Once this platform was bolted on and the stud walls in place I would have the two seven foot platforms installed as well as screwed and bolted in. After this, the stud walls would get lagged to the deck to secure their placement and promote stability. Next, we'd make sure the platforms were level at this point as well as make sure the sharpie lines I had put on for re-assembly were in their proper places. If these were all in good order I would have the MDF floor put on and then have the escape stairs

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bolted on. Once these were done I would have all the railings attached and leveled out. The last thing would be having the chain-link fence re-assembled and stood up. This may take some time so the next project could be started. The Chain-link fence would require its pipes set up first and connected together, these connectors just hold the pipe and are tightened and loosened as to be able to assemble and re-assemble easily. Next the chain-link itself would be put on and secured via ties to the pipes. Once the chain-link fence was finished being assembled it would be moved into place and secured there. This would be done by putting the bottom of the fence pipes into blocks we pre-made and then they would be lagged to the deck.

At this time, the structure of the catwalk would be in its permanent position. Once it was ready I would move to having the flat iron re-assembled and then raised upright. After being put in the standing position I would have the unit lifted into place and attached to the deck. Since it is lagged, I would have the aircraft cable attached to it and then attached to the grid. With how it would need to be done the aircraft cable would feed through holes pre-drilled in the unit down to the second board from the bottom and connect to an eye bolt, the board it goes through acts as keeper plates so the wire does not move out of position. I would then have a rope lowered so that the aircraft cable could be tied to it. It would then be pulled up to the grid and dead hung.

After the completion of the cat walk and flat iron installation I would have the toy tower brought in. This would be the trickiest piece of the whole load-in due to its size and weight. The plan would be to haul the unit in as one giant piece and secure it to the deck once it was stood up. It's hard to say when this would get done because it would have to be during the largest lab to have the most hands on deck to help move it. After it is standing, the air craft cable attached to it would be dead hung from the grid. A similar method to the flat iron building would be used.

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With these critical tasks being completed I would have the more intricate ones started. Some people with steady hands would start stapling the scrim onto the stage left loft stud wall using a fabric stapler for the delicate material and then attach the garage door on top of it. The scrim was left until load-in so no holes were poked in it due to how fragile the material is. While this is happening I would have the front facing of the deck attached which was pre-cut and the arch trim and baseboard cut and attached. I would also have the escape step railings attached.

This would be a good time to have some people run through the set and see if any details were missed in the assembly process that would make things not line up or un-even and then have them fixed. This would be a good spot to find breaks or other damage that could have been caused during the stress of load-in and have those repaired as well. With everything else being tested I would go ahead and test the movement of the band platform to determine if it needs stage brakes or not.

In finishing the set up portion of the load-in, a run through of the rigged pieces would need to be done. This would be to ensure that each of the pieces were level and tight. Rigging is an unforgiving aspect of theatre so one wrong move could become fatal which is why a double and possibly even triple check should be done. Once it was established that everything was completed and fixed, paints would need to come through and touch up problem areas that might have arisen during load in. Once this was completed, the toys would then need to be attached to the toy tower.

The last thing I would have done pertaining to the set pieces would be having the downstage fence brought in and put in place and lag screwed to the deck. I would have saved this for last to keep more room in the back section of the stage as long as possible. To secure these down, I would only use two lag bolts for each as to again minimize holes put in the deck to fill

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later. This unit would then (after being fully secured) possibly need some paint touch up. After completing all these tasks, the next stage to come would be the tech process.

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## **CHAPTER 8: HOW COVID-19 AFFECTED THIS PROCESS**

COVID-19 was tough on me as well as my crew in the shop from the start to finish of this process. Whether it be fear of catching this dreaded disease, having to wear a mask every day while we worked, or the possibility of the university shutting down looming over our heads. We had a lot of things making our lives harder. Prior statements in this document have been made highlighting how COVID-19 affected this process. I will further elaborate on these issues, as well as talk about other day to day things that made this all the more challenging for everyone involved in this process.

The beginning of the pandemic was the hardest in this process. Meeting over Zoom and seeing each other through computer screens doesn't seem like it changes much but it does. It's almost unexplainable, but being in a room promotes more conversation and energy where talking from your bedroom via a screen makes you want to end things as soon as possible and not work or talk through potential ideas. Social distancing had the same affect, with the suggestion of social distancing being kept in place until the pandemic was over I never met up with my ATD to talk until the fall semester. I felt we could have bounced more ideas off each other and grow together more creatively but with being on Zoom it was just easier to wrap up and keep living in your box. Seeing people every day made questions instantaneous but with being online there was a constant waiting period.

A hidden factor too that I didn't discuss previously was finding the motivation to move forward with the work at hand. It was tough bringing myself to do a significant amount of work on a project that may never see the light of day. Watching for what could be the inevitable shut down every day while cases rose took the wind out of my sails. I spoke in length with Charlie

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and various other shop employees about this at the beginning of the semester and they also shared similar feelings. Fear of the unknown spread in the shop and drove us down.

Our fears were realized when we hit the three week shut down in September. The two weeks of the university being open and building up to the point of shutdown in the shop were nail biting. It also made for low morale as it became like a scary movie with each person wondering who was next in the shop to catch this potentially deadly virus. Tempers were high too as we watched the Governor of the state and the President of the university take no action. It was honestly a shock to me that we returned to campus in the first place and I thought their guidance through that time was atrocious. The same fear returned a few weeks before Thanksgiving as we saw Morgantown hit their all-time high in cases. Luckily, the university changed its tactics by this time lowering the amount of positive cases on campus, but it left something to be desired for the United States.

Other things I didn't think would have a huge effect was the actual wearing of masks and face shields. Since I am a healthy adult, it did not occur to me that mask-wearing might lead to breathing issues for others – which did happen. I also didn't know that wearing a mask with safety glasses would make them fog up creating a dangerous situation. These items added to our faces and body to create more heat and cause more perspiration and exhaustion than seen in previous semesters within the shop. I could tell by the end of certain days the wind was taken out of the workers and they just wanted to go home for the one thing in the world that was free, a breath of fresh air.

As previously observed on numerous occasions we had an abundance of people leave due to needing to self-quarantine, myself included. This was something I never had anticipated and was shocked at how often it occurred. We lost so much labor and cognitive thinking with these

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people being out. For me too, it was easy to lose focus and get off track during self-quarantine periods. It was really shocking to talk to some of the other graduate students who taught courses and to discover how many of their students were out because of self-quarantine. The most surprising thing about these absences was the fact these students were out not because they had the virus or because they were sick at all but because they had potentially come in contact with somebody who had contracted the virus. This added a state of fear but also made the network of kids who needed to quarantine larger.

COVID-19 put the year 2020 on hold in a sense. It was a strange time to navigate life. This was especially true for me, as a person trying to budget, plan, and build a production over the course of two semesters, while also trying to graduate. A lot of things affected this process that I never could have imagined and in ways no one could have foreseen. Being on uncertain ground everyday with these things looming over my head definitely takes its toll along with the added stress of the presidential race, and nation-wide social unrest and protests. As a country we witnessed the brutal death of George Floyd at the hands of a police officer sparking the cause for racial injustice to be thrust into the public eye. This death unlike no other, I had seen, before crept into every American home and initiated a necessary conversation about racial equity within our communities across the country. COVID-19 affected this process greatly and made it so much harder than it needed to be but then the year 2020 as a whole made it almost impossible.



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## CHAPTER 9: CONCLUSION

Every production has its own set of challenges that need to be overcome, for *Rent* this was especially true. I know a lot of issues arose over all with this production and I can't speak for how the actual performances will go but I feel we accomplished our goal. At the time of my departure we were under budget with two set pieces being left for build. I know it wasn't all my fault but I did feel a lot of guilt because the set wasn't 100 percent finished.

As for my team, in looking at myself I need to adapt more in being able to guide large groups of people in daily tasks, I also need to figure out a way to start enjoying drafting, an important aspect of my career as a technical director. Charlie, in the end, proved to be a valuable asset and I wouldn't have traded him for anybody else in the shop. However, I feel he needs to ask more questions in future work and get clarity on what he is doing. His confidence is admirable but it leaves him open to unexpected problems. As I have spoken about Chance already he did a great job as a carpenter on his first production at WVU. He is still green but I am confident in his next two and a half years at WVU he will grow into a great technical director that I will envy one day.

Overall I wouldn't have traded the experience of working on *Rent* for anything else in the world. It gave me the confidence I will need to succeed out in the competitive job market. There is room for improvement, and I know that for me that means to work on all aspects of my craft. I believe this will happen with time and practice. I wish I would have gotten to finish the show and that I wasn't sick for a week and a half of the process, however life happens and we have to keep moving on. COVID-19 really shook things up but all in all I felt we did the best we could do with what we were given. In the end the build for *Rent* will forever be an important time in my life and I will take this experience with me to every production I work on in the future.

Prodan

**APPENDIX A: PRODUCTION ESTIMATE**

<b>Show Estimate</b>			
Production: RENT			
Director: Jeremiah Downs			
Designer: Robert Klingelhofer			
Technical Director: Grant Prodan			
Set Piece	Cost	Hours	Load In Time
1st floor Loft	\$834.66	77	4
2nd floor Loft	\$416.36	78	2
Tower Façade	\$140.44	34	4
Toy Tower	\$262	34	4
Wagon	\$104	36	1
Sky Light	\$437.12	43	2
Upstage Platform	\$603.38	77	4
Folding Tables	\$335.10	36	1
Wooden Fence	\$194.84	23	3
Trucking	150		
Rigging			4
	3478.28	438	29
	5% 173.914		
	3652.194		
	10% 365.2194	43.8	2.9
<b>Total</b>	<b>4017.4134</b>	<b>481.8</b>	<b>31.9</b>

West Virginia University College of Creative Arts School of Theatre & Dance	<b>ESTIMATION FORM A</b> PRODUCTION: <i>RPT</i> PREPARED BY: <i>GAP</i> DATE: <i>5/15/00</i>									
<b>SCENIC ELEMENT: 1ST LEVEL LOFT</b>										
<p style="text-align: center;">11'3"</p> <p style="text-align: right;">6'8"</p> <p style="text-align: center;">COX    scrim    scrim</p> <p style="text-align: center;">↑ Hair nets</p>	<p style="text-align: center;">Incellular MDF</p> <p style="text-align: center;">8'      + 3'3"</p> <p style="text-align: center;">11'3"</p>									
<p style="text-align: right;">6'8"</p> <p style="text-align: center;">6'</p> <p style="text-align: right;">COX cover</p>	<table style="width: 100%; border-collapse: collapse;"> <tr><td style="text-align: right;">1/4" MDF</td></tr> <tr><td style="text-align: right;">1</td></tr> <tr><td style="text-align: right;">scrim</td></tr> <tr><td style="text-align: right;">1</td></tr> <tr><td style="text-align: right;">2x4x12</td></tr> <tr><td style="text-align: right;">     </td></tr> <tr><td style="text-align: right;">     </td></tr> <tr><td style="text-align: right;">COX</td></tr> <tr><td style="text-align: right;">     </td></tr> </table>	1/4" MDF	1	scrim	1	2x4x12			COX	
1/4" MDF										
1										
scrim										
1										
2x4x12										
COX										
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">2x4 STUP WALLS</p> <p style="text-align: right;">6'8"</p> <p style="text-align: center;">10'4 3/4"</p> <p style="text-align: right;">COX cover</p>	<p style="text-align: right;">6'8"</p> <p style="text-align: center;">10'4"</p>									
<b>CONSTRUCTION NOTES</b>										
Size: _____										
Materials / Hardware: <i>1/4" MDF, scrim, 2x4x12, COX</i>										
_____										
_____										

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**APPENDIX A: PRODUCTION ESTIMATE**

Scenic Element Estimate						
Production: RENT						
Director: Jeremiah Downes						
Designer: Robert Klingelhofer						
Tech Director: Grant Prodan						
Scenic Element						
1st Floor of Loft						
Construction Procedure				Crew	Hours	Est.
Pull Stock				2	2	4
Leg up Stairs				2	2	4
Build Second set of steps				2	4	8
Cut Material for Railings				1	1	1
Weld Metal				1	3	3
Make Railing Attachable				1	1	1
Cut Floor Material				1	2	2
Assemble the Floor				2	4	8
Bolt Together				2	2	4
Attach outer facing				4	2	8
Attach Kick Rail				2	1	2
Cut bottom stud material				4	2	8
Assemble Bottom Stud				4	1	4
Cut and attach Facing				4	2	8
Attach Scrim				2	1	2
Cut Weird MDF				1	1	1
Make half Round				1	3	3
Attach Half Round				2	3	6
Attach ceiling in Space						
TOTALS						
						77
Material	Unit	Stock	EST.	Price	Cost	
1x6x16	Stick		6	\$17.99	\$107.94	
1x1 Box Tube	Stick		3	\$25	\$75.00	
2x12	Stick		2	\$15.89	\$31.78	
3/4" Cdx	Sheet	16	16	\$0.00	\$0.00	
2x8x12	Stick		14	\$9.79	\$137.06	
1/4" MDF	Sheet		11	\$11	\$121.00	
2x4x12	Stick		38	\$5.89	\$223.82	
Scrim	Bolt		1	\$138.06	\$138.06	
				Total	\$834.66	

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West Virginia University College of Creative Arts School of Theatre & Dance	<b>ESTIMATION FORM A</b>
	PRODUCTION: <i>next</i>
	PREPARED BY: <i>LAP</i>
	DATE: <i>5/3/2020</i>
<b>SCENIC ELEMENT:</b> <i>2nd Floor LOFT</i>	
<b>CONSTRUCTION NOTES</b>	
Size:	
Materials / Hardware: <i>DOWN, 2x4, LAP, COX, 3/4" MDF, 1/4" MDF</i>	

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**APPENDIX A: PRODUCTION ESTIMATE**

Scenic Element Estimate						
Production: RENT						
Director: Jeremiah Downes						
Designer: Robert Klingelhofer						
Tech Director: Grant Prodan						
Scenic Element						
2nd Floor of Loft						
Construction Procedure				Crew	Hours	Est.
Cut all Material				2	2	4
Assemble Top Piece				2	1	2
Assemble Side Pieces				4	1	4
Test fit 3 pieces				2	1	2
Cut pieces for molding				2	2	4
Assemble Chair Rail				2	1	2
Assemble Crown Molding				2	1	2
Assemble Poster Frame				2	1	2
Attach Poster				1	1	1
Assemble PVC Stove Pipe				2	2	4
Assemble Baseboard				2	1	2
Window Estimation						34
Add Rigging				3	5	15
TOTALS				78		
Material	Unit	Stock	EST.	Price	Cost	
2x4	Stick	1	3	\$5.89	\$17.67	
luan	Sheet	3	3	\$0.00	\$0.00	
3/4" CDX	Sheet	2	2	\$0.00	\$0.00	
3/4" MDF	Sheet		1	\$29.97	\$29.97	
DOW Rod	Stick		2	\$11	\$22.00	
1x2 Box tub	Stick		3	\$33.60	\$100.80	
1x1 Box tub	Stick		4	\$25	\$100.00	
1/2" Angle Iron	Stick		6	\$8	\$48.00	
1/8" Acrylic #599050	Stick		4	\$15.98	\$63.92	
1-1/2" flat bar	Stick	Pull			\$0.00	
PVC Pipe	Stick		2	\$10	\$20.00	
Rigging					\$14	
				Totals	\$416.36	

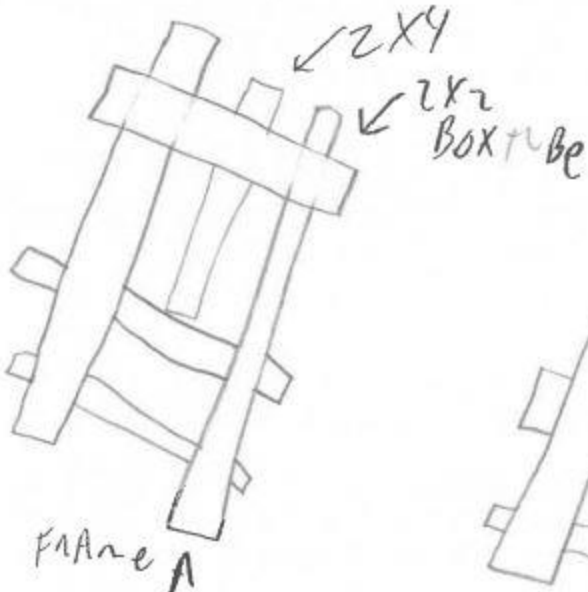
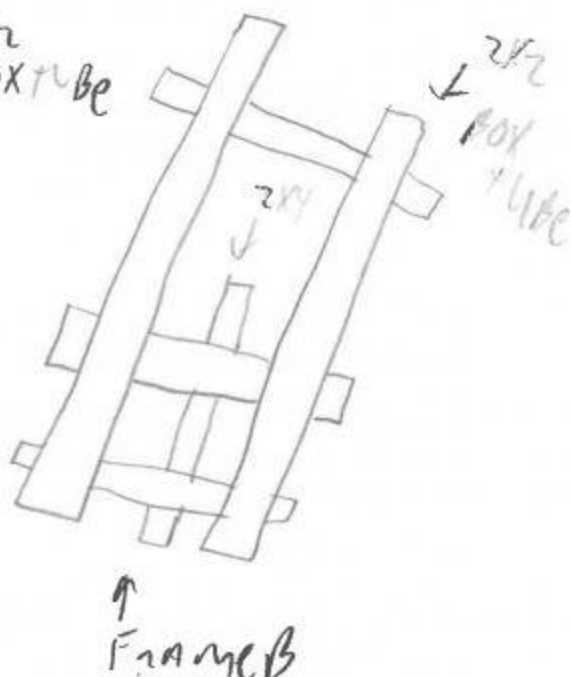
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West Virginia University College of Creative Arts School of Theatre & Dance	<b>ESTIMATION FORM A</b>
	PRODUCTION: <i>ACRT</i>
	PREPARED BY: <i>GAP</i> DATE: <i>5/1/200</i>
SCENIC ELEMENT: <i>FLAT Iron Building</i>	
<p style="text-align: right; margin-right: 20px;"> <i>5'10"</i>  <i>17'2"</i>  <i>1x3</i>  <i>Hollywood Frame</i> </p> <p style="text-align: right; margin-right: 20px;"> <i>Windowsill</i>  <i>2x4</i>  <i>2x4</i>  <i>11</i>  <i>2x4</i>  <i>11</i>  <i>1x6</i>  <i>1x6</i> </p>	
<b>CONSTRUCTION NOTES</b>	
Size: _____	
Materials / Hardware: <i>2x4, 1x6, 1x3</i>	
_____	
_____	
_____	





Prodan

West Virginia University College of Creative Arts School of Theatre & Dance	<b>ESTIMATION FORM A</b>
	PRODUCTION: <i>next</i>
	PREPARED BY: <i>GAP</i>
	DATE: <i>5/1/07</i>
<b>SCENIC ELEMENT:</b> <i>TOY Tower</i>	
<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>Frame A</p> </div> <div style="text-align: center;">  <p>Frame B</p> </div> </div> <div style="margin-left: 100px;"> <p><u>2x2 Box tube</u></p> <p>11 11</p> <p>2x4</p> <hr style="width: 50px; margin-left: 0;"/> <p>11</p> </div>	
<b>CONSTRUCTION NOTES</b>	
Size: _____	
Materials / Hardware: <i>2x2 Box tube, 2x4</i>	
_____	
_____	
_____	



Prodan

West Virginia University College of Creative Arts School of Theatre & Dance	Page <b>ESTIMATION FORM A</b>
PRODUCTION: <u>Rent</u>	
PREPARED BY: <u>Charlie Diborsic</u>	
DATE: <u>4/29/20</u>	
SCENIC ELEMENT: <u>SL Wagon</u>	
<b>CONSTRUCTION NOTES</b>	
Size: <u>8' x 7' x 6"</u>	
Materials / Hardware: <u>2 (4' x 7') platforms bolted together with a iron skirt, swivel casters and stage brakes; it has a hand rail 32" high and 6' long</u>	



Prodan

Page

West Virginia University  
College of Creative Arts  
School of Theatre & Dance

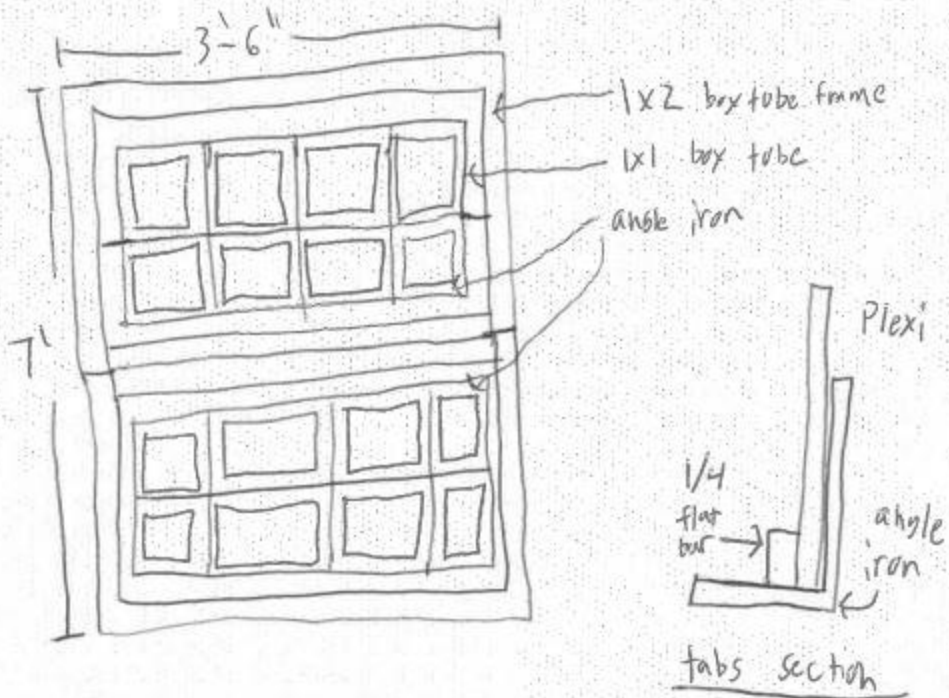
### ESTIMATION FORM A

PRODUCTION: *Rent*

PREPARED BY: *Charlie DiGiorgio*

DATE: *4/28/2020*

SCENIC ELEMENT: *Skylight*



#### CONSTRUCTION NOTES

Size: *3'-6" x 7' With Plexi Panes 1'-6" x 9 1/2"*

Materials / Hardware: *1x2 box tube, 1x1 box tube, Plexi: SKU# 599050, 1/2" x 1/2" angle iron, rigging hardware.*



Prodan

West Virginia University College of Creative Arts School of Theatre & Dance	Page <b>ESTIMATION FORM A</b>
PRODUCTION: <b>RENT</b>	
PREPARED BY: <b>Charlie DiBorsio</b>	DATE: <b>4/29/2020</b>
SCENIC ELEMENT: <b>UPstage Platform</b>	
<b>CONSTRUCTION NOTES</b>	
Size: <b>36' X 6'</b>	
Materials / Hardware: <b>2x4, 2x12, 1x1 box tube, 3/4" CDX, 1/4" MDF, fence, Tee tube connectors, elbow connectors, Stainless Steel Pipe, 4 way connector</b>	





West Virginia University  
College of Creative Arts  
School of Theatre & Dance

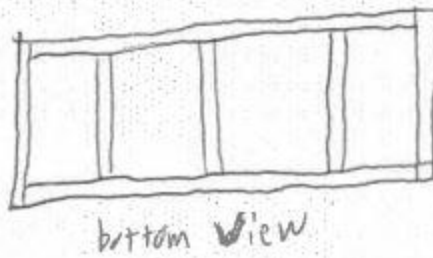
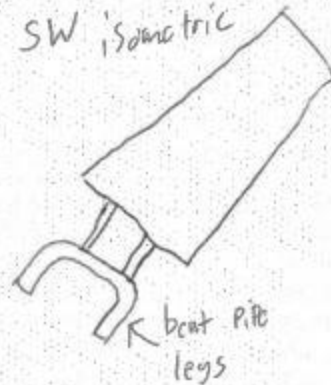
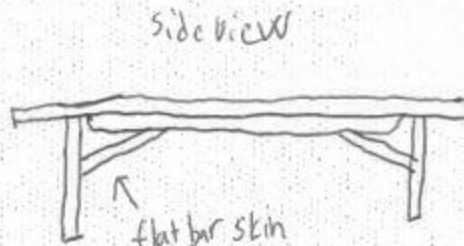
### ESTIMATION FORM A

PRODUCTION: RENT

PREPARED BY: Charlie D.

DATE: 4/30/2020

SCENIC ELEMENT: "Folding tables"



1x1  
box tube framing  
w/CDX skin  
on top

#### CONSTRUCTION NOTES

Size: 3' x 8'

Materials / Hardware: 1x1 box tube, 3/4" CDX, 1/4" Luan, 1 1/2" flat bar, 1" pipe,  
1x6



Prodan

West Virginia University College of Creative Arts School of Theatre & Dance	<b>ESTIMATION FORM A</b>
	PRODUCTION: <u>RENT</u>
	PREPARED BY: <u>GAP</u> DATE: <u>5/11/2020</u>
SCENIC ELEMENT: <u>DOWN STAGE FRONTS</u>	
<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>6'8" 4' + 4'</p> </div> <div style="text-align: center;"> <p>6'8" 4' + 4' + 4'</p> </div> </div> <div style="display: flex; justify-content: space-between;"> <div style="text-align: center;"> <p>2x4 Steel JACK 10X</p> </div> <div style="text-align: center;"> <p>2x4 H H H H H 10X H H</p> </div> </div>	
<b>CONSTRUCTION NOTES</b>	
Size: _____	
Materials / Hardware: <u>2x4 3/4" 10X</u>	
_____	
_____	
_____	



Prodan  
**APPENDIX B: BUILD CALENDAR**

		R.E.N.T		Build Calender			Main Stage-Clay	
Carpenters	Hr/Wk	8/30/2020	8/31/2020	9/1/2020	9/2/2020	9/3/2020	9/4/2020	9/5/2020
Week 1	Grant		Syllabus	Syllabus	DS Fence			
	Charlie		Syllabus	Syllabus	Band-Platform		Stud-Wall	
	Chance		Syllabus	Syllabus	DS Fence		DS Fence	
	Ashley		Syllabus	Syllabus	Band-Platform		Stud-Wall	
	Sheriff		Syllabus	Syllabus	Custom Platform		Slat-Facing	
	Pauline		Syllabus	Syllabus	Stud-Wall			
	Byron		Syllabus	Syllabus	Band-Railing		Stud-Wall	
	Steven		Syllabus	Syllabus	Steps		Steps	
	Paint		Syllabus	Syllabus				
Carpenters	Hr/Wk	9/27/2020	9/28/2020	9/29/2020	9/30/2020	10/1/2020	10/2/2020	10/3/2020
Week 2	Grant		Labor Day	2nd Floor of Loft				
	Charlie		Labor Day	Steps			Chain-Link	
	Chance		Labor Day	2nd Floor of Loft			2nd Floor of Loft	
	Ashley		Labor Day	Stud-Wall			Chain-Link	
	Sheriff		Labor Day	Stud-Wall			Chain-Link	
	Pauline		Labor Day	Stud-Wall	Tables			
	Steven		Labor Day		Steps		Steps	
	Byron		Labor Day	Stud-Wall	Tables			
	Paint		Labor Day					
Carpenters	Hr/Wk	10/4/2020	10/5/2020	10/6/2020	10/7/2020	10/8/2020	10/9/2020	10/10/2020
Week 3	Grant		2nd Floor of Loft					
	Charlie		Flat Iron Building					
	Chance		2nd Floor of Loft				2nd Floor of Loft	
	Ashley		Flat Iron Building					
	Sheriff		2nd Floor Deck					
	Pauline		Stair Railing					
	Steven		2nd Floor Deck		2nd Floor Deck		2nd floor Deck	
	Byron		Window					
	Paint							

Prodan

**APPENDIX B: BUILD CALENDAR**

R.E.N.T		Build Calender					Main Stage-Clay		
Carpenters	Hr/Wk	10/11/2020	10/12/2020	10/13/2020	10/14/2020	10/15/2020	10/16/2020	10/17/2020	
Week 4	Grant		2nd Floor Deck		Test Fit	Test Fit	Test Fit		
	Charlie		Flat Iron Building		Test Fit	Test Fit	Test Fit		
	Chance		Flat Iron Building		Test Fit		Test Fit		
	Ashley		Flat Iron Building		Test Fit	Test Fit	Test Fit		
	Sheriff		2nd Floor Deck		Test Fit	Test Fit	Test Fit		
	Pauline		Toy Tower						
	Byron		Toy Tower						
	Steven		2nd Floor Deck			Test Fit			
	Paint								
Carpenters	Hr/Wk	10/18/2020	10/19/2020	10/20/2020	10/21/2020	10/22/2020	10/23/2020	10/24/2020	
Week 5	Grant								
	Charlie								
	Chance								
	Ashley								
	Sheriff								
	Pauline								
	Steven								
	Byron								
	Paint					Test Fit			
Carpenters	Hr/Wk	10/25/2020	10/26/2020	10/27/2020	10/28/2020	10/29/2020	10/30/2020	10/31/2020	
Week 6	Grant								
	Charlie								
	Chance								
	Ashley								
	Sheriff								
	Pauline								
	Steven								
	Byron								
	Paint					Load-In			

Prodan

**APPENDIX B: BUILD CALENDAR**

R.E.N.T		Build Calendar				Main Stage-Clay			
Carpenters	Hr/Wk	10/11/2020	10/12/2020	10/13/2020	10/14/2020	10/15/2020	10/16/2020	10/17/2020	
Week 7	Grant	Tech	Dark	Dress	Final Dress	Performance	Performance	Performance	
	Charlie	Tech	Dark	Dress	Final Dress	Performance	Performance	Performance	
	Chance	Tech	Dark	Dress	Final Dress	Performance	Performance	Performance	
	Ashley	Tech	Dark	Dress	Final Dress	Performance	Performance	Performance	
	Sheriff	Tech	Dark	Dress	Final Dress	Performance	Performance	Performance	
	Pauline	Tech	Dark	Dress	Final Dress	Performance	Performance	Performance	
	Steven	Tech	Dark	Dress	Final Dress	Performance	Performance	Performance	
	Byron	Tech	Dark	Dress	Final Dress	Performance	Performance	Performance	
	Paint	Tech	Dark	Dress	Final Dress	Performance	Performance	Performance	

Prodan

**APPENDIX C: BUDGET PROJECTION**

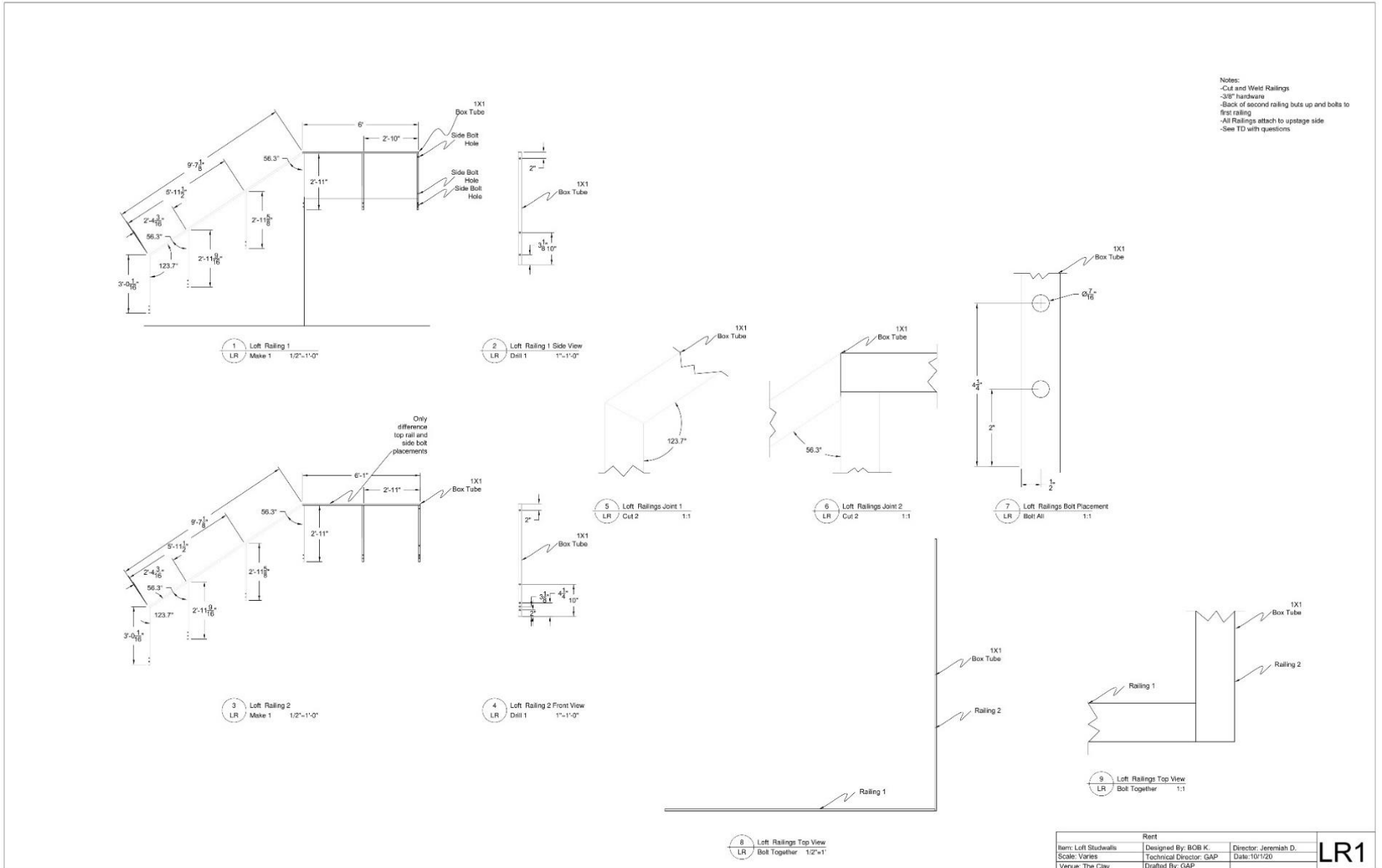
<b>Production: RENT</b>
Technical Director: Grant Prodan
Prepared By: Grant Prodan

## Budget Estimation

Element	Original Estimate	Spent to Date	To be Spent	Projection	Remaining
1st Floor of Loft	\$834.66	\$834.04	/	\$834.04	\$0.62
2nd Floor of Loft	\$416.36	\$333.12	\$22	\$355.12	\$61.24
Tower Façade	\$140.44				
Toy Tower	\$262	\$288	/	\$288	(\$26)
Wagon	\$104				
Sky Light	\$437.12				
Upstage Platform	\$603.88				
Folding Tables	\$335.10				
Wood Fence	\$194.84				
Hardware	\$173.91	\$57.34			
Trucking	\$150.00	/	/	/	\$150.00
Subtotal	\$3,652.31				
10% Contingency	\$365.23				
<b>Total:</b>	<b>\$4,017.54</b>				\$365.23



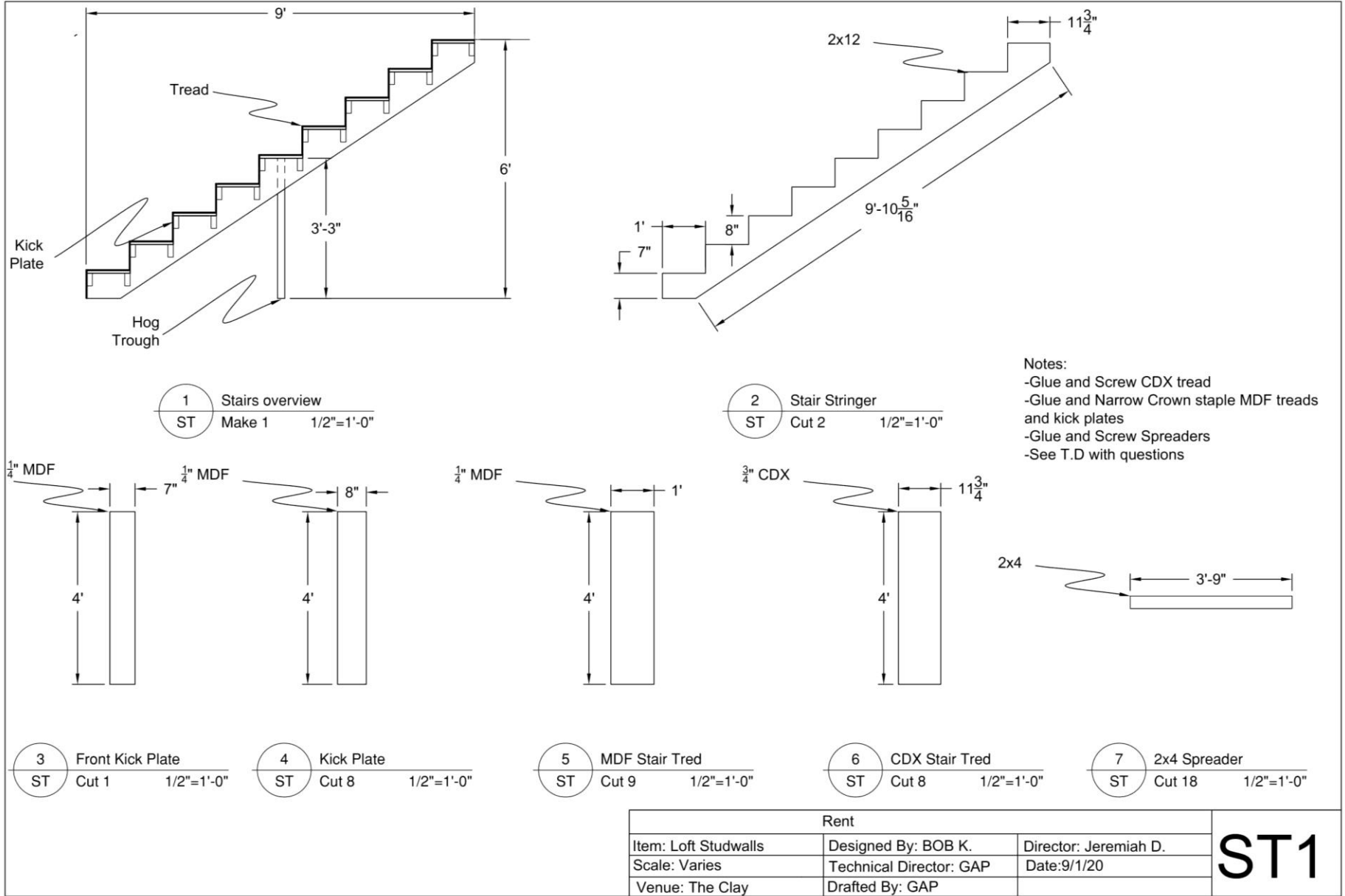
Prodan  
**APPENDIX D: DRAFTING**



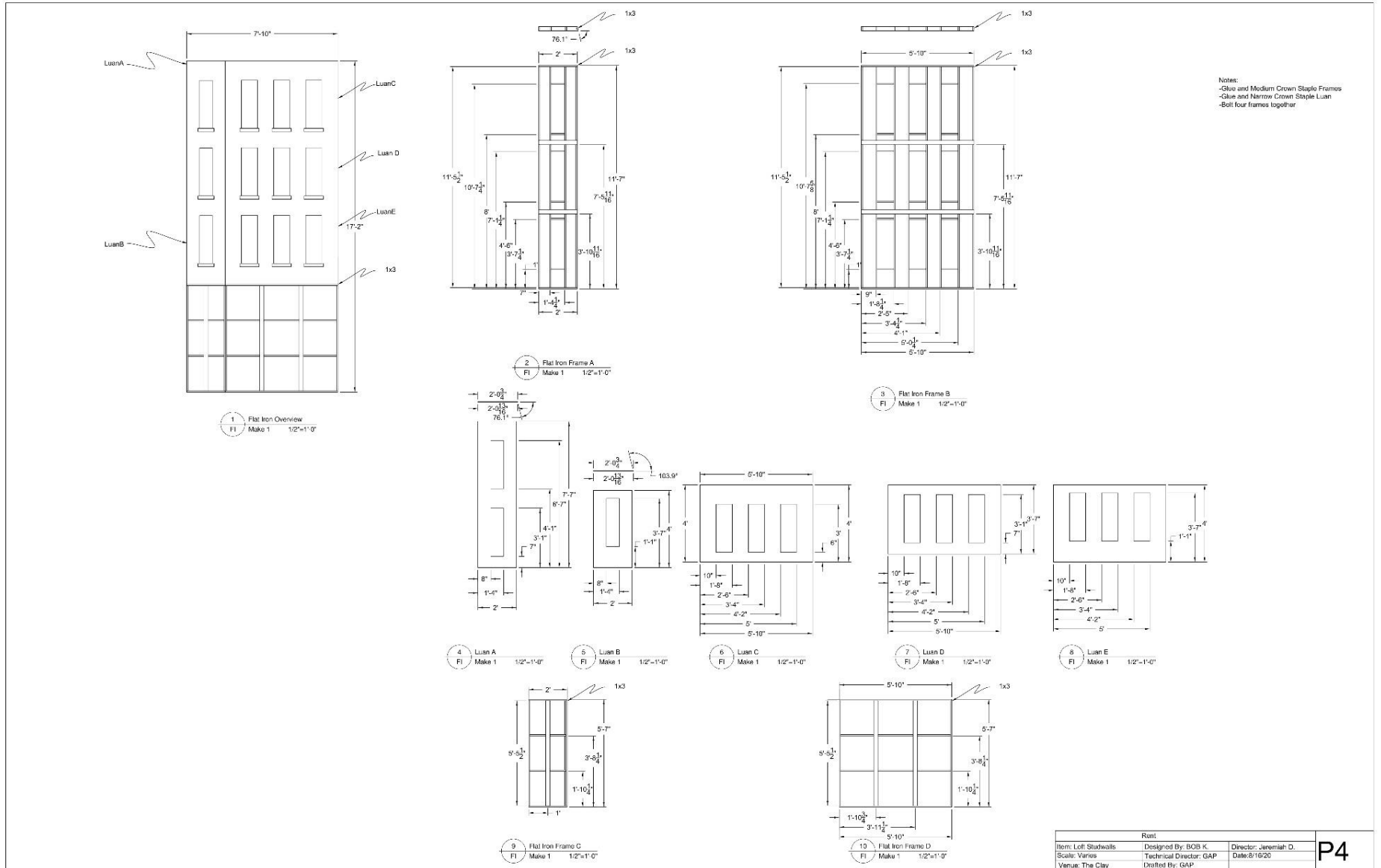
Rent		
Item: Loft Studwalls	Designed By: BOB K.	Director: Jeremiah D.
Scale: Varies	Technical Director: GAP	Date: 10/1/20
Venue: The City	Drafted By: GAP	

**LR1**

Prodan  
**APPENDIX D: DRAFTING**



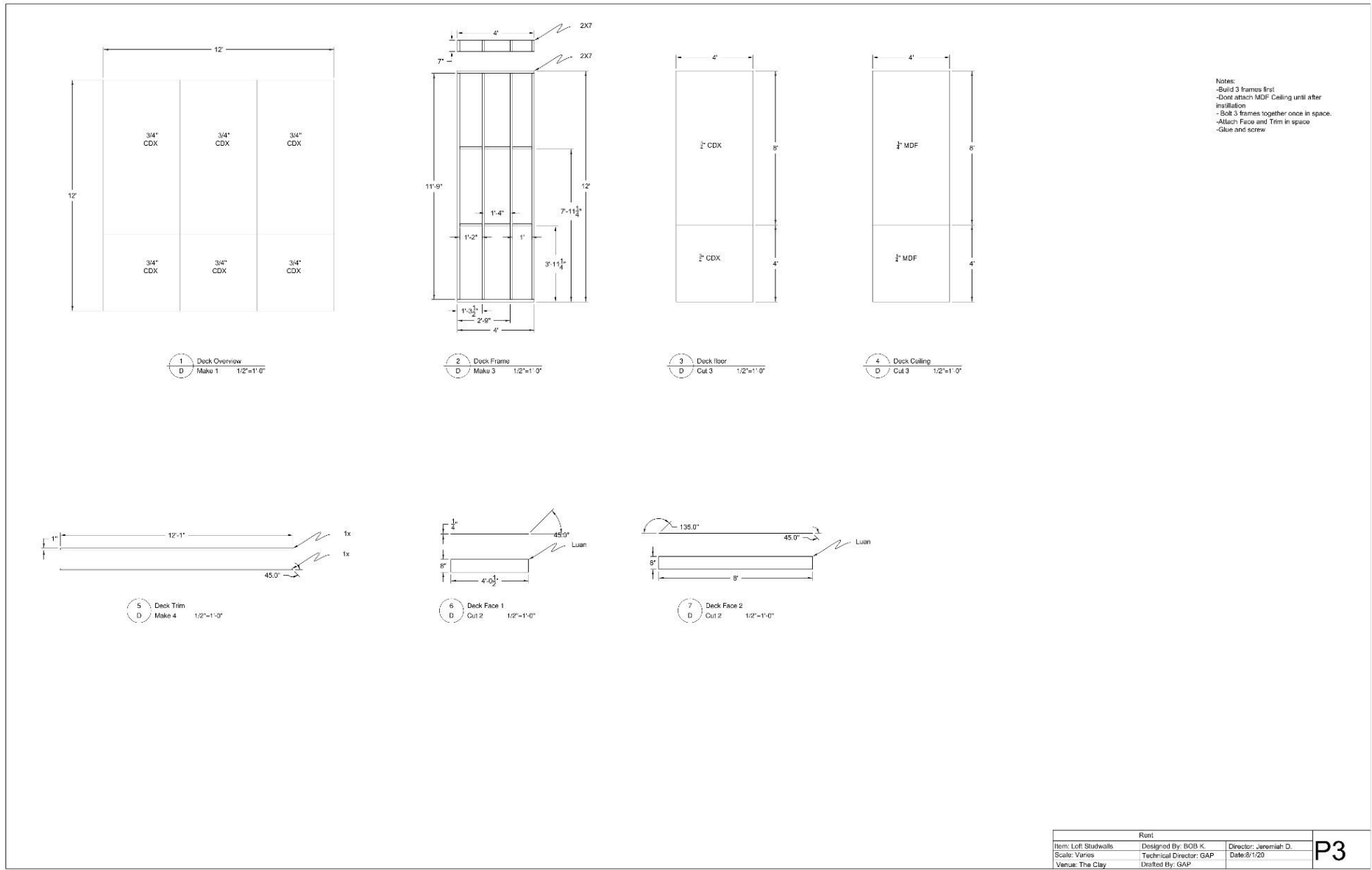
APPENDIX D: DRAFTING



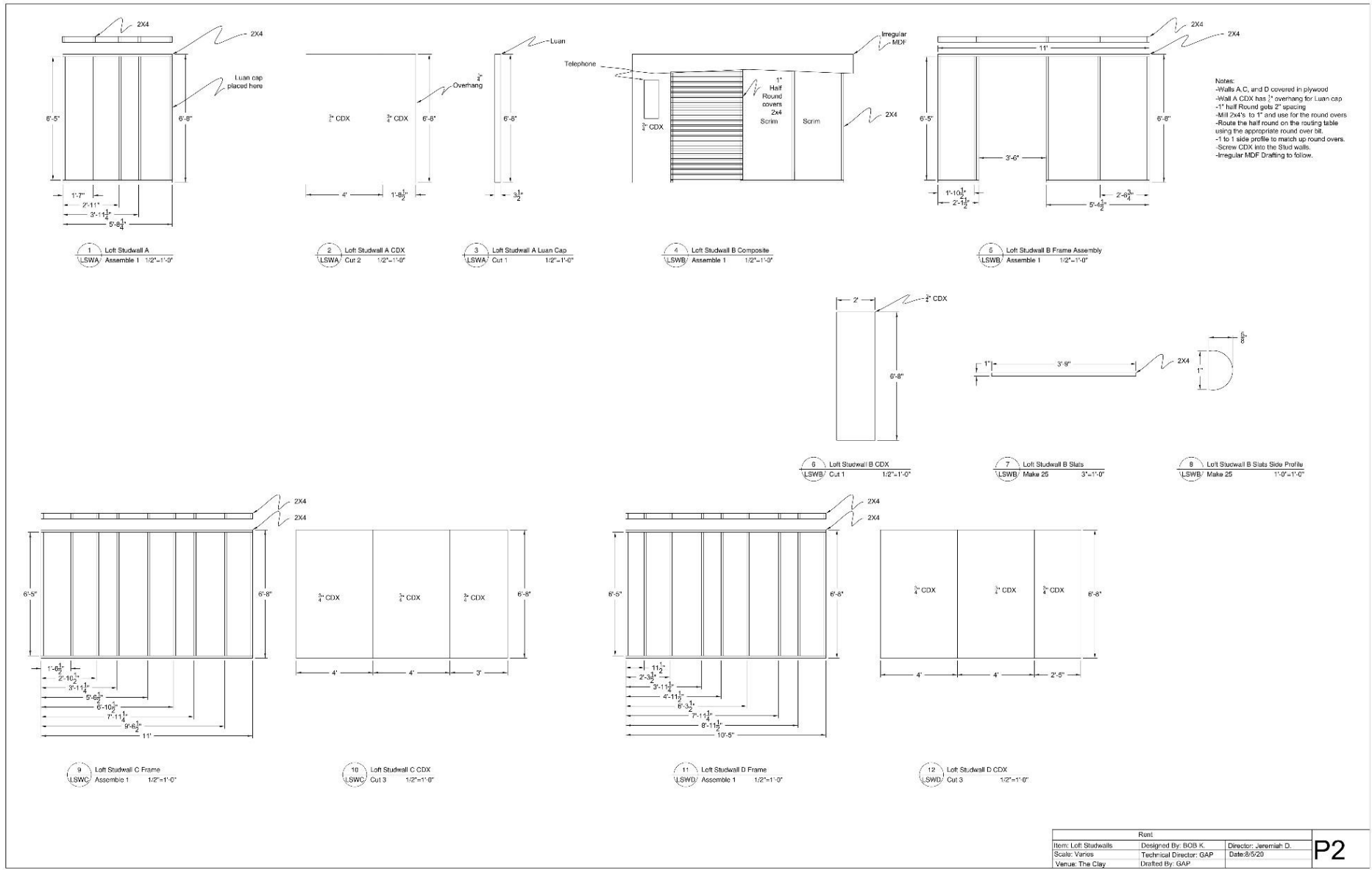
Revit		
Item: Loft Studwalls	Designed By: BOB K.	Director: Jeremiah D.
Scale: Various	Technical Director: GAP	Date: 8/16/20
Vendor: The Clay	Created By: GAP	

P4

Prodan  
**APPENDIX D: DRAFTING**

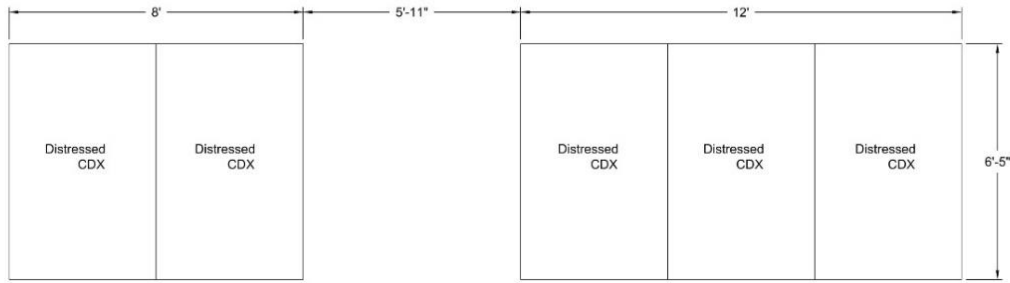


Prodan  
APPENDIX D: DRAFTING



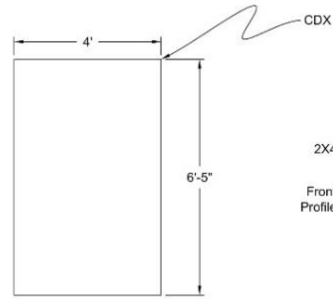
Rent		
Item: Loft Studwalls	Designed By: BOB K.	Director: Jeremiah D.
Scale: Varies	Technical Director: GAP	Date: 8/5/20
Venue: The Clay	Drafted By: GAP	

Prodan  
APPENDIX D: DRAFTING

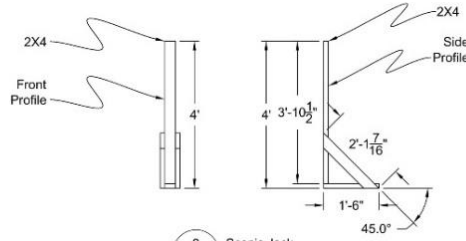


Notes:  
-Screw the plywood into the 2x4 scenic jack  
-Lag the scenic jack into the deck  
-Jacks are centered to the CDX

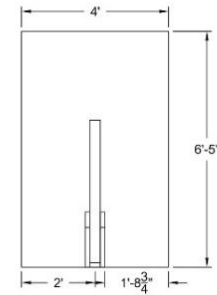
1 Ds Fence  
DSF Assemble 1 1/2"=1'-0"



2 Ds Fence Ply  
DSF Cut 5 1/2"=1'-0"



3 Scenic Jack  
DSF Make 5 1/2"=1'-0"

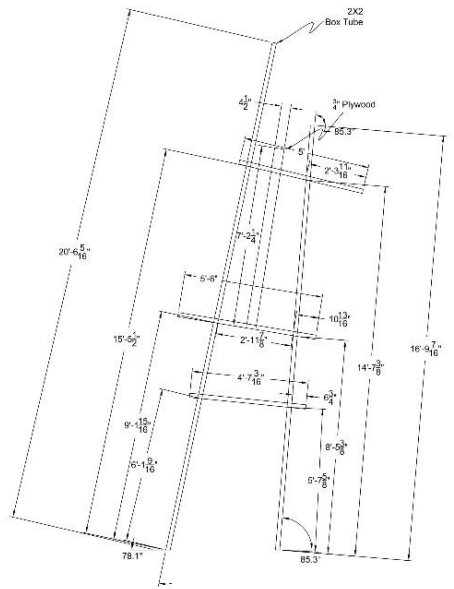


4 Scenic Jack Placement  
DSF Assemble 5 1/2"=1'-0"

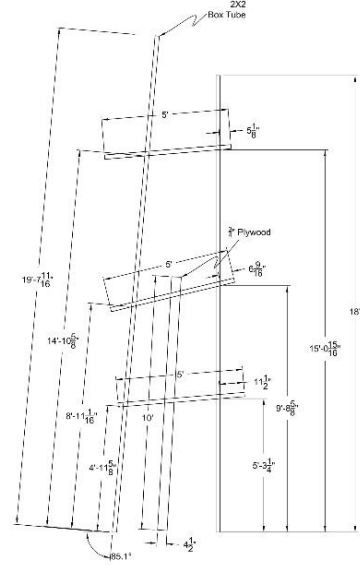
Rent		
Item: Ds Fence	Designed By: BOB K.	Director: Jeremiah D.
Scale: 3/8"=1'-0"	Technical Director: GAP	Date: 8/1/20
Venue: The Clay	Drafted By: GAP	

P1

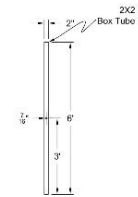
Prodan  
**APPENDIX D: DRAFTING**



1 Toy Tower Frame A  
 TT Make 1 1/2"=1'-0"



2 Toy Tower Frame B  
 TT Make 1 1/2"=1'-0"



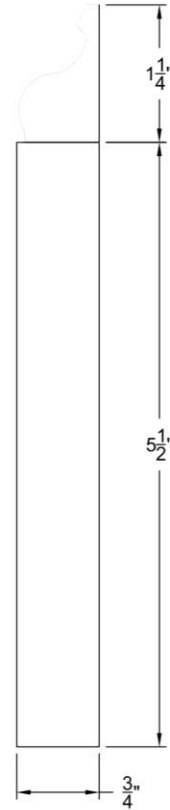
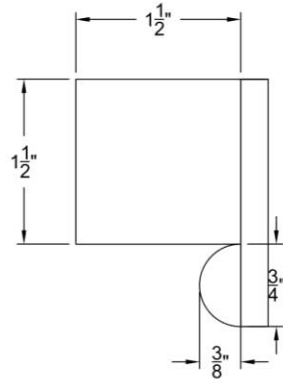
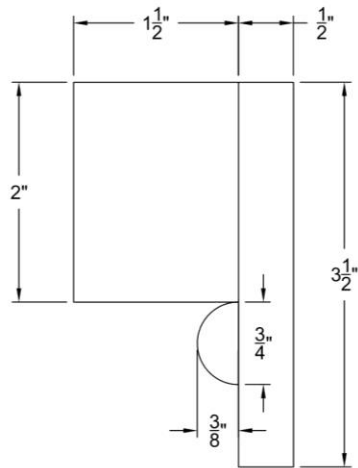
3 Toy Tower cross brace  
 TT Make 4 1/2"=1'-0"

Notes  
 -Weld together  
 -Weld Frames Separately  
 -Consult designer after welding and then add cross braces  
 -Cross braces do not have to be 2x2 box steel, but can't be more than 3 inches wide  
 -No exact placement of cross bracing  
 -All angles not specified are 90 degrees

Rant		
Norm: Lof: Studwalls	Designed By: BOB K.	Director: Jeremiah D.
Scale: Varies	Technical Director: GAP	Date: 6/1/20
Vanua: The Clay	Drafted By: GAP	

**TT**

Prodan  
**APPENDIX D: DRAFTING**



Notes:  
 -Glue and brad

1 Crown Molding  
 L Make 12 feet 1/2"=1'-0"

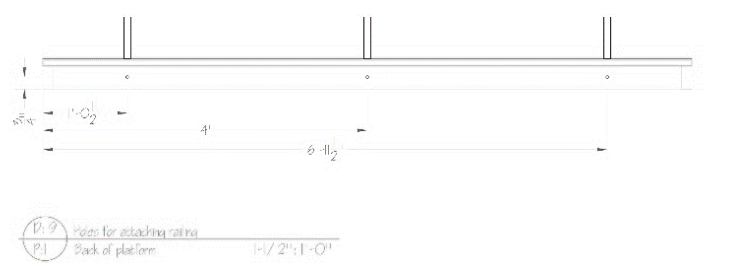
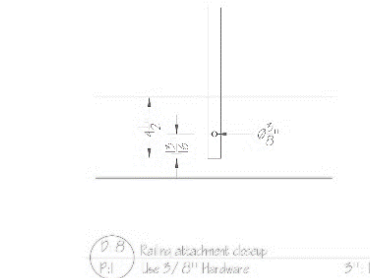
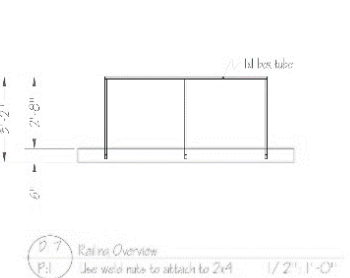
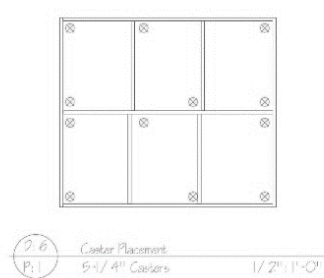
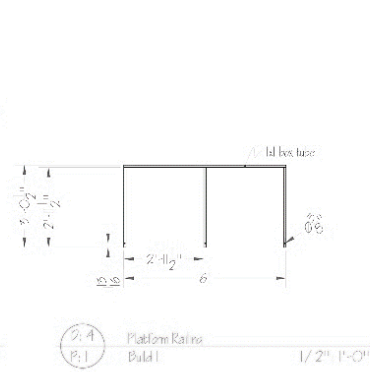
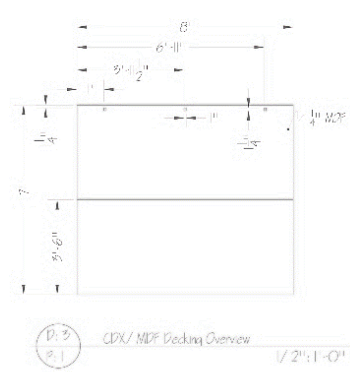
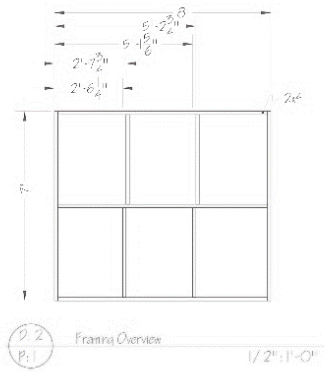
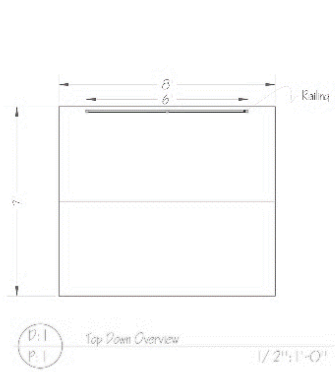
Rent		
Item: Loft Studwalls	Designed By: BOB K.	Director: Jeremiah D.
Scale: Varies	Technical Director: GAP	Date: 9/9/20
Venue: The Clay	Drafted By: GAP	

**L 1**





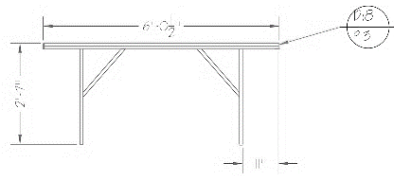
Prodan  
**APPENDIX E: REVIEWED DRAWING**



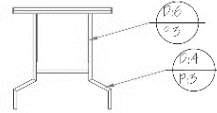
- Notes:
- Use 5/8" hardware for attaching railing
  - Lift 2" platform up before trying to attach railing
  - See ATD with any questions

Real Estate School of Business and Finance	
<b>RENT</b>	
PL Name: Build Platform	
Project: Apartment 2	
Designer: Robert L.	PL #1
Est. Project: Scott P.	1
Drawn By: Owen S.	
Scale: None	Date: 01/26/2005
Filename: C:\Users\Owen\Desktop\GAP\RENT\Drawings\Build Platform	

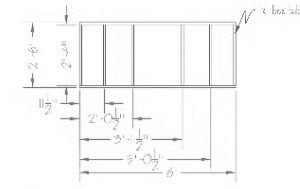
Prodan  
**APPENDIX E: REVIEWED DRAFTING**



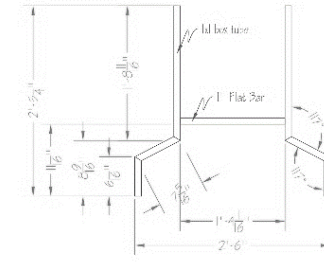
**D:1** Folding Table Overview  
**P:3** Build 2 3/4" 1'-0"



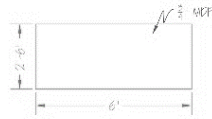
**D:2** Folding Table Overview  
**P:3** Side View 3/4" 1'-0"



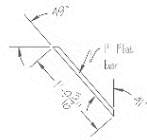
**D:3** Steel Table Framing  
**P:3** 1/2" 1'-0"



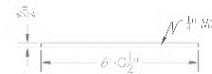
**D:4** Table Leg  
**P:3** Welded to Frame, Build 2 1-1/2" 1'-0"



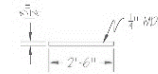
**D:5** MDF Topper  
**P:3** Tack Screws to Frame 1/2" 1'-0"



**D:6** Flasher crossmember  
**P:3** Build 4 1" 1'-0"



**D:7** MDF Skirt  
**P:3** Staple to Top MDF, 45° each side 1/2" 1'-0"



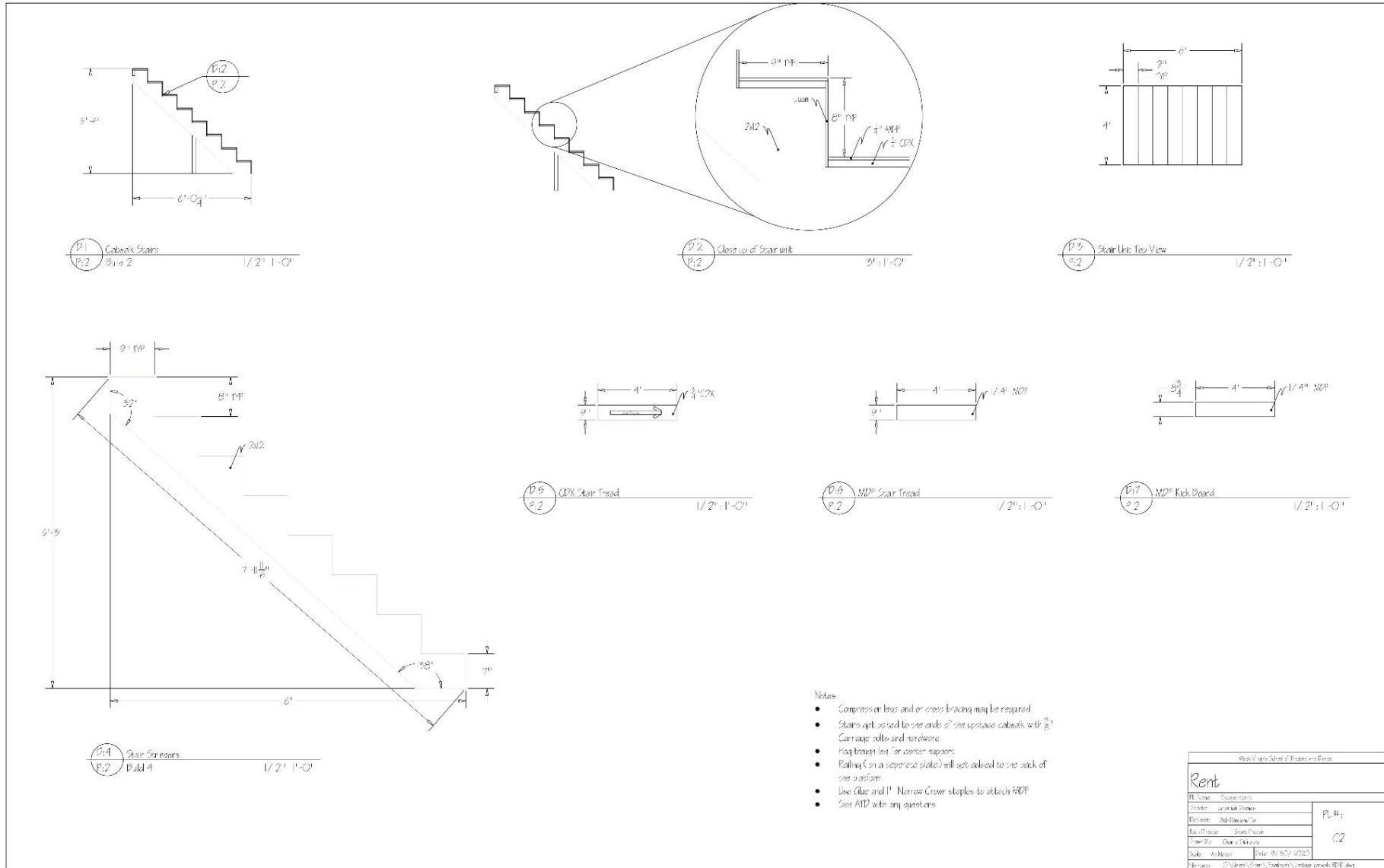
**D:8** MDF Skirt  
**P:3** Staple to Top MDF, 45° each side 1/2" 1'-0"

Notes:

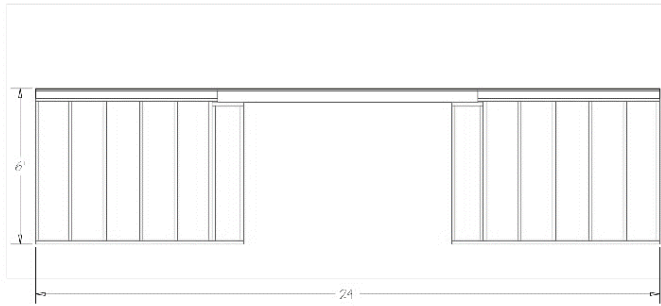
- 2 tables need to be built
- Build one frame first then attach one leg
- After legs are done, attach flasher crossmembers
- Weld all connection points
- Once frame is done, use liquid nails then Tack-Screw on the topper MDF
- Place each MDF skirt piece to 45° degrees so that the seam between pieces is nice & nice
- Use Narrow crown staples to attach MDF skirts
- See AT2 with any questions

Winn-Dixie School of Finance and Design	
<b>Rent</b>	
P: Name: <i>Edina</i>	PL: <i>3</i>
P: Order: <i>Armani 3</i>	
P: Review: <i>300 C</i>	
P: Tech Director: <i>Carly P</i>	
P: Project Mgr: <i>Christa D</i>	
P: Scale: <i>Varies</i>	Date: <i>9/27/2020</i>
File name: G:\Users\Vincent\Documents\Winn-Dixie\Tables 4-20-2020.dwg	

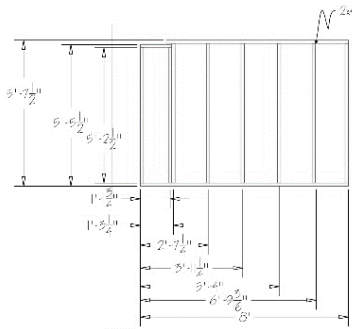
Prodan  
**APPENDIX E: REVIEWED DRAFTING**



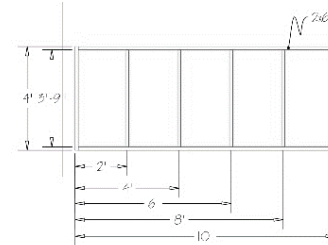
Prodan  
**APPENDIX E: REVIEWED DRAFTING**



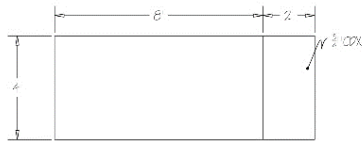
2.1 Caswell Structural Overview  
 4x7 platforms are stock  
 1/2" x 1" - 0"



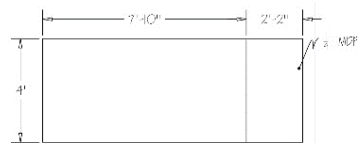
2.2 Caswell Structural  
 Draw 4  
 1/2" x 1" - 0"



2.3 4x10 platform  
 1/2" x 1" - 0"



2.4 4x10  
 1/2" x 1" - 0"

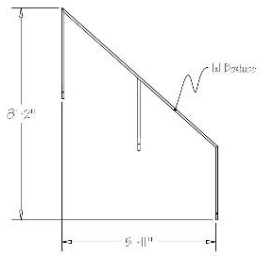


2.5 4x7  
 1/2" x 1" - 0"

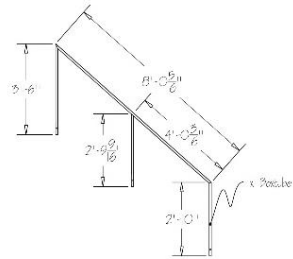
- Notes
- Put two 4x7 platforms from stock and route to 7x10
  - Add Cross bracing as needed
  - Platforms get screwed in upwards from subways
  - See AFD with any questions

West Virginia State of Energy and Power	
<b>Rent</b>	
By Name: Caswell, Robert	PL #:
Location: 4x7th Zone	
Person: Bill Hines	
Fac. / Phase: Gas / Gas	
Date: 01/01/2010	
Scale: As Shown	Date: 01/27/2010
Filename: C:\Users\Glen\Documents\Caswell\rent.dwg	

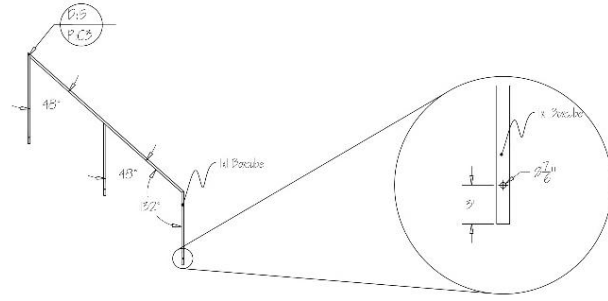
Prodan  
**APPENDIX E: REVIEWED DRAFTING**



**D.1** Catwalk Stair Railing Overview  
 P.C.S. Build 2  
 1/2" = 1'-0"

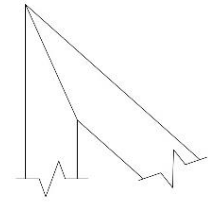


**D.2** Catwalk Stair Railing Continued  
 P.C.S.  
 1/2" = 1'-0"

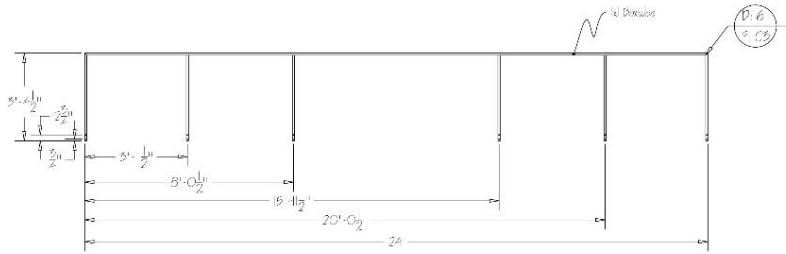


**D.3** Catwalk Stair Railing Angles  
 P.C.S.  
 1/2" = 1'-0"

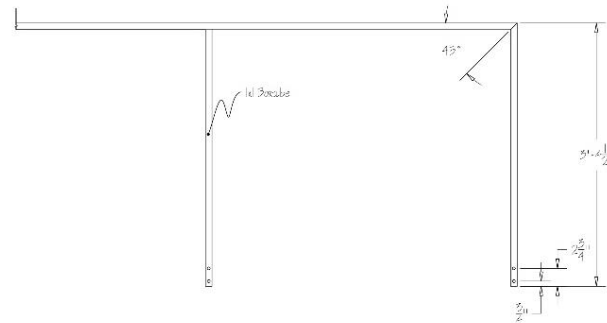
**D.4** Catwalk Stair Railing Connector  
 P.C.S.  
 3/4" = 1'-0"



**D.5** Upper Railing View  
 P.C.S.  
 1" = 1"



**D.6** Catwalk Railing Plan  
 P.C.S.  
 1/2" = 1'-0"

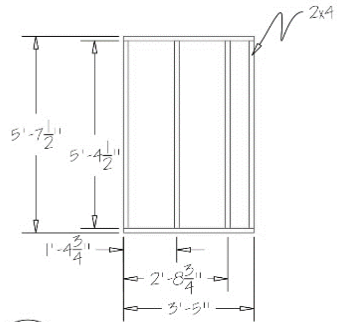


**D.7** Catwalk Railing Closure  
 P.C.S.  
 1-1/2" = 1'-0"

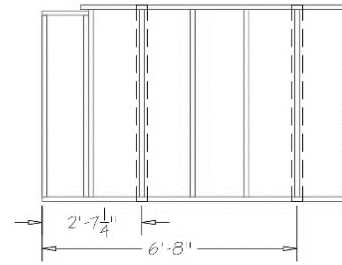
- Notes
- All Railings attach to jacking side
  - Use 3/8" hardware
  - See ATP with any questions

Rent	
By: [Signature]	PL#:
Project: [Text]	CS
Drawn: [Text]	
Check: [Text]	
Date: [Text]	
Path: C:\Users\j\OneDrive\Documents\catwalk.dwg	

Prodan  
**APPENDIX E: REVIEWED DRAFTING**



D:1 Studwall Crossbrace  
 P:CA Build 4  
 1/2" : 1'-0"



D:2 Studwall Locations  
 P:CA  
 1/2" : 1'-0"

Notes:

- Use Framing nails for stud wall construction
- Screw Cross bracing studwalls to platform supporting stud walls with 3" drywall screws
- See ATD with any questions

West Virginia School of Theatre and Dance	
<b>Rent</b>	
PL Name: Studwall Crossbrace	PL #:  CA
Director: Laramiah Powers	
Designer: Bob Chappell	
Tech Director: Grant Prosser	
Project: Charlie Dickerson	
Scale: 1/2" : 1'-0"	Date: 9/30/2020
File name: C:\Users\Grant\Downloads\Upstage catwalk RENT.dwg	

Prodan  
**APPENDIX F: PROCESS PHOTOS**

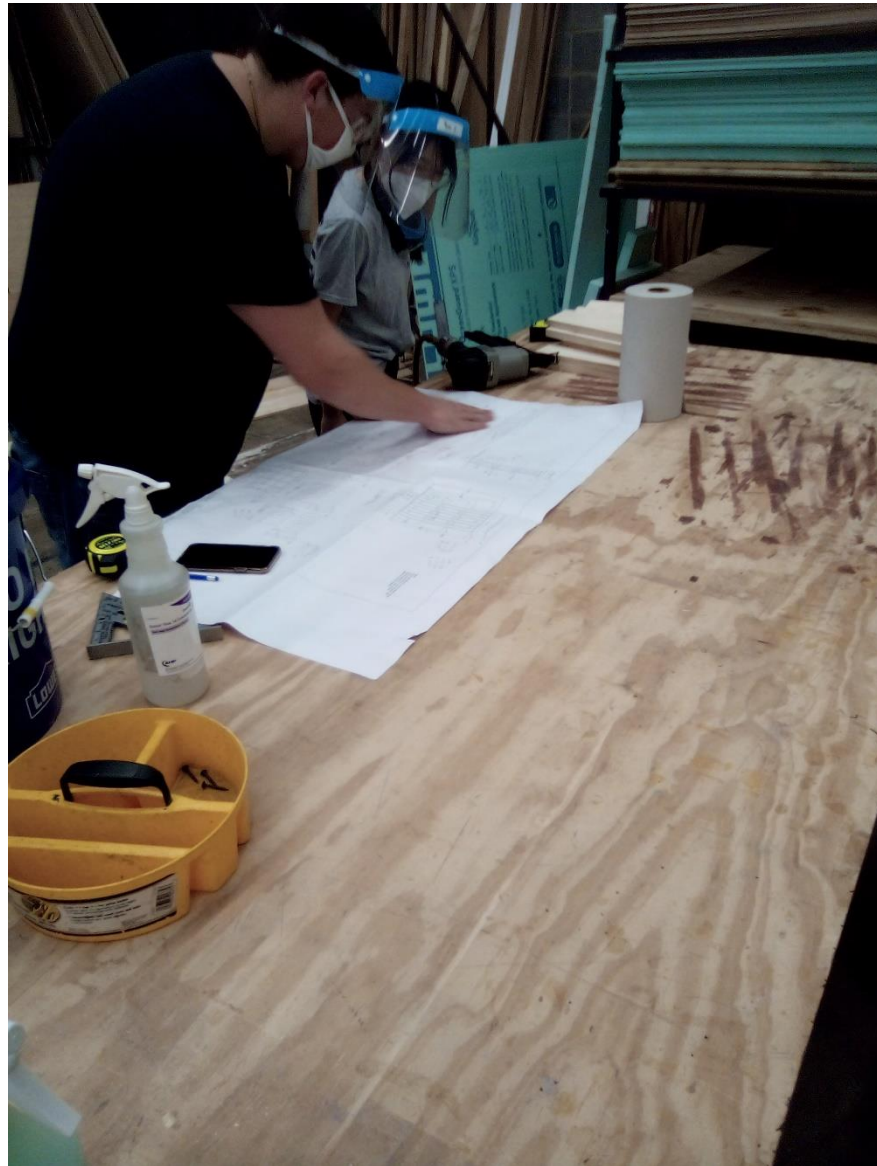


Loft deck platform frame



Prodan

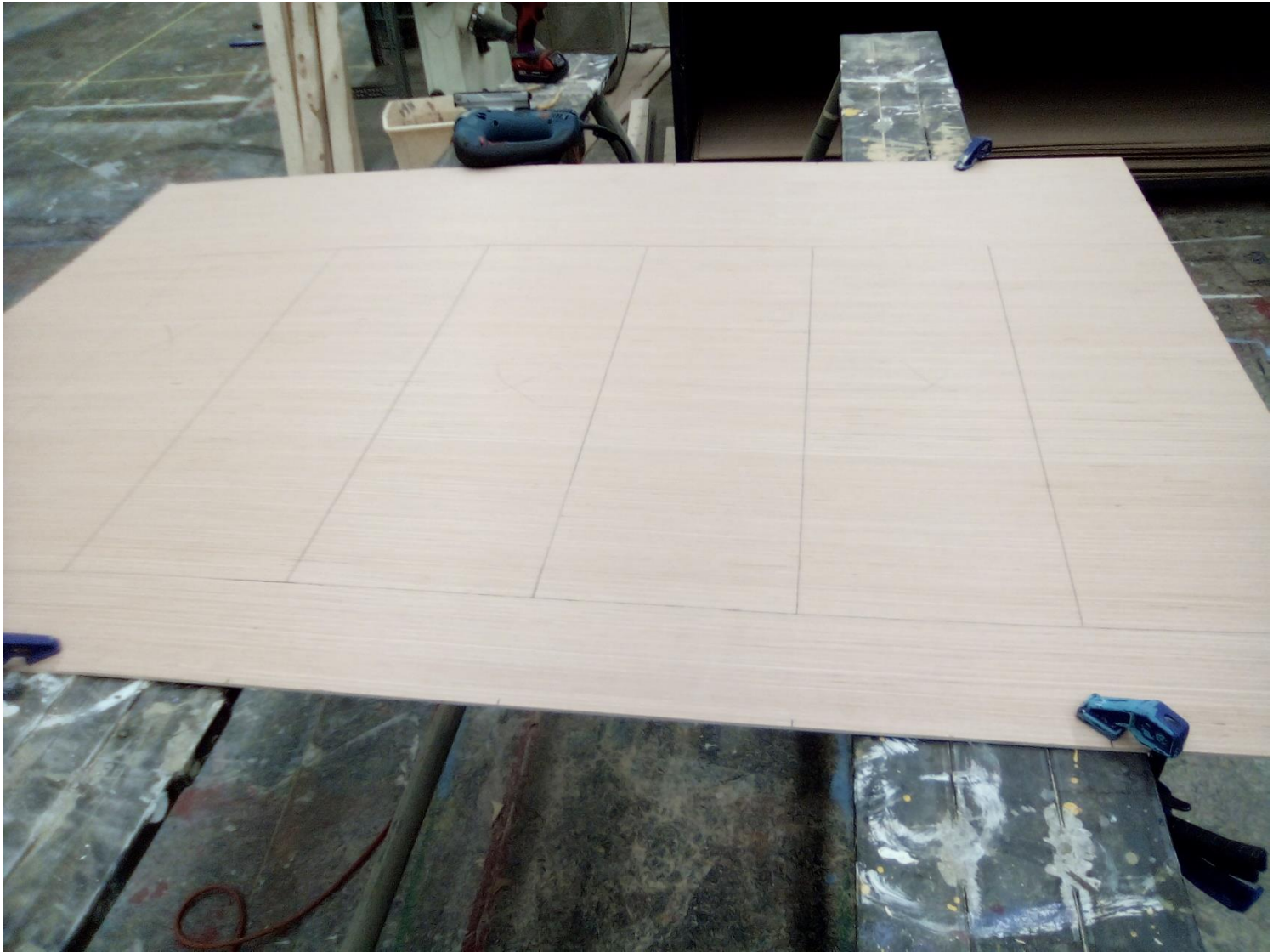
**APPENDIX F: PROCESS PHOTOS**



Chance lead carpenter explaining

Prodan

**APPENDIX F: PROCESS PHOTOS**



Abandoned building window

Prodan

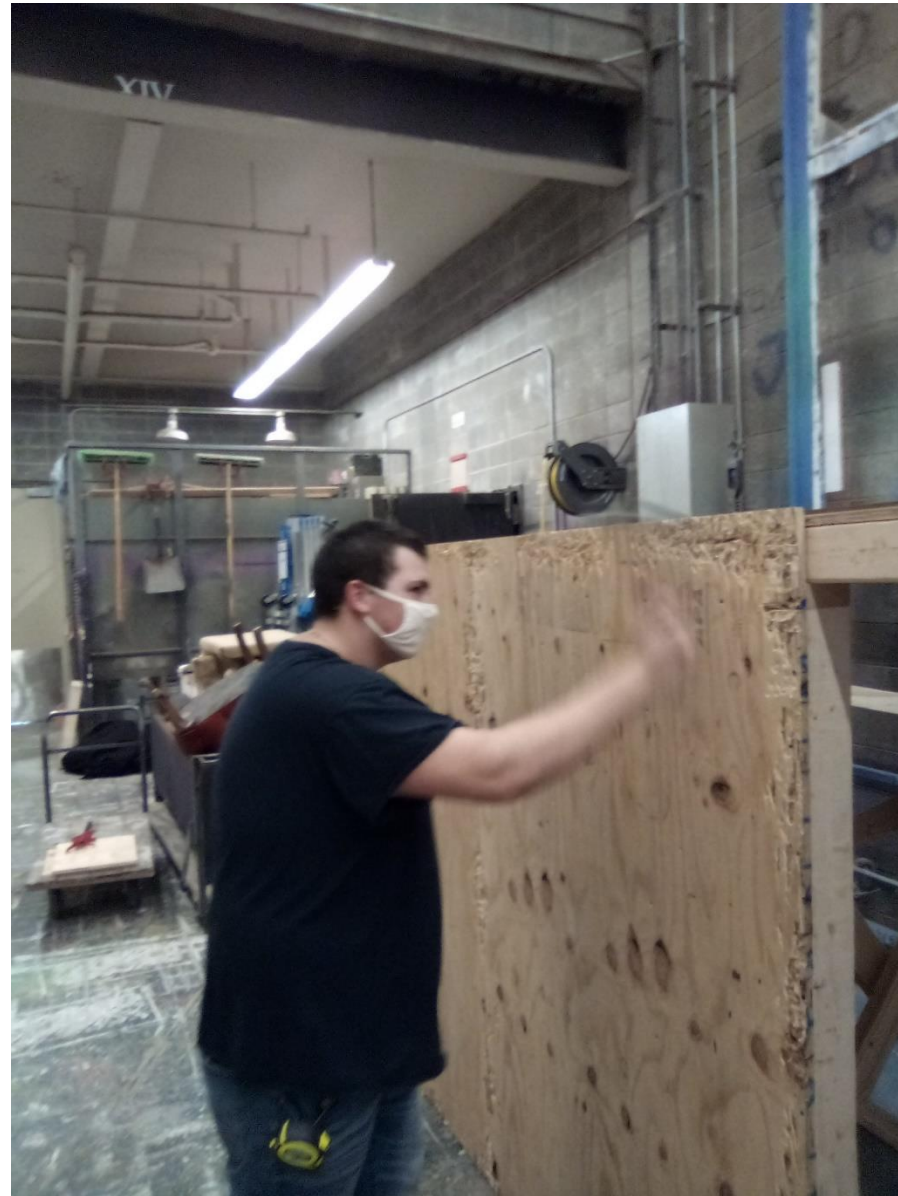
**APPENDIX F: PROCESS PHOTOS**



Stagecraft students building abandoned building

Prodan

**APPENDIX F: PROCESS PHOTOS**



Chance lead carpenter distressing CDX

Prodan

## APPENDIX F: PROCESS PHOTOS



Students building abandoned building

Prodan

**APPENDIX F: PROCESS PHOTOS**



Catwalk set up

Prodan

**APPENDIX F: PROCESS PHOTOS**



Steel cutting for tables

Prodan

**APPENDIX F: PROCESS PHOTOS**

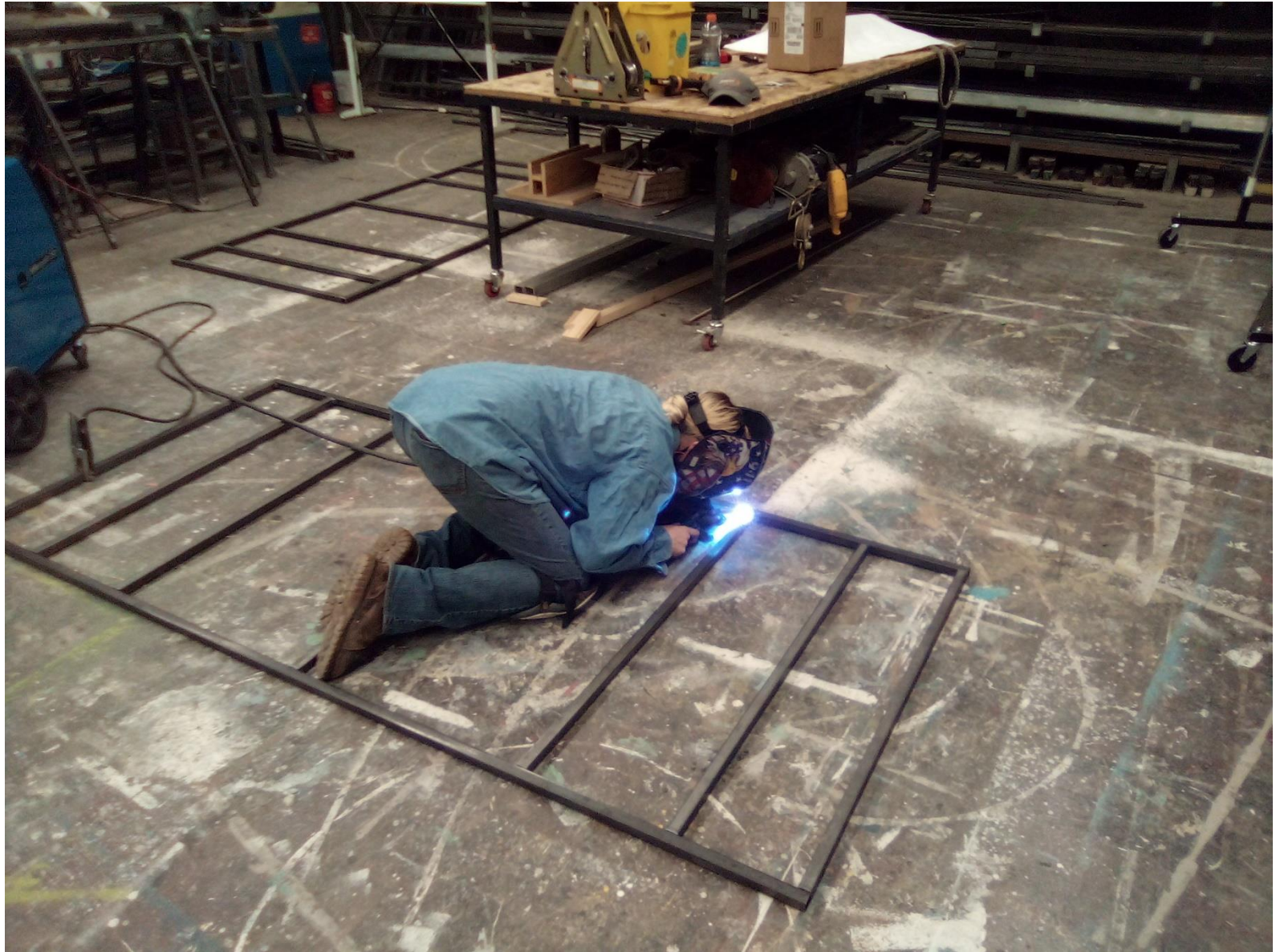


Table welding



Prodan

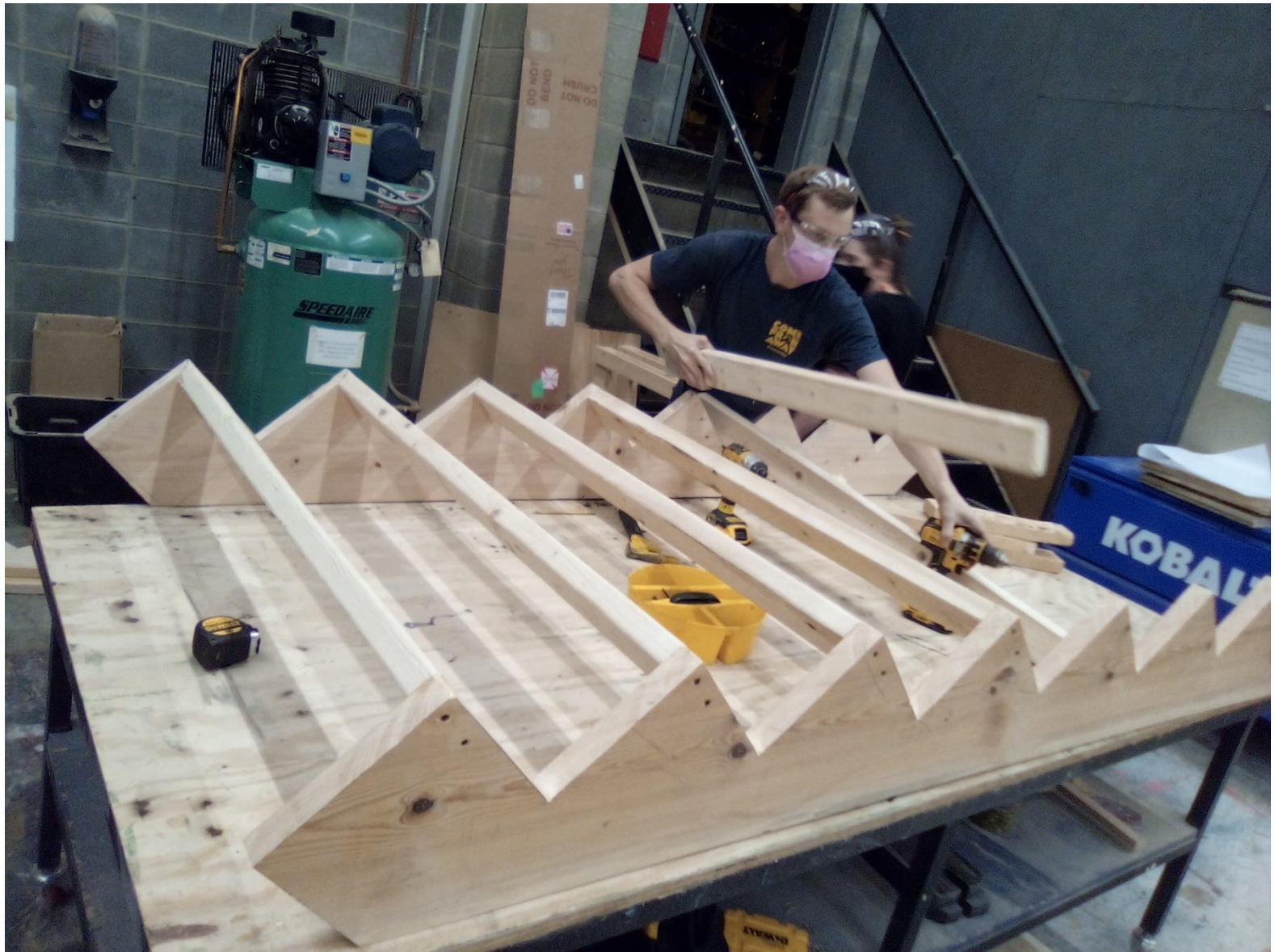
**APPENDIX F: PROCESS PHOTOS**



Ten-foot platform for catwalk construction

Prodan

**APPENDIX F: PROCESS PHOTOS**



Escape stair construction

Prodan

**APPENDIX F: PROCESS PHOTOS**



Catwalk construction

Prodan

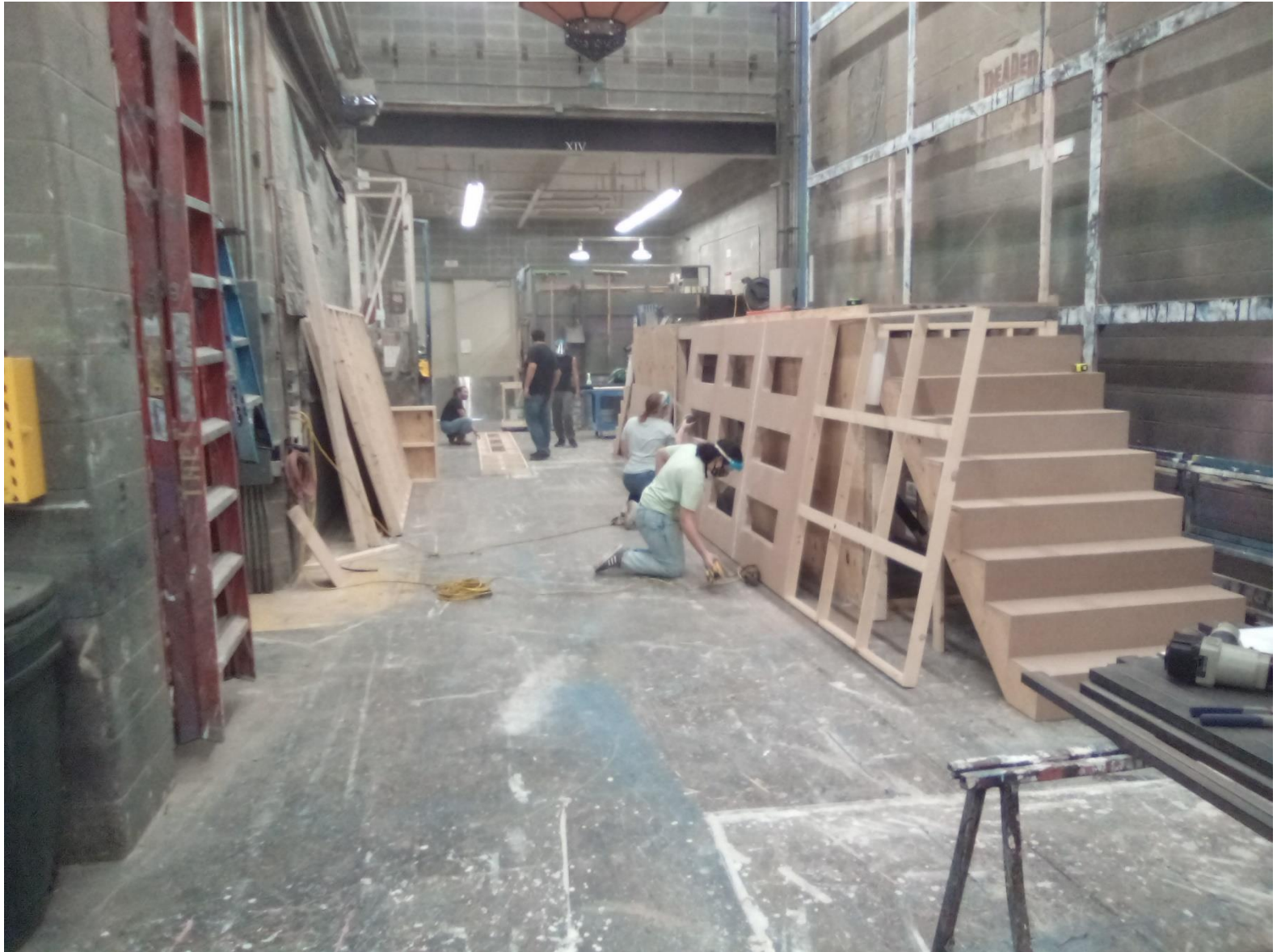
**APPENDIX F: PROCESS PHOTOS**



Abandoned building

Prodan

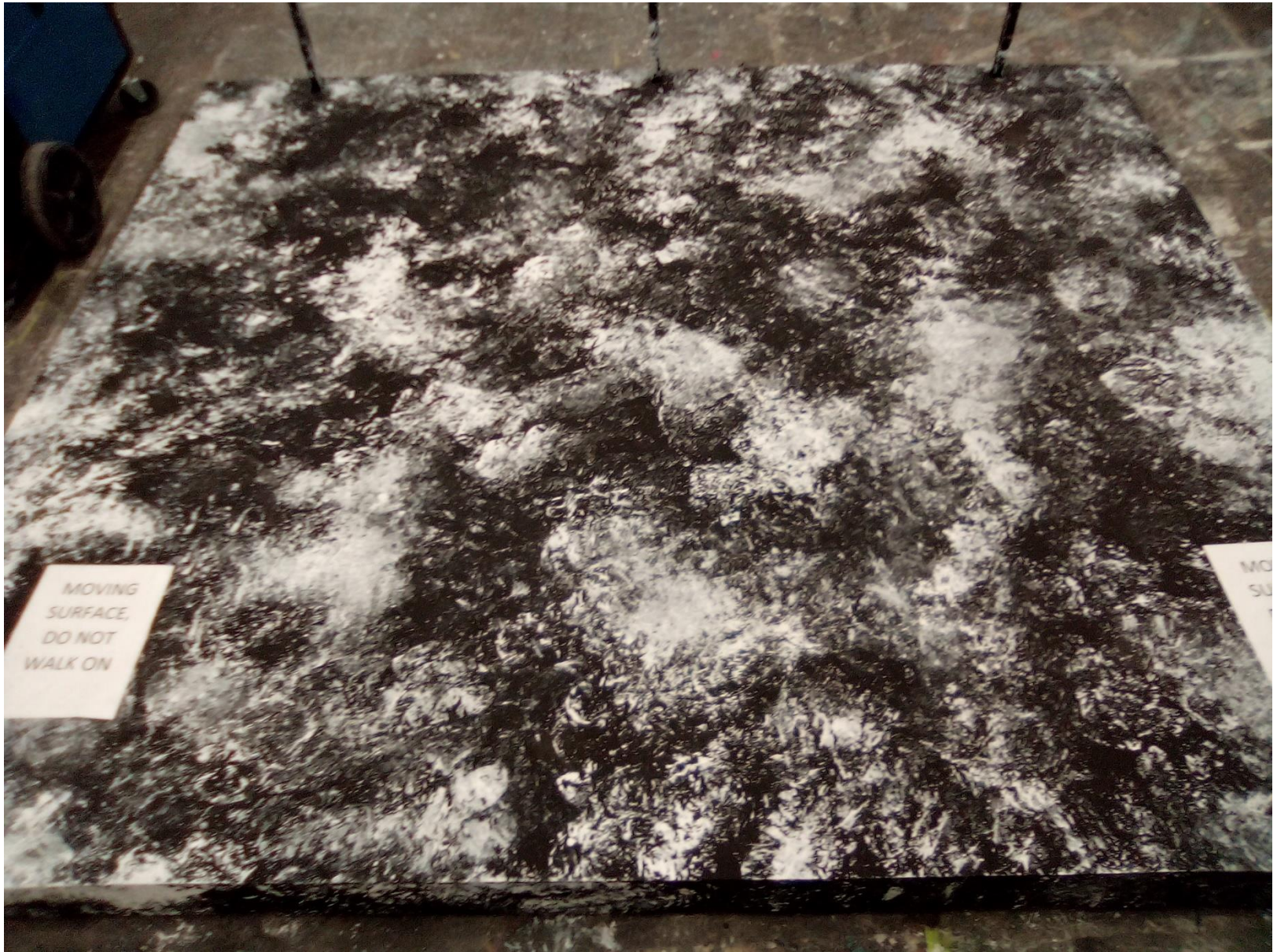
**APPENDIX F: PROCESS PHOTOS**



Abandoned building assembly

Prodan

**APPENDIX F: PROCESS PHOTOS**



Painted band platform

Prodan

**APPENDIX F: PROCESS PHOTOS**



Loft with escape stairs

Prodan

**APPENDIX F: PROCESS PHOTOS**



Assembled catwalk



Prodan

**APPENDIX F: PROCESS PHOTOS**



Assembled loft