AVENUE Q: AN ENDEAVOR IN TECHNICAL DIRECTION

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AVENUE Q:

AN ENDEAVOR IN TECHNICAL DIRECTION

by

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A THESIS

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Avenue Q:
An Endeavor in Technical Direction

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The Johnny Carson School of Theatre and Film at the University of Nebraska began its spring semester of the 2017-2018 season with a production of Avenue Q. Director Andy Park staged this production in the Johnny Carson Studio at the Lied Center on the University of Nebraska campus. My role in the production was that of technical director. The responsibilities of the technical director include budgeting of departmental resources, money and labor, engineering and construction of all scenic elements, maintaining a safe working environment, creating and adhering to a timely build schedule, maintaining the designer’s aesthetic vision throughout, the transportation and installation of all scenic elements to the performance space and removal of all elements following the completion of the production.

This thesis details the process necessary to take a conceptual design and put it into a working reality within the confines of budget, time and available skill. Following the conclusion of this thesis is a series of appendices to support the written information.
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Chapter 1: Introduction

The Johnny Carson School of Theatre and Film began the spring semester of the 2017-2018 season with a production of Avenue Q. The production took place in the Johnny Carson Studio Theatre located in the Lied Center on the campus of the University of Nebraska. The production officially opened on March 2, 2018 and closed on March 16, 2018 with a total of fifteen performances. The production team included Andy Park (director), Jessica Thompson (scenic designer), Jamie Bullins (costume designer), Laurel Shoemaker (lighting designer) and Emily Callahan (sound designer). I received the assignment of technical director for the production during the spring of 2017.

Avenue Q was written by Robert Lopez and Jeff Marx with book by Jeff Whitty. It opened on Broadway in 2003 at the John Golden Theatre, where it won three Tony Awards. The musical is a comedic satire on the maturation process of becoming an adult and having to leave behind the false realities ingrained in the heads of adolescents growing up. The production incorporates puppets, puppeteers and human actors in a not-so-subtle imitation of the world created for Sesame Street. This world, however, is firmly rooted in modern day trials and tribulations and the realities that begin to set in once youth reaches adulthood. The show primarily follows the life of Princeton, a recent college graduate who has found himself with no money, no applicable skills and no idea how to navigate this newfound and rather harsh world. The audience watches as Princeton traverses his way through romance and
heartbreak, the extremes of both good and bad advice, and general despair, with musical comedy relief underscoring everything.

This thesis is intended as a detailed overview of the process of taking the artistic and aesthetic goals of the production team as a whole and bringing them into a finite and produced reality. The main objective of the technical director follows closely to the work of the scenic designer. The ultimate goal of the technical director is to maintain the scenic designer’s artistic and aesthetic vision from start to finish. The technical director accomplishes this process through a variety of means. Primary responsibilities include accurate budgeting of time, resources and materials, engineering and construction of scenic elements, implementing schedules to allow successful completion, maintaining a safe working environment throughout and maintaining effective communication with all interdepartmental staff.

This production had a working budget of only $3,500.00, an amount which was to cover all major scenic elements as well as all paint supplies. We received a six-week window for the build schedule with three days available to pack the set into a box truck and transport it to the performance space and install. The major components of the design included two buildings façades, each with a second level, a third building façade with a standing level above it, a custom projection screen, a full stage silhouetted ground row as well as a full stage sub-deck to install the units atop.
Design meetings for Avenue Q began in September of 2017 with the design team and director discussing the practical needs for the production. While the technical director is not required to attend design meetings, my personal preference is to be involved as early in the process as possible. I view my role in these meetings as being a general observer of ideas and as a sounding board should any concerns arise. This level of early involvement also provides a cursory background on why and how design choices are being made and their intended effect. A few particularly notable revelations from these meetings were the use of a live, six piece band on stage, the use of projections throughout, the lighting designer’s interest in utilizing spot lights in a performance space that did not naturally accommodate their usage and the growing interest of the scenic designer to incorporate puppet-like functions into the set itself, rendering the set itself as a giant puppet.

While none of these revelations fell solely under my purview, I felt it in the best interests of the production as a whole to begin investigating some solutions. Due to the fact that the Johnny Carson Studio is not located in the building that houses the theatre department (the Temple Building), my working knowledge of the space was far less familiar than with the other performance spaces in the Temple Building. As such, I scheduled a walkthrough of the space with Dan Stratman, the director of production at the Lied Center. The walkthrough was an informal event but afforded me the time to see the space without any scenic elements installed, to inspect the seating units that we would be utilizing and to take a few field measurements to
ensure that the technical drafting of the building from which we were working was accurate enough to avoid significant obstacles as we proceeded. During this meeting I mentioned to Stratman that we were thinking of methods which might best incorporate the spotlights at the rear of seating units. Stratman mentioned that the Glenn Korff School of Music owned some scaffolding units that could potentially work, as they had built in walk through openings so that we could maintain proper fire code egress. I conveyed this information to the production team and we determined that the lighting department would contact the School of Music to inquire about the aforementioned scaffolding’s size and potential usage.

The design meetings shifted focus to become production meetings allowing the facilitation of the production to begin to take shape while respective designers were fine-tuning their work. During these meetings it was evident that a challenging aspect of the production was growing in scale and concern and that was the use of projections. While the Johnny Carson School of Theatre and Film has some stock of video equipment, it is incredibly limited. There was also a noteworthy concern with where responsibilities fell for not only sourcing the necessary equipment and its setup, but also who would be responsible for the creation of the content. Fortunately, two undergraduate students in the film department, Michaela Wadzinski and Ethan Grafton, were willing to take on the task of content creation under the supervision of faculty advisor Steve Kolbe.

With half of the matter solved, the responsibility of the technical aspect of projection use was still batted around the room with no one department looking to claim ownership. The particular challenge of using projections in Carson School...
productions lies in the absence of one person on faculty or staff who has expertise enough to answer difficult questions concerning the technical needs and requirements of equipment. Before frustrations could grow any further, I took this responsibility upon myself. With base working knowledge of projections I suggested that we utilize a rear projection screen to minimize the amount of ambient light with the hope to have a bright enough image for the audience. Based on the initial working ground plan from the scenic designer, there was slightly more than five feet of space behind a screen that was roughly ten feet by six feet. Kolbe recommended that we aim to keep the aspect ratio at 16:9 for video content’s sake. I then began research into the throw angle of projector lenses, potential necessary lumen output, resolution and cost of procurement.

The first component I needed to understand was how the throw of the lens dictated the distance away from the screen necessary to create the intended projection size. Throw ratio is expressed in a numerical ratio; for example a lens with a throw ratio of 1.5:1 means that for every one foot of screen width you require, the projector must been one and a half feet away. A projector with the throw ratio of 2.0:1 would require two feet of distance from the screen for a one foot wide image. With this information I calculated that the absolute largest throw ratio for a lens for our purposes would have to be in the 0.6:1 range but hopefully shorter than that, 0.5:1 would be ideal. This throw ratio is classified as a short throw lens. Having working knowledge of the JCSTF projection equipment stock, I was less than optimistic that we would have anything remotely close. A conversation with the house electrician Kathy Turner confirmed my suspicions. Most projectors that the department owns are long
throw in the range of 3.9-7.3:1. The shortest throw lens in stock was a 1.5-2.24:1, which was not going to function for our needs.

The next line of inquiry led me to the Hixson-Lied College of Fine and Performing Arts Information and Technology Services. David Bagby, the manager of IT Services, informed me that unfortunately the college owned no projectors with a lens throw within the range that I was searching. Bagby did however say that there was a portable rear projection screen available that I could borrow for testing. Half of what I needed was better than nothing at all. Broadening the search sent me in two different directions. I first contacted Dog and Pony Productions, an audio/video rental company based in Omaha, Nebraska. Dog and Pony Productions had a projector in stock that could swap lenses in order to accommodate my needs, but they did not own said lens. Dog and Pony could rent it from another company and then sub-rent it for the production. While it was a relief finally to find some potential answers, that relief was fleeting: the rental price came in at nearly $5,000.00 for the run of the production. Considering the rental price was $1,500.00 beyond the scope of the entire scenic budget, it was quickly evident that renting it would not be a feasible solution.

I subsequently contacted William Van Deest, my undergraduate advisor and the theatre coordinator at Creighton University in Omaha. I recalled using projections on a few shows during my years at Creighton, but I had no knowledge of what was in their current inventory. Van Deest confirmed that they owned two ultra-short throw projectors and that I could borrow one to test and see if it would suit our needs. Now with both a borrowed projector and a borrowed screen I moved forward into the testing phase. On December 14th I conducted a video test setup on the main stage of
Howell Theatre in the Temple Building. I opted to use this space due to having conventional theatrical lighting hung that I could utilize to gauge ambient light bounce that would be likely during production. Invited to the test were Jessica Thompson, Laurel Shoemaker and Andy Park, as well as JD Madsen (Professor of Scenic Design) and Mitchell L. Critel (Professor of Technical Direction).

The test was successful in that we were able to project an image from very short distance from the rear of the screen and that it was visible through ambient theatrical light at a distance of nearly fifty feet away. Though the team agreed that the projector would fit the needs of the production, I was left wanting a better option. The image degradation beyond eight feet in width, the lower resolution and the low lumen output gave me cause for concern. I again contacted Van Deest and discussed my misgivings. He agreed and mentioned that he may have another option through an audio/visual specialist whom he contracts for work. Two weeks following I had a second option to test, one that was newer and smaller with a higher resolution and brighter lumen output. Within moments of testing the second projector my concerns were put to rest. It was evident that this projector would be capable of fulfilling the needs of the production, and being able to borrow the projector at no cost was just as big of a bonus.

With the business of projections more or less put to bed, I was now able to focus on my primary concern, the scenic design. The initial design packet was due on December 8th for cost analysis with my costing due on December 15th. I received the packet on December 11th and quickly got to work. The idea of creating building structures that mimicked puppet actions meant that entire walls were able to pivot
and slide open and close. Such mimicry, while interesting, posed a significant challenge in the eventual engineering of those components. Most often, when large scale movement of scenic elements is involved in a design, the cost begins to rise in lockstep. Another considerable element of the initial design that was going to add to building costs was a cantilevered second level to house the entire band so they were not taking up a significant portion of the main playing space for the actors. Over four days I worked through the multitude of scenic elements. My process of cost analysis involves a component of pre-engineering where I began to determine how structures must be built in order to determine materials and quantities.

I completed the cost analysis before meeting with Thompson, Park and Critel on December 15th. The result of the analysis was that the initial design was roughly $8,500.00 over budget. Quite candidly, I would say this surprised no one in the room. In order to construct the main scenic elements and have them resilient enough for transport to another theatre, I opted for an all steel frame construction. This was particularly necessary for the units that opened and closed for durability’s sake, as well as the cantilevered band platform. Professor Critel and I offered suggestions to Thompson about minimizing some of the intricacies of the design without losing the aesthetic qualities. One of the main suggestions was that the functionality of the set as a puppet be discarded in place of a more traditional façade to the buildings. Another suggestion was to design a way so that the band platform was able to have more vertical support, thus requiring less heavy duty structural steel for construction. At the conclusion of the meeting we determined that Thompson would have five days for revisions, after which I would embark on another cost analysis. This delay pushed
revisions and re-costing into winter break, a period we had earmarked for the engineering process of the production.

Thompson began sending gradual revisions starting on December 20th with a completed packet arriving December 23rd. It became evident that she was holding onto the idea that the set function as a puppet, albeit on a lesser scale. I completed the subsequent cost analysis on December 24th, but the design still exceeded $4,000.00 beyond working budget. At this point I had to be very honest and insist on austerity: if the design were going to be realized the idea of its puppet like functions would have to expire. This was not easy for Thompson, nor me. I was truly excited by the concept of the design. Avenue Q has been produced without such machinations time and time again, but this was an opportunity to create an interesting take on what has become a commonplace design. It was nevertheless unfeasible within the working budget.

Thompson set to work on another round of revisions which were more in line with a redesign of the set, which I received on December 28th and began re-costing.

I completed the cost analysis of the redesigned set on December 29th, and though still over budget, it was now within an allowable range that I felt could become achievable. Major changes came from eliminating the puppet-like mechanics of the buildings as well as moving the band to the upstage area of the main playing space instead of housing them on a second level platform. I scheduled a phone conversation with professor Critel to discuss how and where the design had changed and to confer with him about the amount that it was currently over budget. I suggested that lowering my contingency budget line (a cost reserved for unexpected expenses), moving a few cost items from scenic to props and charging the cost of the
custom built rear projection screen to a special effects cost line would allow the show to be within budget. Critel agreed and we were able to proceed with the design, without losing significant visual aesthetics from the intent of the original design.

On December 30th I began the engineering process in earnest and with a quickened pace. Build on the set was slated to begin January 2, 2018 but I remained doubtful about time sufficient to create enough working drafting for the shop to begin by that date. The engineering process would take me the ensuing two weeks to complete, working mostly during the evening or whenever not in class. The largest downside to working through the costing and redesign process over winter break was it had consumed all of the time earmarked to engineer the show effectively. This process inevitably led to a few oversights on my part but thankfully nothing that was insurmountable.
Chapter 3: Construction

Construction of the show officially began on January 3, 2018, not too far off the intended start date of the 2nd. Classes did not begin until January 8th, so during this week the labor force consisted of fellow technical direction graduate students Daniel D’Egnuff, Michael Strickland and me. I had my counterparts begin construction on the sub-deck pieces we would have to build to accommodate the set within the constraints of the Johnny Carson Studio. Any scenery utilized in the studio we had to install atop a sub-deck of our own design and creation so that we could anchor down set pieces to it. The studio has a battleship linoleum floor of which the Lied staff is very protective, so protective indeed that a single screw hole into their floor came with a repair bill of $100.00. At this point in the budget we were mindful to avoid such costly mistakes. We completed construction of the sub-deck early the following week and gave it to the paint shop.

Classes for the 2018 spring semester began January 8th, meaning that we would soon have the undergraduate student force back in the shop to assist in the build process. The scene shop employs four undergraduate workers: first year students Karen Husband and RaeAnn McCoy and second year students Colin Falk and Dylan Spilinek. Professor Critel assigned Spilinek the task of master carpenter for the show. These students are vital in the function of the shop, whether it is taking on individual projects or utilizing other students to complete larger projects. The students in the other pool of workers come from lab components in the Intro to Theatre class (THEA 112) or the Technical Theatre Practice course (THEA 201). The total expected number
of students for the semester would reach around 55. These students, however, needed to go through safety orientation before being allowed to begin their lab hours, so their anticipated start date was another week away.

During the first week of classes the four shop employees along with the graduate students began work on the façades of the center stage unit and the stage left unit. The center stage unit split into two sections, a first and second floor in order for ease of construction, but also for transportation out of the building and into the performance space. Each level of the center stage unit consisted of five walls, while the stage left unit consisted of three walls. Work on these units continued into the following week and we completed work on them January 18th, after which we handed off to the paint shop. The shop had been operating at a substantial pace up to this point, and I feared that the introduction of lab students could potentially begin to bog down that progress. This observation is by no means a knock on the lab students coming in to work, but it is rooted in the reality that most, if not all of them, have little to no prior experience working in a scene shop. And as an instructor of one of the sections of THEA 201 I do not expect them to. Their lack of experience is the specific reason for offering the course. That inexperience, however, means that they require more time, careful consideration and considerable oversight as they begin working in the shop. During this week a sizable order for steel arrived, which I planned to use for construction of the stage right unit, the fire escape, the ships ladders used to access all second levels, as well as the frame for the custom projection screen.

To my delectation, the overall progress and pace of the shop was functioning well and it did not begin to slow with the addition of lab students. Their eagerness to
hop in and their willingness to deal with some of the more mundane tasks kept the build moving ahead. There was one day in particular where the assistant technical director Daniel D’Egnuff stopped and forced me to take count of the number of humans working in the shop. The total number was somewhere near twenty four, which is generally more than double what the scene shop can typically accomodate.

Beginning the week of January 22nd I divided the specific workload in the shop. The stage right unit façade, fire escape, ships ladders and projection screen were all being fabricated from steel. The process of cutting, preparing and MIG (metal intert gas) welding is beyond the experience of most student labor in the shop. I tasked D’Egnuff as head of this operation with the assistance of master carpenter Dylan Spilenek and shop employee Colin Falk. I thus divided the bulk of the lab students amongst the paint shop and scene shop employee Karen Husband along with graduate student Michael Strickland to begin work on the ground row. The ground row was a silhouetted backdrop with the cityscape of New York City cut out of it. The overall size was forty feet wide by almost eighteen feet tall.

Initially I had considered utilizing the Computer Numeric Controlled (CNC) machine the Carson School owns to complete this task by loading the vector based files and having the machine cut the profiles. After further evaluation I determined it would be in the best interests of the shop and the lab students to utilize an alternative method using a video projector to trace the images onto the material and then cut the shapes out with hand power tools. While I am I staunch supporter of technology and assisted in the research process for the grant for the CNC machine, I also firmly believe that it would have been taking basic learning and an opportunity to work with tools
away from the lab students. The accuracy would have been infinitely more precise had the CNC been utilized, but for this particular application I felt it was far more important to put tools into the hands of those that were there to learn, and learn how to use them properly.

The work on these respective projects continued through the week and into the following. During this week, however, it became apparent that the size and scope of the design had put the shop at, if not beyond, capacity. In order to keep all build projects moving forward the scene shop had effectively stretched out into every available space within the Temple building. The shop itself was occupied with building the ground row and painting the center stage unit. I was utilizing the studio theatre to trace the ground row panels as well as using it as a full sized paint shop. The entire Howell theatre stage had been taken over by the sub-deck which was waiting for its final paint treatment after receiving a base coat of black. The stage left unit was receiving final paint touches in the wagon house off stage left of Howell, and the metal shop was beyond capacity. We were quickly running out of space, and that crunch complicated the looming exigency of building the additional scenic units. It was also around this time that I began to worry that the paint shop was not going to complete their work successfully. They had spent three weeks working on samples to this point and only the smallest unit in the show had been completed.

With two weeks left in the build schedule I worked to move all available hands to assist with paint as I could afford. The remaining scenic elements to be built included the platforms for the stage left, center stage and stage right units and a series of jacks to support the ground row. The stage right unit was welded and ready to be
covered in lauan for paint. The fire escape, the projection screen and trim for all units were the final components to complete. The doors for the three units had come from the stock that the Carson School owned. I asked Strickland to clean the doors up and then create custom jambs so they could be installed into each unit. As D’Egnuff was finishing up the welding projects I then had him turn his attention to cutting and creating the trim work that would adorn all units. Most of the trim was simple in nature, rectangular and without much detail work -- but there were a few pieces that required some assembly to give depth and shape. The intention was to create a labeling system for all of the trim before it went to paint so that it would be easily discernible. It was my hope that the trim could be cut and built by February 9th so that it could be painted over the weekend during the paint call that was scheduled for full work days on the 10th and 11th. I spoke with the paint charge and explained the labeling system and how it corresponded to the individual buildings.

The final week of build began February 12th and while there was a fair amount of work ahead the end goal was certainly in sight. The bulk of the work during this week was the detail work, those things that would help make the set look like a cohesive finished product. This detail work included the installation of windows, installation of all trim that could be done before transport, building capitals to adorn the tops of the buildings, build the frame for and stretch the rear projection screen material, building safety railings for the second levels of units, as well as building a cradle to house the projector safely. There was a sense of excitement in the air among the scene shop and staff. They had put a lot of work into the building process and knowing that it would be installed the following week added encouragement to
continue to power through. I had voiced my goal to the shop that by the afternoon of Friday, February 16th, the bulk of the work would be done and that the crew could begin to disassemble the major scenic units for transport the following Monday. We met our goal head on when disassembly began at 3:00 PM that Friday. By 5:00 PM the set pieces first in line for installation were neatly packed together and awaited load out of the scene shop.

At this benchmark in the build process I was able to step back and take a moment to reflect on the sheer amount of hard work and effort the crew had put in -- but I also reflected on a significant personal goal that I was unable to meet during the build. It had been my intention to be able to assemble the set fully (sans sub-deck) on the Howell stage in order to understand how exactly the second level units were going to install together. I knew that there would be some amount of trouble-shooting involved with this process and I wanted to experience the process within the confines of our building in order to minimize any frustrations and to have a full assortment of tools available as needed. This degree of preparation was simply not feasible due to time and space constraints during the build process. It certainly did not indicate a large failure on my end, it just meant that the trouble-shooting process would have to happen in the Johnny Carson Studio during a very limited load-in schedule.
Chapter 4: Load In

For the process of transporting all technical elements of the production from the Temple Building to the Johnny Carson Studio at the Lied Center the School rented a twenty six foot box truck for the duration of February 18th to February 20th. In the entertainment world, this is a process called “load-in”, during which the crew moves all elements into the performance space and the installation can begin. Load-in officially began on February 18th with the electrics crew taking the first day to hang all of their lighting instruments and to begin focusing. This date also marked the time for the sound department to hang their speaker plot. The Johnny Carson Studio utilizes a motorized pipe grid that can be lowered via four cable drive winches. The intent was that electrics could manage the majority of their hang on Sunday so that the grid was only moved a total of one time, thus eliminating the number of times that they would have to refocus instruments if the system had to be lowered again.

I was in attendance for a portion of this day as there were a number of ANSI (American National Standards Institute) Schedule 40 steel pipes that required installation to one end of the existing grid to accommodate the cyclorama and cyc lights, the scrim, border, legs and other drapes and curtains. I gave lighting the first couple hours of the day to begin their process before coming in with scene shop supervisor Nate Rose to hang the pipe for scenic needs. During a stop by the studio I noticed that there was a large projection screen hanging directly where the cyc was supposed to hang, taking up about one foot of required depth. Speaking with Lied production technician Jeff Koch I asked if it were possible to move the screen as it was
not indicated on any of the technical drawings of the space. Koch thought it was a possibility but it was a decision that required approval from his supervisor. I asked Koch to keep me informed and began developing an alternative solution if it were not feasible to move the screen. Koch later informed me that the screen would not be movable. Rose and I proceeded with the alternate plan of moving the pipe that the cyc hung on downstage one foot. The area of production that this change would most affect was lighting if there was not sufficient room for their cyc lights to adequately illuminate the cyc. After speaking with house electrician Kathy Turner and assistant lighting designer Adam Jezl-Sikorski, they both thought the move would be negligible. Rose and I continued to hang the remainder of the necessary pipes for soft goods and scenic.

The scenic portion of the load in was scheduled for February 19th through the 21st, from 1:00 PM until 10:00 PM. These hours were extended beyond the typical workday of the scene shop in order to have sufficient time to accomplish the task at hand. The load-in schedule was particularly aggressive but optimistic. My hope was to finish scenic load-in quickly and allow lighting as much time as possible in the space to finish focusing and work on cueing. Due to the size of the design I determined that we would require at least three trips with the box truck in order to transport all scenery to the performance space before our truck rental expired on Tuesday the 20th. In order to accomplish the timely use of the truck, the order in which the crew packed the truck was of paramount concern to a successful load-in. Thus, the initial truck pack included the first scenic elements that needed installation for the process to move appropriately. This pack had four carts which contained components of the twenty
four foot by forty seven foot sub-deck, the ground row, the jacks for the ground row and the road box which contained all of the necessary tools for the scenic load-in.

The first items we needed to install were all of the soft goods: the cyc, scrim, border and legs. These had to go in first because once the ground row was installed the space they occupied would no longer be accessible. Once the soft goods were hung, Koch, Critel, D'Egnuff and myself set the trim height on the motorized grid. This process involved slight adjustments in height both up and down at six different points throughout the space. Once the grid was set to its final trim height, the installation of scenic elements could begin.

The sub-deck was the first and most obvious unit requiring installation, because all of the other scenic units sat atop it. This process began a bit slowly but it was important to get this component correct so that all of the other pieces in the process would be able to be installed in their intended positions. While the sub-deck was in process, I began spiking positions for the ground row and its support jacks for installation. Crews were concurrently loading the second truck pack at the Temple Building, with the first floor façades of all of the units, the masking unit for the projection screen and all of the platforms and legs. While I installed the ground row, the crew unloaded the second truck pack; meantime we installed the stage left unit with its second level platform. Once the ground row was completed, my attention turned to getting the center stage and stage right first floor façades installed followed by their first and second level platforms.

Day two of load in began with the third and final truck pack. The second level façades of the stage right and center stage units we had purposely left behind to allow
paint time to finish detail work as well as electrics time to finish running cables for the light emitting diode (LED) tape. In addition to the second levels, the ships ladders, fire escape, safety handrails, stair units, flower boxes, awning and projection screen were loaded. Once the truck arrived at the performance space it was quickly unpacked and work began installing the ships ladders to the stage left and center stage units while the stage right second level façade was installed. During this period I added rigging points to the grid of the studio to create hanging positions for the projection screen and projector itself.

Following the completion of those elements the crew turned its attention to installing the ships ladder on the stage right unit while adding the safety handrails to all second levels. The safety handrails served a double purpose for the production. First and foremost they were there to keep the actors on the second levels safe from falling to the stage floor from a height of nearly ten feet. Their second purpose was to provide the basic structure for black masking fabric, to prevent the audience from seeing beyond the interior of the units when doors and windows were opened. The addition of this masking was added rather late in the process and though I would hesitate to call it an afterthought, in all reality an afterthought is it was. My solution involved running cordage between vertical sticks of steel that were incorporated into the safety handrail. Once the cordage was hung I draped black duvetyn (or “commando cloth”, depending on which coast you live on) and safety pinned it around the line. While I feel there could have been a more intentional masking device, this fit the need of the production.
At the end of the third day of load-in we had installed all of the major scenic elements without any major challenges. At that juncture, the scenic crew could not return to the performance space for additional work until Friday, February 23rd to allow lighting maximum time in the space to fine focus instruments and complete cue work. However, Dylan Spilinek and I spent a few hours in the space on Thursday, February 22nd running cables for the projector as well as the video feeds of the conductor for the cast and stage management and of the stage feed for the conductor.

Friday, February 23rd was the last working day before having cast on stage later that evening. It was in the best interests of the production as a whole that some of the smaller detail elements be in place so that the cast could begin working with them and the set in order to become as comfortable as possible. The crew installed flower boxes, tagged all masking curtains with white ribbon so that the cast understood entrances and exits, they hung the last two masking legs, and they striped the set as a whole with white gaff tape to avoid any instance in which someone could be caught off guard while moving in the dark. The remaining trim that we could not install before transport we now expedited during this time. Though some finishing details remained uninstalled at this point, I was content with the state of the set heading into technical rehearsals.
Chapter 5: Technical Rehearsals

The technical rehearsal schedule did not officially begin until February 24th, but on the evening of the 23rd there was a blocking rehearsal which gave the cast their first opportunity to be on the set. The rehearsal also provided the director necessary time to understand how his blocking for the show would work on an actualized set. The cast had up to this point only used the taped-out two dimensional rendition in the Temple Building rehearsal rooms. I have always made it a point to welcome the cast to their set for the first time and this show was no exception. This house warming on my part is rooted in a concern for safety, making sure that the cast understands how the set will interact with them and how they can safely utilize all components. There is also a part of me that truly enjoys seeing the excitement and exploratory nature of a cast when first allowed to traverse their new world.

I prefer to have the cast work through the space in quarter speed, then half and eventually work their way up to full speed so that they can create a sense of accustomed comfort before having to run the show with full energy. This particular design gave me two moments of inherent trepidation: the ships ladders and the fire escape. Whether actors are comfortable at heights or not, getting familiarized with traversing ships ladders can be tricky at first, due to the steep angle and a general sense of unacquainted novelty. I asked that anyone who had scenes blocked on the second levels of units slowly ascend and descend the ladders until they were confident in their footing. It was during this time that I discovered that the actor playing Gary Coleman, Karen Richards, was severely afraid of heights.
Unfortunately for Ms. Richards, almost all her entrances and exits utilized the second floor fire escape and the on stage straight ladder to the ground. I assured Richards that we would spend as much time as needed in order to make her comfortable traversing the offstage ships ladder as well as becoming confident and comfortable being on the fire escape and using the straight ladder. While I know there is no way to force overcoming a fear of heights, I have also helped many students and cast members become more comfortable working at elevations. I can only begin to imagine how difficult it is to be at an uncomfortable acclivity while trying to maintain character. She and I spent around twenty minutes on the fire escape itself, practicing breathing techniques as well as proper climbing techniques until she felt completely safe on the set. Once Ms. Richards had confidence with the heights she was working from, the blocking rehearsal continued. Throughout the course of the rehearsal I took scenic notes on things that needed to be address during the following week, but I specifically paid close attention to her work on the ladders and by the end of the evening she was climbing up and down without hesitation.

Technical rehearsals commenced on February 24th and 25th with ten hour workdays over a twelve hour call. These lengthy technical rehearsals are the first opportunity for the technical staff and stage management to begin putting the show together in working order. This production was certainly not lacking in technical aspects that needed fine-tuning within the show. Not only was it the first attempt at incorporating sound effects and lighting cues, we were also working with two spot light operators, projections, costumes, haze and fog, a live audio engineer and a backstage run crew for transitions. While some dread the monotony of technical
rehearsals, I find they are the opportunity for the true choreography of the production to find its home. Clunky or otherwise poorly planned transitions and miscalled cues can easily take the audience out of their willful suspension of disbelief.

Through the two days of rehearsal, I primarily took notes on elements of the production that required aesthetically finished touches or on pieces that were not working as they should. There were a few transitions that I was happy to assist the cast and crew in attempts to make them as succinct as possible. The first major transition that needed help was the shift into the “Around the Clock Café” scene. During a production meeting a month prior there was a directorial ask that an actor be able to tap dance at the top of this scene. The wear and tear from tap shoes posed a threat to both the paint treatment on the sub-deck as well as the sub-deck itself. Being in a roadhouse, paint touch-ups are approved on a very limited basis. And with the Carson School’s intention to continue to produce theatre in the Johnny Carson Studio, the sub-deck would endure continued use for years to come. It was my suggestion that in order accommodate the tap dancing and preserve the floor below it, a piece of high density fiberboard (HDF) be brought on for the actor to use. This arrangement met with directorial agreement, but during the first attempt at transitioning into this scene the result was anything but graceful. A second attempt was slightly better, but still less than optimal. At this point we discussed cutting the piece of HDF to size so that it could fit beneath a scenic element and simply fold down for the scene and fold back up following. A couple more attempts with the modified approach and the transition was able to take proper shape.
Another such transition that needed some nuance was the shift into the wedding scene. For this look, the scenic designer wanted festive lanterns hung about the second levels of both the stage right and center stage units. Again, the first attempt lacked grace. A few modifications to where and how the lanterns were hung and where they were stored directly before the transition helped immensely. Though the onstage picture was not drastically different with the lanterns than the stock set, it was a nice and simple addition to give the scene its own look.

With the cast having an Equity day off of rehearsal on February 26th, various production departments were able to gain uninhibited access the space, allowing us to address the bevy of notes that came from the weekend’s rehearsals. February 27th served as first dress as well as the production’s first rehearsal with the six piece live band. Going into this rehearsal I knew the addition of the band could become a potential pinch point. The space allotted to the pit band was rather tight, especially when none of the instruments are particularly small. They included an acoustic piano, electric keyboard, a drum set with auxiliary percussion, an electric guitar and bass and a woodwind player who played multiple instruments throughout. Another possible predicament I foresaw arose from not allowing the live audio engineer (A1) sufficient time to set microphones on instruments and then dial them in through the sound system. Having been a touring musician and live engineer, I offered Araceli Ramirez (A1) whatever help I could, telling her I was not there to do her job but merely to help in any capacity she needed. My contribution to getting the band situated came from playing a human and instrument version of Tetris, trying different instruments and
amplifiers in different locations until everyone had enough room to be comfortable and to successfully perform their parts.

With the band set, technical rehearsals continued as the production team tweaked and fine-tuned various aspects of the show. I spent the majority of the rehearsal moving about the seating units looking for unfinished details from all vantage points of the eventual audience members. These notes would be finished during the following daytime hours leading up to the final dress rehearsal on February 28th, one that included an invited audience of theatre majors. The positive response of the invited audience proved to be a nice reaffirmation to the cast and crew that the long hours spent leading up to opening of the show were well worth the efforts and energy put forth.
Chapter 6: Performances

*Avenue Q* officially opened on Friday, March 2, 2018 to a sold out crowd. The production was performed a total of fifteen times and closed on Friday, March 16, 2018. During the run of performances there was only one technical problem that required my attention: the non-slip grip tape installed on the ships ladders was peeling off a couple rungs. I replaced the pieces that were peeling and reinforced all of the remaining rungs to ensure no future problems. None occurred.
Chapter 7: Strike

Following the conclusion of the final performance on Friday, March 16th the crew uninstalled and removed the entire production from the Johnny Carson Studio Theatre. This process has traditionally earned the sobriquet “strike”. To prepare for this strike, I scheduled a meeting amongst departmental heads so that everyone could have an opportunity to voice specific needs and to discuss what each department required of the others, as well as to ensure that everyone was well aware of the schedule moving into strike. Leading up to this meeting I formulated a strike plan that encompassed not only the scenic elements but also projections and video as well as the components of the performance space that required a reset, including seats and risers and getting the pipe grid back to its standard setup. In addition to communicating with each department I also discussed the logistics with our Lied Center contact, Jeff Koch. Koch and I discussed how to navigate the loading dock between our strike and the concurrent load-out of the Three Tenors which had been performing on the Lied Center’s main stage. We determined that the roll-off dumpster for the Avenue Q strike would be dropped off in bay two of the loading dock earlier in the day on Friday, and once the Three Tenors load-out was complete we could move the rented box truck into bay one.

The crew for strike consisted of eleven graduate students, twenty seven undergraduate design and technology majors, five undergraduate cast members and two departmental staff members, all split into areas of focus to complete the task at hand as swiftly as possible. My initial estimation led me to believe that strike would
require around four hours to complete. Strike began at approximately 10:00 PM once the audience had vacated the house completely. A portion of the crew assigned to scenic began working on the seating units, collapsing them and moving them out of the way as much as possible. At the same time another portion of the crew set to work on the stage right unit so as to allow an unobstructed path to the loading dock. The center stage and stage left units followed, dismantling the ground row and sub-deck last. Of the scenic elements used in the production, I indicated to the crew that we would keep the doors pulled from stock, the projection screen and we would retain all steel for repurposing and recycling. The jacks that supported the ground row we likewise kept to reuse on the following Carson School production.

While I was primarily focused on the removal of scenic elements, I floated throughout the night to check in with other departments to ensure that they were on track and had sufficient help. Once the final sub-deck pieces were loaded onto carts and onto the box truck the first trip was made to unload at the Temple Building while all other hands turned to help electrics strike their lighting instruments. The truck returned to the Lied Center shortly following the completion of the lighting strike. The racks and carts housing lighting’s equipment were loaded on the truck and the entirety of the strike crew headed back to Temple to unload. I dismissed the strike crew at 2:15 AM, fifteen minutes beyond my estimation but content that it was completed and that there had been no injuries or major dilemmas throughout what can sometimes be a rather hectic process.
This production of Avenue Q had a working scenic budget of $3,500.00. That amount was to include all materials necessary for the build and construction of the set as well as an internal ten percent paint budget of $350.00. Any standard consumable fasteners were supplied from the scene shop overhead budget but specialty fasteners and adhesives were to be included in the production budget. As discussed in chapter two, a number of revisions and cost analyses were required to get to a point where we could safely proceed without concern for either running out of the allotted budget nor running over. In order to maintain this budget I kept a constant running total through receipt tracking so that I knew where the budget stood at every turn. Though I was diligent in the cost analysis process, there were some unanticipated expenses that ate into the contingency factor I carried on the show. The cost of purchasing duvetyn for interior masking at $259.37 was one of those unexpected expenses, but thankfully the budgeted contingency factor covered it. The budget summary for the show revealed that the production spent $3,301.43 of the total budget, leaving $198.57 to spare.
Chapter 9: Conclusion

The production of *Avenue Q* by the Johnny Carson School of Theatre and Film at the University of Nebraska provided what I would consider to be an excellent opportunity for a Master of Fine Arts level technical direction thesis production. Though this served as my fifth production as technical director within the department, the show offered several challenges and moments of learning throughout the process. I was able to utilize skills previously developed as well as new techniques in order to make the show as successful as possible. I am thankful for the trust and support of the faculty in allowing me to serve in the role of technical director on this scale of production without concern that the job would not be completed. At the same time, having an open door to discuss any challenges provided a reassurance that I would be able to complete the task at hand. I am also thankful for the willingness and open-minded nature of director Andy Park in allowing the scenic designer to explore unique ideas in the design process, ultimately creating what I would consider to be a beautiful set that worked well for the show, as well as kept me on my toes.

As with most, this production proved to provide some learning opportunities, however, there was much to take pride in from the finished product. I gained valuable knowledge regarding the technical aspects of projections and that is a component of live theatre that will not be going away anytime soon. I also gained more experience in managing larger labor forces and doing so without becoming frustrated nor overwhelmed. The short amount of time for engineering forced my focus to be tightened and output speed increased. Engineering and building a set that could
effectively be transported through an undersized freight elevator or down a flight of steps and out a door provided many chances for me to catch myself before creating something that could not fit out of the building.

Overall, I would say that both the production as a whole and my thesis project were a resounding success. I was able to continue the educational path of the terminal degree in my field while at the same time strengthening the skill set with which I entered the program. I feel that the knowledge I have gained over my time spent at the University of Nebraska will continue to serve me well as I continue on into the professional working world.
Appendix A: Designer Reference Materials

Scenic Designer Ground Plan

Scenic Designer Front Elevation and Isometric Views
Scenic Designer Final Rendering

Scenic Designer Final Rendering – Wedding Scene
Scenic Designer Initial Rendering

Scenic Designer Revised Rendering
Technical Director
Brendan Greene-Walsh
402.658.6210
brendan.gwalsh@gmail.com

Johnny Carson Studio - Lied Center Stage Left Unit

Date: 2/1/2018
Scale: 1" = 1'
Sheet 2 of 30

General Notes:
Sheet good layout requires 4 sheets Glued & stapled 1 1/2" strips on SL2 are added pieces Flush cut door opening on SL3

Director: Scenic
Lighting Designer: Li
Drawn By: A. Park
J. Thompson
L. Shoemaker
BGW

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Awning Structure (Front View)

Awning Structure (Side View w/ Wall)

Awning Structure (Top View w/ Wall)

Awning Supports (Side View)

Awning Supports (Boxed View)

Date: 2/1/2018
Scale: 1" = 1'
Sheet 3 of 30

General Notes:
Awning structure is made of 3/4" CDX. Covered in lightweight muslin - to be covered aftering mus is painted. Glue, screw and/or staple. Unit is screwed into top of SL Unit.

Director: Scenic
Lighting Designer: Li
Drawn By: A. Park J. Thompson L. Shoemaker BGW

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General Notes:

- Platform is 2x4 construction w/ 3/4" lid
- Glue & screw
- Ladder is 1"x2" 16 ga steel welded
- Treads are flush to front edge of ladder
- Handrail is 1" SST welded to upstage side of ladder

Date: 2/1/2018
Scale: 1" = 1'
Sheet 4 of 30

Director: Scenic Designer: Lighting Designer: Drawn By: A. Park J. Thompson L. Shoemaker BGW

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402.658.6210
brendan.gwalsh@gmail.com

Avenue Q
Johnny Carson Studio - Lied Center Stage Unit

Date: 2/1/2018
Scale: 1" = 1'
Sheet 6 of 30

General Notes:
Construction is 1x4, glued & stapled
Skin is lauan, glued & stapled
All 1x on face are flush to front of wall
CS2 is 1st level, CS2b is 2nd level
Angled edge needs 1x beveled to match
Skins are beveled to match
Interior skins are screwed - NO GLUE

Director: Scenic
Lighting Designer: Li
Drawn By: A. Park J. Thompson L. Shoemaker BGW

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General Notes:

Construction is 1x4, glued & stapled.

Skin is lauan, glued & stapled.

All 1x on face are flush to front of wall.

CS3 is 1st level, CS3b is 2nd level.

Angled edge needs 1x beveled to match.

Skins are beveled to match.

Flush cut openings.

Director:

Scenic Designer:

Lighting Designer:

Drawn By:

A. Park

J. Thompson

L. Shoemaker

BGW

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Brendan Greene-Walsh
402.658.6210
brendan.gwalsh@gmail.com

Date: 2/1/2018
Scale: 1" = 1'

Sheet 8 of 30

General Notes:
- Construction is 1x4, glued & stapled
- Skin is lauan, glued & stapled
- All 1x on face are flush to front of wall
- CS4 is 1st level, CS4b is 2nd level
- Flush cut openings

Director: Scenic
Lighting Designer: Li
Drawn By: A. Park
J. Thompson
L. Shoemaker
BGW

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General Notes:
Construction is 1x4, glued & stapled
Skin is lauan, glued & stapled
All 1x on face are flush to front of wall
CS5 is 1st level, CS5b is 2nd level
Interior skins are screwed- NO GLUE

Date: 2/1/2018
Sheet 9 of 30

Permission to use must be obtained prior to any use.
Do not attempt to build anything contained if you are not qualified to do so.
General Notes:

Ladder construction is 1"x2" steel welded

Treads are 1"x2" steel welded

Handrail is 1" SST welded

CS Unit handrail is on upstage side

SR Unit handrail is on both sides

Director: Scenic Designer: Lighting Designer: Drawn By: A. Park J. Thompson L. Shoemaker

BGW

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SR1/SR4 (Framing View)
3'-0"  2'-10"

SR1b/SR4b (Framing View)
3'-0"  2"  2 1/2"

SR1/SR4 (Top View)
3'-0"  7'-8"

SR1/SR4 (Top View)
3'-0"  8'-0"

SR1b/SR4b (Sheet Layout)
3'-0"  8'-0"

SR1/SR4 (Sheet Layout)
3'-0"  7'-8"  2"  2 1/2"

Scale: 1" = 1'

Date: 2/1/2018
Sheet 14 of 30

General Notes:
BUILD 1 SR1, BUILD 1 SR4
Construction is 1"x2" steel welded
Skin is lauan
SR1/SR4 is 1st level, SR2/SR4 is 2nd, bolted together
Steel on face is flush to front of wall

Director: Scenic Designer: Lighting Designer: Drawn By: A. Park J. Thompson L. Shoemaker

BGW

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General Notes:

- Construction is 1"x2" steel welded
- Skin is lauan
- SR3a is 1st level, SR3b is 2nd, bolted together
- Backset 1"x2" at angled ends to clear 1"x2" on face is flush to front of wall
- Flush cut openings
- No welds inside openings please

Director:

Scenic Designer:

Lighting Designer:

Drawn By:

A. Park
J. Thompson
L. Shoemaker
BGW

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General Notes:

- Construction is 1"x2" steel welded
- Skin is lauan
- SR3a is 1st level, SR3b is 2nd, bolted together
- Backset 1"x2" at angled ends to clear 1"x2" on face is flush to front of wall
- Flush cut openings
- No welds inside openings please

Director:
Scenic Designer:
Lighting Designer:
Drawn By:

A. Park
J. Thompson
L. Shoemaker
BGW

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SR2 (Top View) 22.5º
SR3 (Top View) 22.5º
SR1 Trim layout (Front View)
SR2 Trim layout (Front View)
SR4 Trim layout (Front View)

NOTE: SEE PLATE 21 FOR CAPITAL DETAILS

Trim A Profile (Front View)
Trim B Profile (Front View)
Trim C Profile (Front View)
Trim D Profile (Front View)

1/2" 1/2" 3/4" 3/4" 4" 2" 9" 8" 8'-8" 15'-6" 8'-8" 15'-4" 8'-8" 15'-6" 295 15'-6" A B C

Technical Director
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brendan.gwalsh@gmail.com

Avenue Q
Johnny Carson Studio - Lied Center SR Unit Trim Detail

Date: 2/1/2018
Scale: 1/2" = 1'

Sheet 20 of 30

General Notes:
Trim is made of 1/2" & 3/4" MDF
Cut to fit
Glue and staple when stacking
Add blocking behind units where necessary for attachment

Director: Scenic
Lighting Designer:
Drawn By: A. Park
J. Thompson
L. Shoemaker
BGW

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VECTORWORKS EDUCATIONAL VERSION

VECTORWORKS EDUCATIONAL VERSION
VECTORWORKS EDUCATIONAL VERSION

NOTE: THIS IS FOR REFERENCE ONLY.
NEVER TRY TO BUILD.

Director:
Scenic Designer:
Lighting Designer:
Drawn By: A. Park
J. Thompson
L. Shoemaker
BGW

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SR3 Capital is 1x2 steel tube framed, sheeted in lauan, trimmed with 3/4" MDF.

SR2 Capital is 3/4" MDF, glued and stapled.

Scale: 1" = 1'

Date: 2/1/2018
Sheet 21 of 30
General Notes:
Flower box construction is 1/2" MDF glued & stapled.
Trim piece added on after construction.
SL Unit trim is 1/2" MDF, cut to fit openings.
General Notes:
- Construction is 3" CDX lip & clip framing
- Sheets are 1/4" maso
- Cut profiles before framing
- Frame to fit construction
- Construction is glue and narrow crown staple
- Framing is viewed FROM REAR

Director: Scenic Designer: Lighting Designer: Drawn By: A. Park J. Thompson L. Shoemaker

BGW

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brendan.gwalsh@gmail.com

Avenue Q
Johnny Carson Studio - Lied Center
Ground Row framing

Date: 2/1/2018
Scale: 1/2" = 1'

Sheet 25 of 30

General Notes:
FRAMING IS VIEWED FROM REAR
Frame to fit 2nd level
Framing is 3/4" ply ripped to 3" strips
Lip and clip construction method
Use ample glue and 3/4" or 7/8" narrow crown staples
Only assemble is 4' wide sections (1+11+22)

Director: Scenic Designer: Lighting Designer: Drawn By: A. Park J. Thompson L. Shoemaker
BGW

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brendan.gwalsh@gmail.com

Johnny Carson Studio - Lied Center
Projector Cradle/Hand Rails

Date: 2/1/2018
Scale: 1/2" = 1'

Sheet 27 of 30

General Notes:
Projector cradle is 1" SST w/ C Clamp in 1x2 at top 3/4" ply base, cased to capture projector
Pipe stab is 2" OD Sched 40
Handrail is 1" SST welded

Director: Scenic Designer: Lighting Designer: Drawn By: A. Park J. Thompson L. Shoemaker

BGW

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Avenue Q
Johnny Carson Studio - Lied Center
Ground Plan w/dims

Date: 2/1/2018
Scale: 1/4" = 1'
Sheet 29 of 30

General Notes: Ground Plan w/dims

Director:
Scenic Designer:
Lighting Designer:
Drawn By:
A. Park
J. Thompson
L. Shoemaker
BGW

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LEGS
SCRIM
BORDER
CYC

VECTORWORKS EDUCATIONAL VERSION
## Appendix C: Documentation

**Avenue Q**

**_page:_ 0  
costed by: **BG-W**  
**date:** 12/29/17

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<th>Description</th>
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**Subtotals**  
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**Subtotal**  
$ 4,842.33

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CONSTRUCTION DETAILS

Structure: CS 1st level & façade
Construction Method: Standard 1x4 construction
Glue & staple

Hardware:

MATERIAL

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<th>Total Cost</th>
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CONSTRUCTION DETAILS

Structure: CS 2nd level
Construction Method: Standard 1x4 construction
Details: Glue and staple

Hardware:

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<th>Quantity (ea)</th>
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Totals $171.38
CONSTRUCTION DETAILS

Structure: SL Wall

Construction Method: Standard 2x4 construction

Details:

Hardware:

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Totals $268.91
**CONSTRUCTION DETAILS**

Structure: SR 1st level & façade

Construction Method: Welded construction

Glue & screw facing

Hardware:

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<th>Quantity (ea)</th>
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Totals $1,199.98
CONSTRUCTION DETAILS

Structure: SR 2nd level
Construction Method: Welded construction
Glue & screw facing

Hardware:

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Totals: $243.15
CONSTRUCTION DETAILS

Structure: Billboard Projection Screen

Construction Method: Welded construction
RP screen stretched & stapled

Details:

Hardware:

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<th>Quantity (ea)</th>
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<td>$48.56</td>
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Totals: $326.77
# CONSTRUCTION DETAILS

Structure: Ground Row

Construction Method: Trace image - jig out patterns
Lip & clip framing

Details:

Hardware:

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Totals $617.68
Avenue Q

costed by: BG-W
Date: 12/29/17

CONSTRUCTION DETAILS

Structure: Fence unit

Construction Method:
Details:

Hardware:

**MATERIAL**

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<td>2x4x8</td>
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</table>
CONSTRUCTION DETAILS

Structure: Dumpster, garbage cans

Construction Method: 

Details:

Hardware:

MATERIAL

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Totals: $218.82
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- **Feb 2018 (Central Time)**
- **Avenue Q - Spring 2018**

### Ground Row Build
- **Ground Row Build**

### Load In
- **Load In**

### Lights Load In
- **Lights Load In**

### Paint Call
- **Paint Call**

### Ground Row Build
- **Ground Row Build**

### Paint Call
- **Paint Call**

### AQ - Open
- **AQ - Open**

### AQ - Notes
- **AQ - Notes**

### AQ - Tech
- **AQ - Tech**

### AQ 10/12
- **AQ 10/12**

### AQ - Spacing
- **AQ - Spacing**

### AQ - Notes
- **AQ - Notes**

### AQ - Notes
- **AQ - Notes**

### JSON Representation

```json
null
```
Avenue Q
Load In Schedule

Monday, 2/19

Load truck
Hang cyc, scrim, border and legs
Spike and chalk center line & US reference line for subdeck
Load in subdeck carts, 1st floor units, ground row and projector skirt
Install subdeck
Install ground row
Install SL unit
Install CS 1st floor
Install SR 1st floor
Leg platforms for install
Install 1st & 2nd floor platforms

Tuesday, 2/20

Install threshold
Install projector screen and cradle
Assemble projector skirt & install
Install escape stairs
Install fire escape and ladder
Install 2nd levels

Wednesday through Friday

White stripe DS edge of subdeck
Install awning
Install flower boxes
Install CS capitals
Install handrails
Install US black duvetyn
Install masking legs
Install trim
Avenue Q
Truck Pack

Monday, 2/19

Subdeck carts 1-4
Jacks for GR & projector skirt
Ground row
SL, CS 1st level, SR 1st level
Projector skirt
Tech table
Road box
Platforms and legs (if space available)

Tuesday, 2/20

SR & CS 2nd levels
Fire escape
Ladders
Handrails
Black duvety
Projector screen & cradle
Stairs
Flower boxes
Awning
**Avenue Q**  
**TD Scenic Notes**  
**2/24**  
**General:**  
- Weight curtains  
- Finish trim  
- Flower boxes  
- Install sconces  
- Velcro curtains at double doors & clip  
- Touch up ground row  
- Knock down sheen on plexi  
- Knee cushions for windows  
- Light leaks around curtains  
- Clean windows  
- Move handrail white stripes to top of railing  
- Pull unnecessary white stripes  
- Close up masking curtains, double where needed  
- Carpet backstage areas  
**SR Unit:**  
- Address cross bracing  
- Paint bolts/fasteners on fire escape  
- Hem 2nd floor curtains  
- Check door handle  
**CS Unit:**  
- Install capitals  
- Add duvetyn to SR side of escape platform  
- Check door handle  
- Seam at door line & up  
- Squeaking coming from ladder  
**SL Unit(s):**  
- Install kick plate on US edge  
- Install wall jack >8'  
- Secure screen to skirt  
- Angle braces on skirt  
- Install street lights  
- Cut masonite to fit below bottom trim height  
**Other:**  
- Piano plates  
- Trim chain & dog clips for scaffold openings  
- Clean conductor monitor  
- Cable cross brace scaffolding on US face  
- Clear house of trash  
- Carpet backstage traffic areas  
**Props:**  
- Tighten roman shade/move up  
- Bumper/stop on SR trash can lid – hitting wall  
- Bench rocks – safety issue  
- Furniture pads or carpet on bottom of hinged trashcans  
- Dull reflective sheen of hinged trashcans  
- Dull reflective sheen of café tables  
- Paint singing boxes guts  
- Cut hospital bedding to size so it doesn’t get caught in casters
**Avenue Q**
**TD Scenic Notes**
**2/26**

**General:**
- Weight curtains
- Finish trim
- Flower boxes
- Install sconces
- Velcro curtains at double doors & clip
- Touch up ground row
- Knock down sheen on plexi
- Knee cushions for windows
- Light leaks around curtains
- Clean windows
- Move handrail white stripes to top of railing
- Pull unnecessary white stripes
- Close up masking curtains, double where needed
- Carpet backstage areas
- Tighten tie line for masking curtains

**SR Unit:**
- Address cross bracing
- Paint bolts/fasteners on fire escape
- Hem 2nd floor curtains
- Check door handle

**CS Unit:**
- Install capitals
- Add duvetyn to SR side of escape platform
- Check door handle
- Seam at door line & up
- Squeaking coming from ladder
- Stab for lantern storage

**SL Unit(s):**
- Install kick plate on US edge
- Install wall jack >8'
- Secure screen to skirt
- Angle braces on skirt
- Install street lights
- Cut masonite to fit below bottom trim height
- Hinge tap surface to wall
- Repair onstage wall edge
- Cut piece of masonite to 23 5/8” x …

**Other:**
- Piano plates (6”x6” w/ 1 1/2” forstner cut 1/4” into surface)
- Trim chain & dog clips for scaffold openings
- Clean conductor monitor
- Cable cross brace scaffolding on US face
- Clear house of trash
- Carpet backstage traffic areas
- Consolidate tools and materials
- Seating riser install
- Chair install
AVENUE Q
TD Scenic Notes
2/28

Masking to hide band (8x8 flats)
Awning fabric
SR facing bowing away
Hook for "For Rent" sign to hang CS below sconce
Wrap 2nd floor handrails with duvelyn
Tap floor
Sand plexi if hairspray doesn't reduce sheen
Move excess chair carts to under HR risers
Repack road box and move to shop
Avenue Q
Strike (3/16)

Seating Units: (Jeff w/Michael, Colin, Karen, RaeAnn & students)
Handrails, riser skirts, seats to carts, center aisle platforms & stairs
Collapse units once clear
SR DS Masking curtain (BGW)
Projector, video gear (BGW & Dylan)

SR UNIT: (Dan, Nate, BGW & Dylan)
Duvetyn masking
2nd level façade
Fire escape & ladders
2nd level platform
1st level façade & platform
KEEP: Steel, door w/jamb duvetyn, legs & jacks

CS UNIT: (Michael, Colin, Karen & RaeAnn)
Duvetyn
2nd level façade
Ladder
2nd level platform
1st level platform & façade
KEEP: Door w/jamb, ladder, duvetyn

SL UNIT: (Dan, Nate, BGW & Dylan)
Masking walls
Platform
Ladder
Façade
Projector masking
Projector screen
Projector cradle
KEEP: Door, ladder, jacks, masking, screen, steel & cradle

GROUND ROW: (BGW, Michael, Colin, Karen)
Begin on SL side
KEEP: 2 jacks

SOFT GOODS: (All)
Pull bottom pipe from cyc
Basket cyc & scrim as grid lowers
Fold in Lied Mainstage?
Legs & cyc to hamper, Z Tech to Jeff
Scrim to Temple

SUBDECK: (Dan, Nate, Dylan, RaeAnn)
Begin DSL work to DSR, MSL work to MSR, USL work to USR

GRID: (All)
Remove conductor TV (Nate, BGW)
Pull pipes & reset
All JCSTF cheeseboroughs to Brendan/buckets (27 total)
Appendix D: Construction Process Photographs

Center Stage unit framing

Stock door selections
Ground row trace and cut out process

Stage left unit
Stage right unit backside – First floor

Stage right unit – Second level
Stage right unit – Second level

Stage right unit – Fire escape
Center stage unit – Second level

Center stage unit – First level
Stage right unit – Second level

Stage right unit – First level
Stage right unit – Second level

Center stage unit – First level
Center stage unit – Second level

Custom built projection screen
Stage left and center stage units – Disassembled for transport

Stage right unit – Disassembled for transport
Load-in day one – Sub-deck and drapes installed

Load-in day one – End of day
Load-in day two – Second level install

Load-in day two – Projection screen and masking
Load-in day two – End of day
Going into tech rehearsals
Appendix E: Production Photographs

Finished set

Finished set
Finished set – Stage right unit
Finished set – Center stage unit
Finished set – Stage left unit with projection screen
Production photograph – Avenue Q

Production photography – Avenue Q