



New Technology SIG

- New Technologies SIG
- Meeting every month
 - 3rd Thursday 3:30
- Contact Tom Shepherd for additional information at
 - newtech@grandcomputers.org



New Technology SIG

- **Computers Club Meetings Open to ALL Grand Residents:**

[General Meeting](#)

- Contact President@grandcomputers.org
 - Wed, Apr 03 2:00pm
 - Pima Room Chaparral Center

- **Ways Extreme Heat Damages Your House (And How to Prevent Them)**



New Technology SIG

- Tech Help for members EVERY TUESDAY
 - from 12:00 - 2:30 pm at the club.

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More information at www.grandcomputers.org > [Tech Help](#)
Bring your device, passwords, & power supply for in person help.
Contact TechHelp@grandcomputers.org



New Technology SIG

- **Special Interest Group Activities (SIGs) Non-Members may attend three meetings before joining the Club.**
 - [30+ Day Outlook \(grandcomputers.org\)](http://grandcomputers.org)

Apple SIG Contact Apple@grandcomputers.org
Mon, Apr 15 3:30pm Chaparral Center - Hopi Room
Club Update - Bring Your iPhone, Pad or Mac. We will Answer your questions.

Compose Yourself Writing
SIG Contact CY@grandcomputers.org [Click for Video](#)
Bring in a Written Story to Read or Join Us in Discussion.

Mon, Apr 01	12:45pm	Sonoran Plaza, Mesquite, Room
Mon, Apr 15	12:45pm	Sonoran Plaza, Mesquite Room
Mon, May 06	12:45pm	Sonoran Plaza, Mesquite Room



New Technology SIG

- **Financial Ed SIG Nov-Mar only.** Contact Financial@grandcomputers.org

The **INVESTING WORKSHOP** is held on the first & third Mondays of the month and provides members an opportunity to ask questions, share experiences, and discuss all things financial.

The **WEBSITE APPLICATIONS** meeting is on the first & third Thursdays and helps members access important financial websites and apply them to their portfolios.

The **MONTHLY SEMINAR** is held on the second Friday of the month and features presentations by industry professionals on a wide variety of current financial subjects.

The SIG does not provide financial advice or invest money.

Thu, Mar 21 8:00am Chaparral Center, Computer Classroom

Investing Websites and Applications Topic: "Hedge Funds and what we can learn from them." - Marc Finkelstien

3 D Printing

A short review of printing

A more extensive review of

How to make Models

The software used

And steps to the machine

3 D Printing




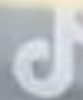
"I hate to be the one to tell you this, Jerry, but I think you've been ripped off."

3 D Printing

- ✓ Additive Process
- ✓ Material is fused to existing material
 - ✓ Filament Fused Fabrication (Plastic & Metal)
 - ✓ Laser Targeted Polymerization (Plastic)
 - ✓ Laser Targeted Fusion (Metal)
 - ✓ Pumped liquids (Concrete)
- ✓ Part is built layer by layer with computer control
- ✓ Produces a part with little finish work

- ✓ Contrasted to Machining, Carving, Turning



 thelayerlord

**How concrete homes are
built with a 3D printer**

3 D Printing



3 D Printing



3 D Printing

Titanium Wheel





20:09:50

×

×

Ctrl+T



3 D Printing

YOUSU
YOUSU Silk Dual Color PLA Filament Coextrusion Filament Silk Rose-Red Blue Color Change PLA, Compatible with Most of 3D Printer, 1kg (2.2 lbs)
Last purchased on Sep 22, 2022
★★★★☆ 153
\$25.99 ~~59.99~~ (\$0.74/Ounce)
Add to Cart
Buy Now
Remove this item

prime FREE One-Day FREE Delivery: **Tomorrow**
Order within 1 hr and 13 mins Details
Sold by YouSu 3D and Fulfilled by Amazon.

Featured items you may like Page 1 of 3

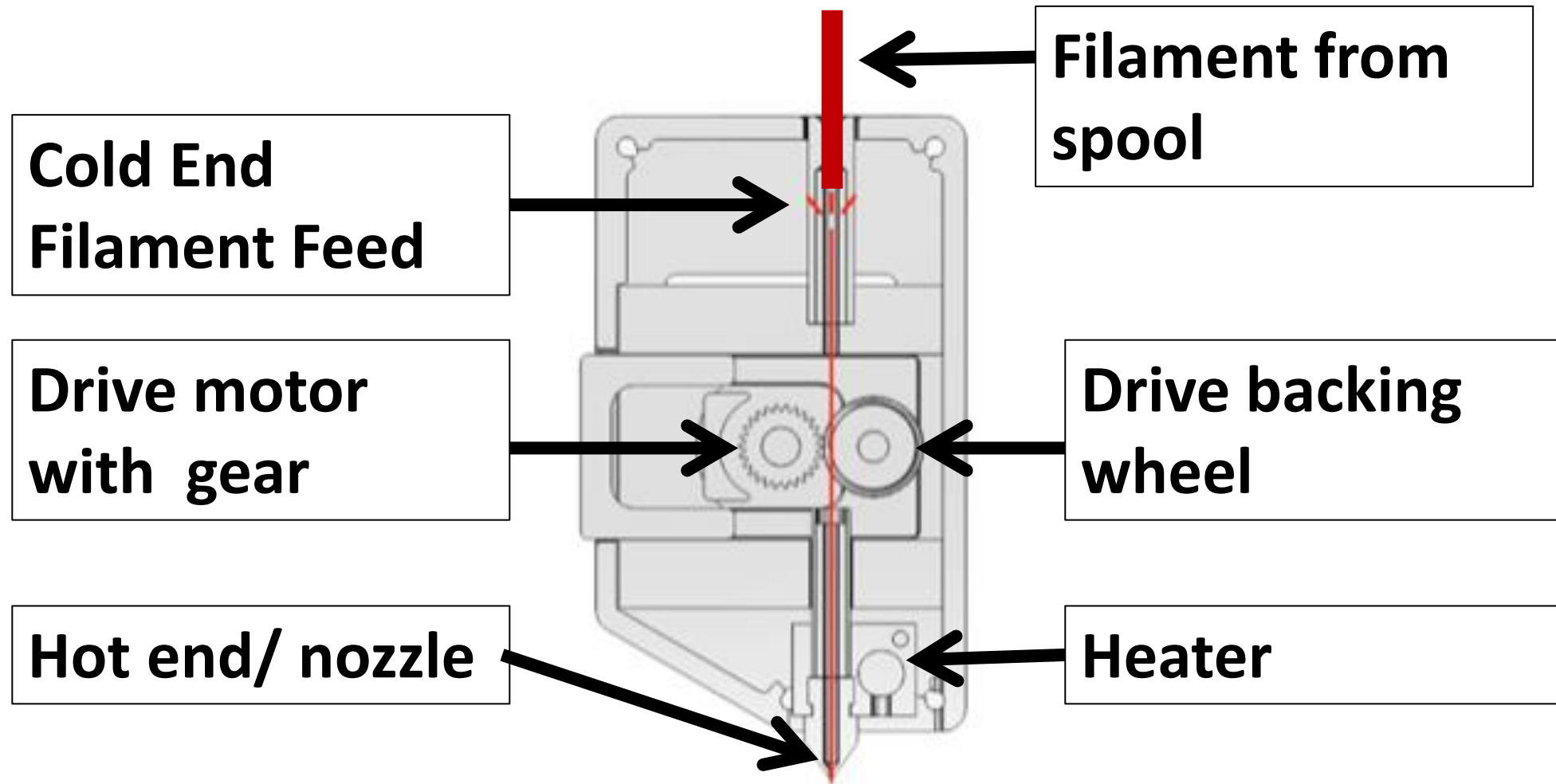
Item	Image	Customer Rating	Price	Product Details	Shipping
YOUSU Silk Dual Color PLA Filament Coextrusion Filament Silk Rose-Red Blue Color Change PLA...		★★★★☆ 153	\$25.99 59.99 (\$0.74/Ounce)	1kg (2.2 lbs)	prime FREE One-Day FREE Delivery: Tomorrow Order within 1 hr and 13 mins Details
Reprapper Triple Color Filament Coextrusion PLA Filament 1.75mm for 3D Printer & 3D Pen, Multico...		★★★★☆ 36	\$33.99	-	prime FREE One-Day FREE Delivery: Tomorrow Order within 8 hrs and 28 mins Details
Amazon Basics PETG 3D Printer Filament, 1.75mm, Translucent Blue, 1 kg Spool		★★★★☆ 5,610	\$26.50 (\$0.75/Ounce)	1.75	prime FREE Delivery: Wednesday, Oct 5 Order within 12 hrs and 13 mins Details
Reprapper Dual Color Filament Coextrusion PLA Filament 1.75mm for 3D Printer & 3D Pen, Multico...		★★★★☆ 44	\$30.99 (\$0.88/Ounce)	-	prime FREE Delivery: Wednesday, Oct 5 Order within 12 hrs and 13 mins Details
Amazon Basics SILK PLA 3D Printer Filament, 1.75mm, Copper, 1 kg Spool (2.2 lbs)		★★★★☆ 1,565	\$21.92 (\$0.62/Ounce)	1.75mm	prime Today 2PM - 6PM FREE delivery today if you order \$25 of qualifying items within 1 hr and 13 mins. Details
PLA 3D Printer Filament, PLA Filament 1.75mm, Shiny Color Change Rainbow PLA Filament, 0...		★★★★☆ 760	\$33.99 List: 59.99 (\$0.97/Ounce)	-	prime FREE One-Day FREE Delivery: Tomorrow Order within 10 hrs and 58 mins Details
Amazon Basics TPU 3D Printer Filament, 1.75mm, Red, 1 kg Spool (2.2 lbs)		★★★★☆ 833	\$28.32 (\$0.80/Ounce)	1.75mm	prime Today 2PM - 6PM FREE delivery today if you order within 1 hr and 13 mins. Details
3D Printer Filament, PLA Filament 1.75mm, Silk PLA Tri-Color Coextrusion Filament, Rainbow PLA F...		★★★★☆ 65	\$32.98 List: 59.99 (\$0.94/Ounce)	-	prime FREE One-Day FREE Delivery: Tomorrow Order within 8 hrs and 28 mins Details
Amazon Basics PLA 3D Printer Filament, 1.75mm, Pink, 1 kg Spool		★★★★☆ 12,337	\$25.84 (\$0.73/Ounce)	-	prime Today 2PM - 6PM FREE delivery today if you order within 1 hr and 13 mins. Details
Purple Blue to Pink Color Change PLA Filament 3D Printer Filament Color Changing with Temperat...		★★★★☆ 1,236	\$25.00 List: 59.99 (\$0.71/Ounce)	-	prime FREE One-Day FREE Delivery: Tomorrow Order within 7 hrs and 58 mins Details

3 D Printing

Versions of 3 D FFF printers.



3 D Printing (print head)

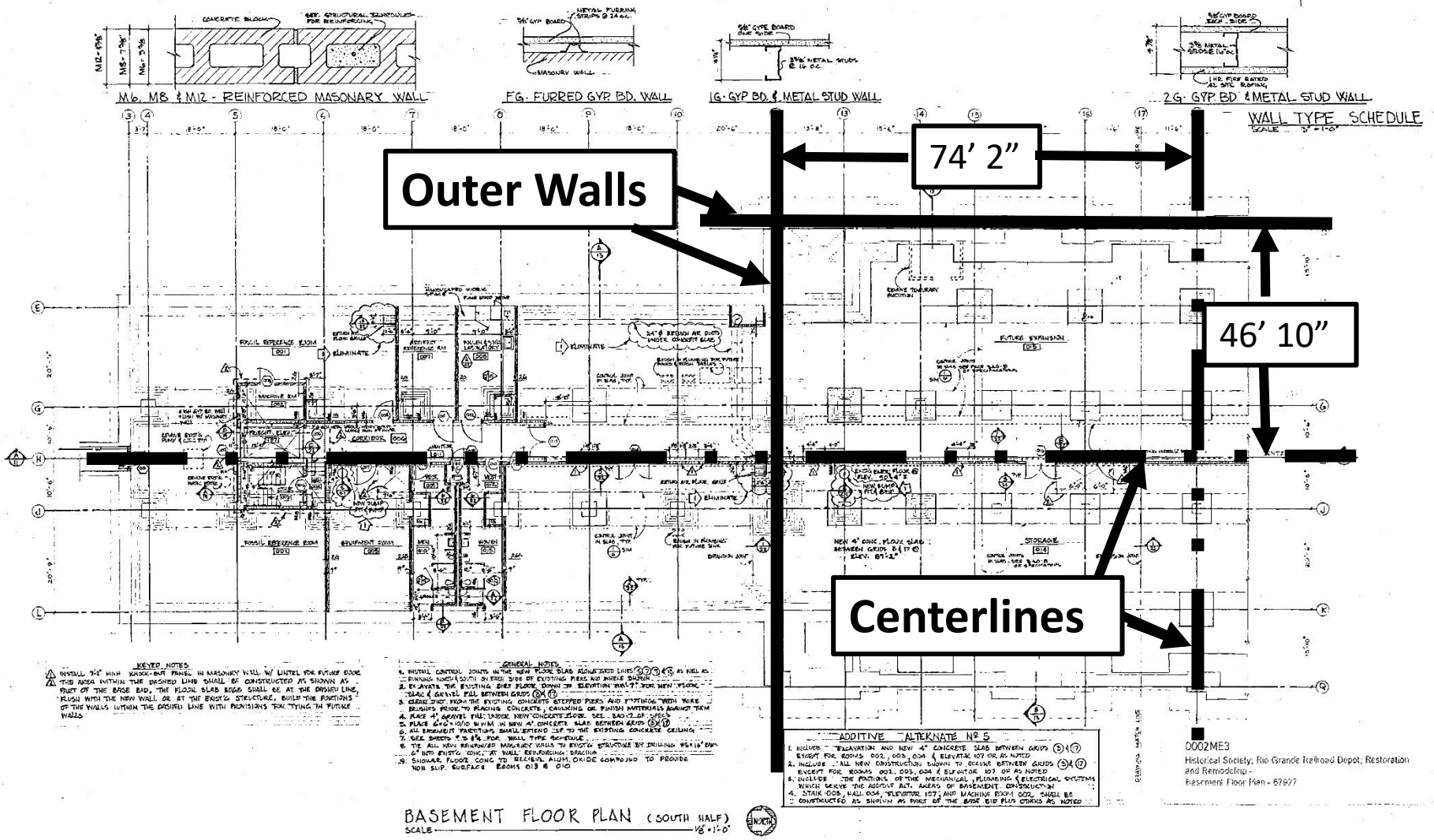




3 D Printing

DENVER AND RIO GRANDE RAILROAD STATION

This railroad station was constructed between 1908 and 1910 to serve the Denver and Rio Grande Railroad and the Western Pacific Railroad. The Denver and Rio Grande Railroad was completed between Denver and Salt Lake City in March 1883, and the Western Pacific between Salt Lake City and Oakland, California, in August 1910. Designed by architect Henry J. Schlachs of Chicago, Illinois, the building cost a reported \$750,000 and is characterized by elements of Beaux Arts Classicism and Renaissance Revival architectural styles. Completed in 1910, one year after construction of the Union Pacific Station three blocks to the North, this railroad station was an important element in the attempt by George Gould to develop a transcontinental railroad system to compete with the Union Pacific. In 1977 the building was given to the State of Utah. It has been occupied by the Utah State Historical Society since December 1980.



Outer Walls

Centerlines

74' 2"

46' 10"

WALL TYPE SCHEDULE
SCALE 3/4" = 1'-0"

KEYED NOTES
 1. INSTALL 2" x 4" BRICK-OUT FRAMES IN MASONRY WALL TO ALLOW FOR FUTURE CORE THIS AREA WITHIN THE DASHED LINE SHALL BE CONSTRUCTED AS SHOWN AS PART OF THE BASE BID. THE FLOOR SLAB EDGE SHALL BE AT THE DASHED LINE, FINISH WITH THE NEW WALL. OR AT THE EXISTING STRUCTURE, BUILD THE PORTIONS OF THE WALLS WITHIN THE DASHED LINE WITH PROVISIONS FOR TYPING IN FUTURE WALLS.

GENERAL NOTES
 1. INITIAL CONTROL POINTS IN THE NEW FLOOR SLAB DIMENSIONED LINE (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13) (14) (15) (16) (17) (18) AS SHOWN.
 2. EXAMINE THE EXISTING BID SLABS DOWN TO ELEVATION 100'-0" FOR NEW FLOOR.
 3. GRAB CUT FROM THE EXISTING CONCRETE STEPPED PIERS AND FOOTINGS WITH NAILS BEHINDS BRICK-OUT FRAMES. CONCRETE CHANGING OR PATCH MATERIALS REMOVE THEM.
 4. PLACE 4" APPROX FILL UNDER NEW CONCRETE SLAB. SEE 300-1.1.1.1.1.1.1.
 5. PLACE 2" x 4" BRICK-OUT FRAMES IN NEW 4" CONCRETE SLAB BETWEEN GRID (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13) (14) (15) (16) (17) (18).
 6. ALL BRICK-OUT FRAMES SHALL BE SET UP TO THE EXISTING CONCRETE CEILING.
 7. SEE SHEETS 2-3 & 4 FOR WALL TYPE SCHEDULE.
 8. TO ALL NEW REINFORCED MASONRY WALLS TO EXISTING STRUCTURE BY BRICKING UP 18" x 18" x 8" INTO EXISTING CONC. AT WALL REINFORCING BRACING.
 9. SMOOTH FLOOR CONC TO REFINISH, ALLOW CHISEL COMPACT TO PRODUCE NON SLIP SURFACE. EIGHT 019 & 010.

ADDITIVE ALTERNATE NO 5
 1. INCLUDE ELEVATION AND NEW 4" CONCRETE SLAB BETWEEN GRID (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13) (14) (15) (16) (17) (18) EXCEPT FOR ROOMS 002, 003, 004 & ELEVATOR 107 OR AS NOTED.
 2. INCLUDE ALL NEW CONSTRUCTION DOWN TO CEILING BETWEEN GRID (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13) (14) (15) (16) (17) (18) EXCEPT FOR ROOMS 002, 003, 004 & ELEVATOR 107 OR AS NOTED.
 3. INCLUDE THE PORTIONS OF THE MECHANICAL PLUMBING & ELECTRICAL SYSTEMS WHICH SERVE THE ADDITIVE AREAS OF BASEMENT CONSTRUCTION.
 4. STAIR 003 HALL 004, ELEVATOR 107, AND MACHINE ROOM 002, SHALL BE CONSTRUCTED AS SHOWN IN PART OF THE BOOK BID PLUS OTHER AS NOTED.

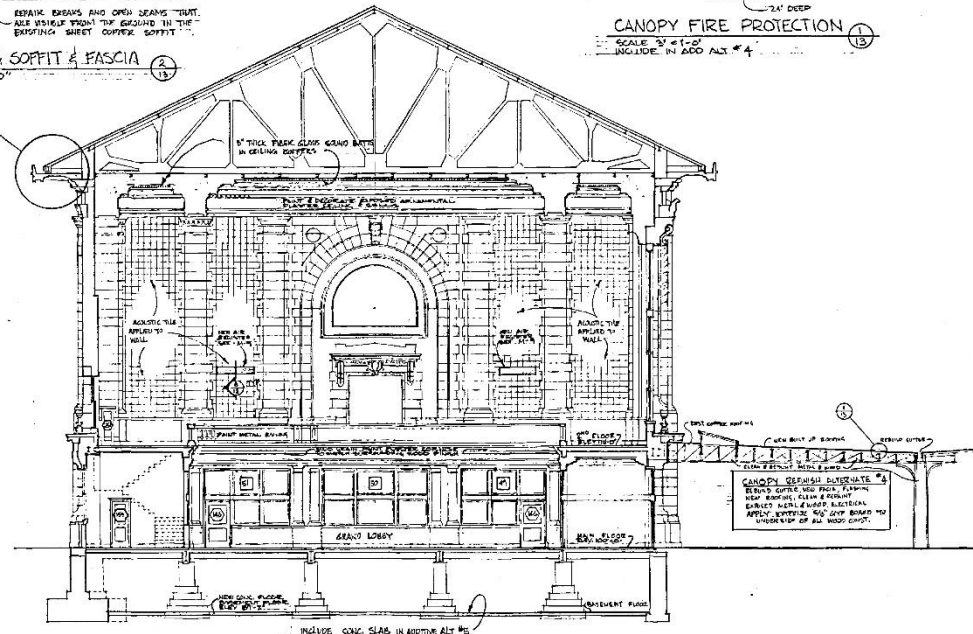
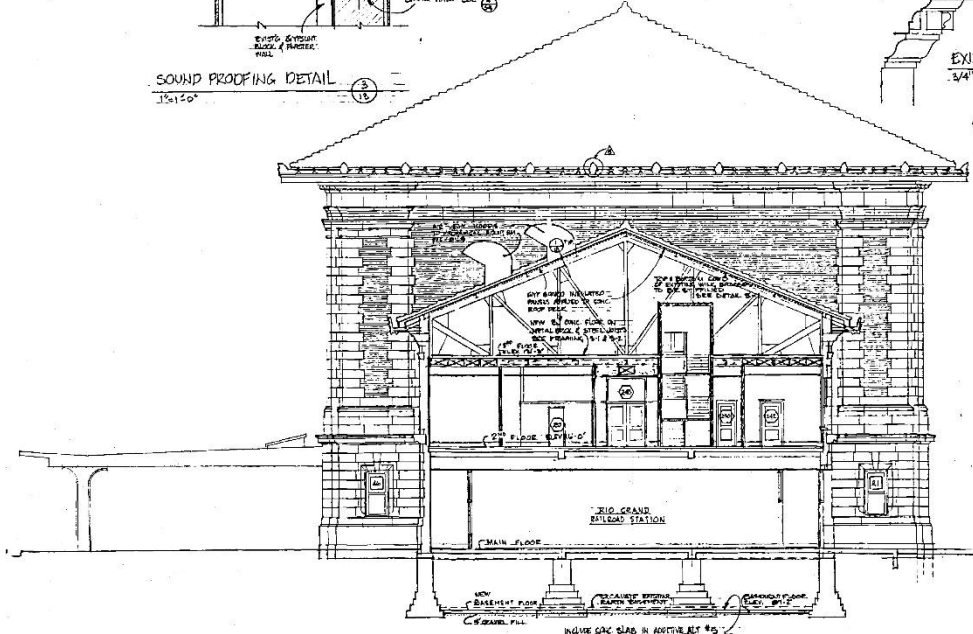
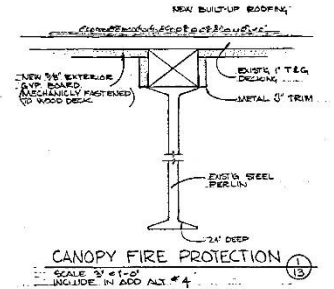
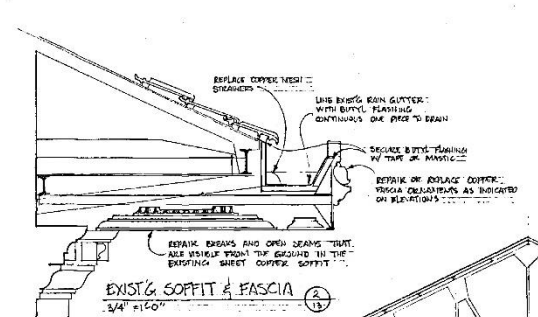
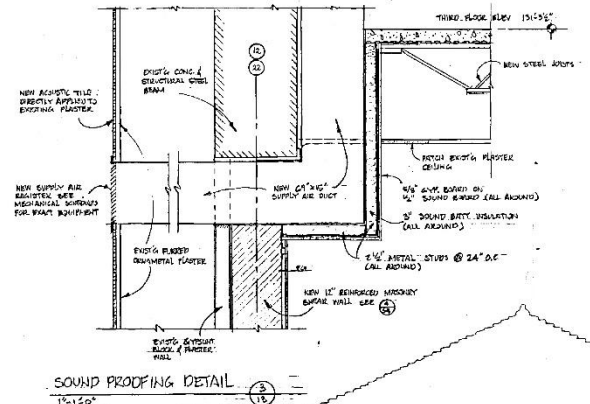
BASEMENT FLOOR PLAN (SOUTH HALF)
SCALE 1/8" = 1'-0"

RIO GRANDE RAILROAD DEPOT
 RESTORATION & REMODELING to house the UTAH STATE HISTORY DIVISION
 THIRD SOUTH & RIO GRANDE STREET
 SALT LAKE CITY, UTAH

STEVEN T. BAIRD ARCHITECT & ASSOCIATES A.L.A.
 1000 EAST 1000 SOUTH
 SALT LAKE CITY, UTAH

NO. 211 STEVEN T. BAIRD
 2741

83



GENERAL NOTES

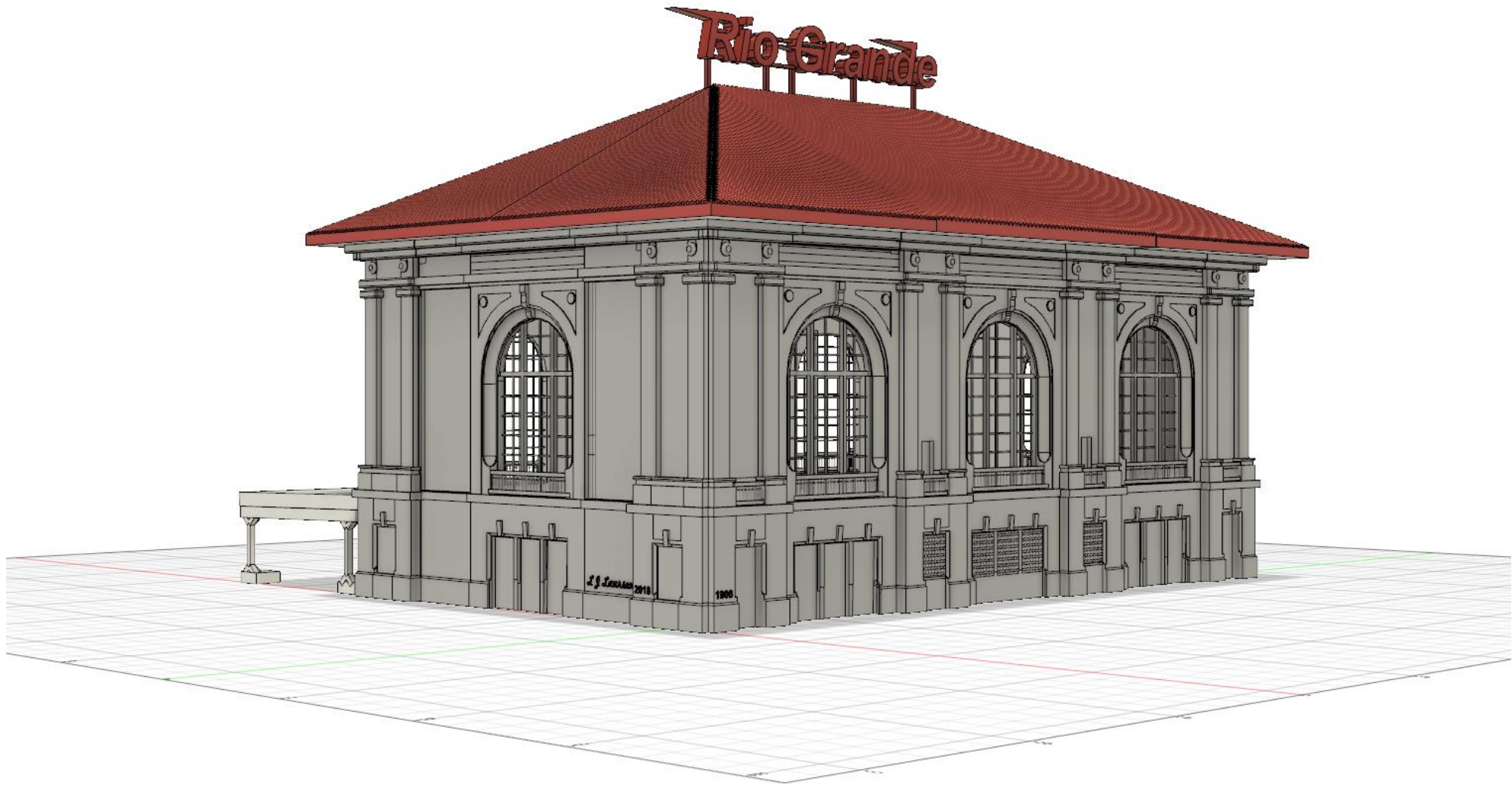
1. CLEAN EXISTING PLASTER WALLS. SURFACE ACOUSTIC TILE WILL BE DIRECTLY APPLIED AS REQUIRED. IN-DOOR TO SET FROM ADJACENT TO THE MASTIC.

Steven T. Baird Architect & Associates A.I.A.
 678 EAST SOUTH TEMPLE
 SALT LAKE CITY, UTAH

RIO GRANDE RAILROAD DEPOT
 RESTORATION & REMODELING to house the UTAH STATE HISTORY DIVISION
 3RD SOUTH & RIO GRANDE STREET
 SALT LAKE CITY, UTAH

No. 233
 STEVEN T. BAIRD
 ARCHITECT

18



Final Product



3 D Printing



3 D Printing



What is 3D modeling?

- Software creates a mathematical representation of a 3-dimensional object or shape.
- The created object is called a 3D model that can be used in a variety of industries.
- Film, television, video games, architecture, construction, product development, science and medical industries use 3D models.

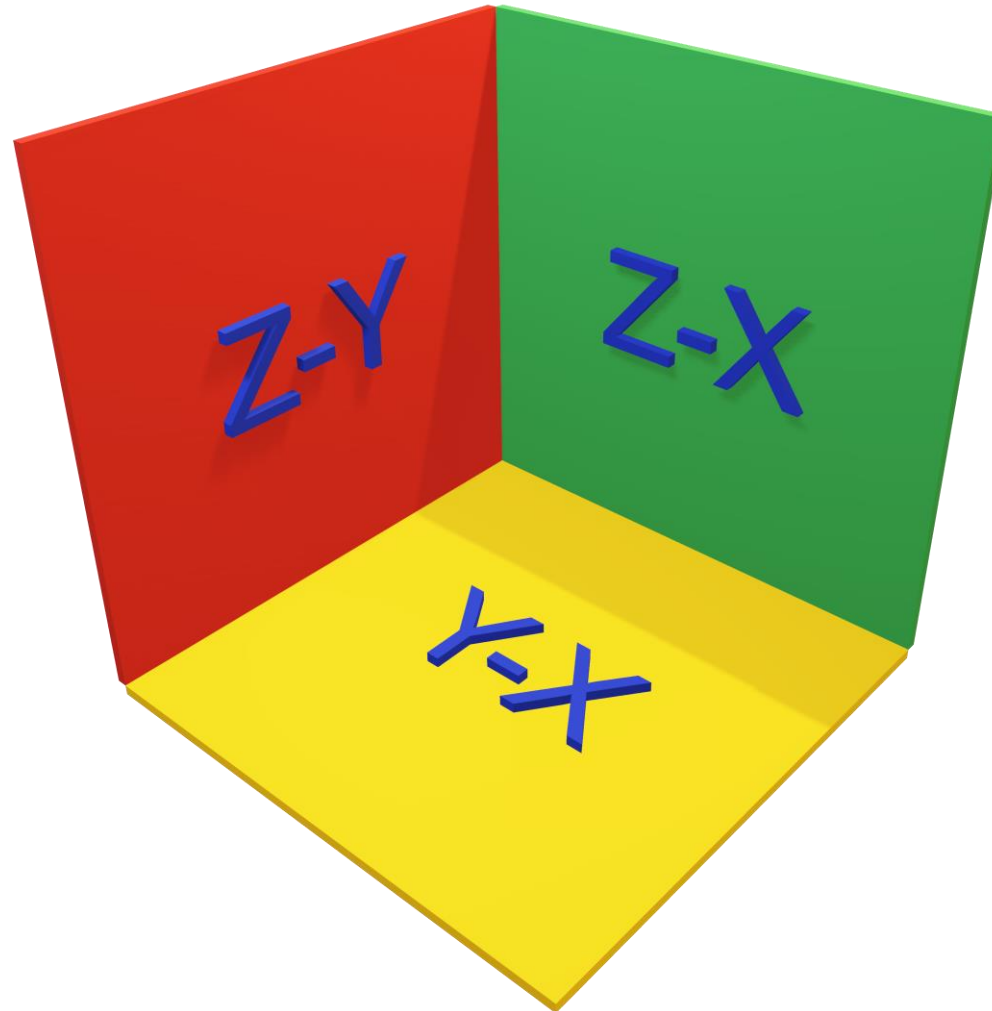
3 D Model Sources

- ✓ **Download them from the internet**
 - ✓ [My Minifactory](#)
 - ✓ [Thingiverse](#)
 - ✓ [ALL3DP](#)
- ✓ **Create your own with software**
 - ✓ [TinkerCAD](#) (Free, Engineering On-Line)
 - ✓ [Blender](#) (Free, Artistic Open source –Linux, Mac, Windows)
 - ✓ [Onshape](#) (Free for Hobbyists, \$1,500/year for Standard Version)
 - ✓ [Autodesk Fusion 360](#) (Engineering+ \$409/year or Free for education)
 - ✓ Many more that go up to \$5,000+

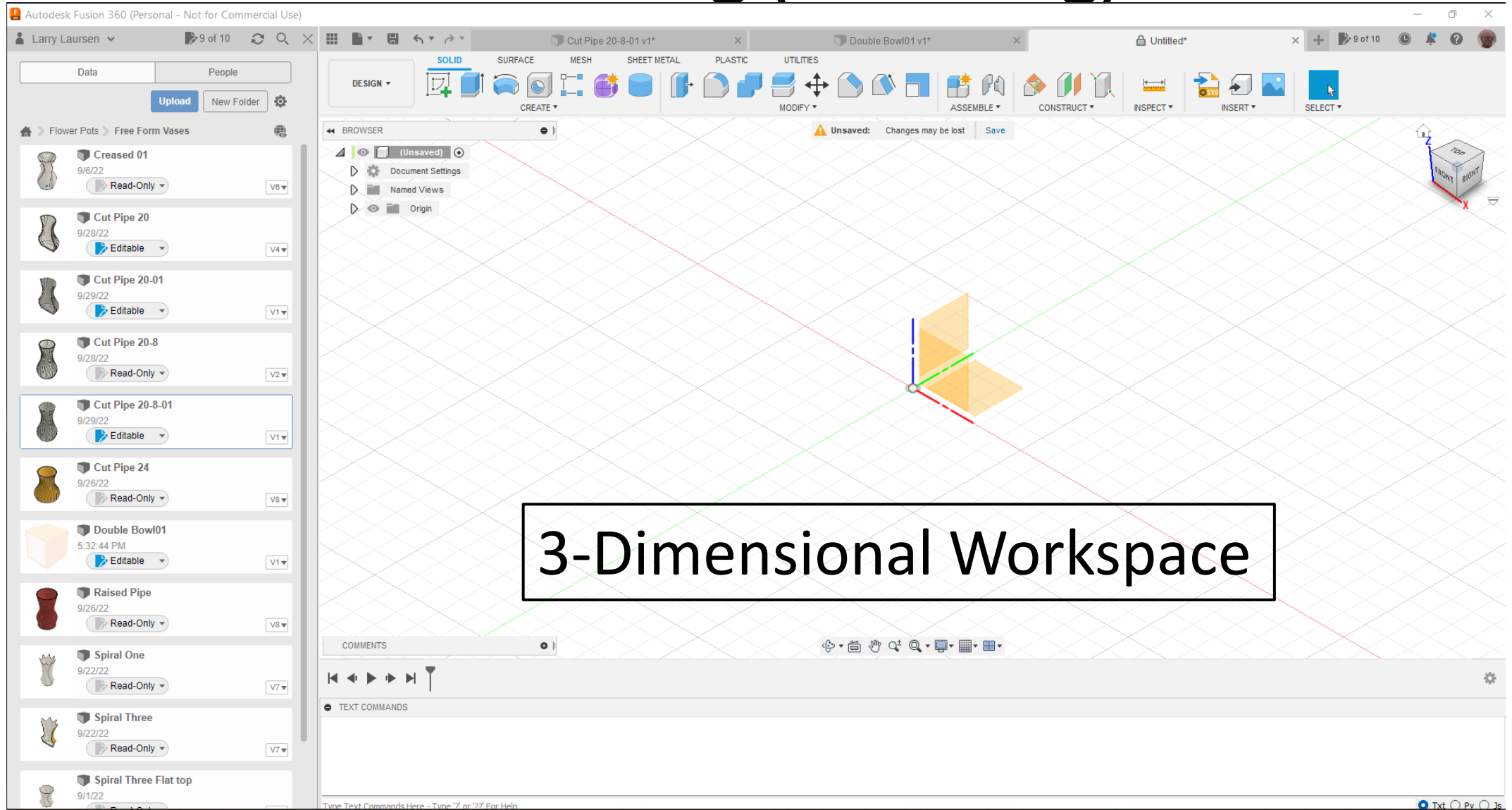
3 D Modeling (Basics)

- A. Start with primitive shapes (rectangles, boxes, cubes, rounds, spheres, triangles, and lines.
- B. Stretch, clip, slice, combine, or remove sections, of the primitives to get a part or section.
- C. Export the model as a universal 3 D model file.
- D. Enter into “slicing” software for 3 D printer
- E. Export file to 3 D printer

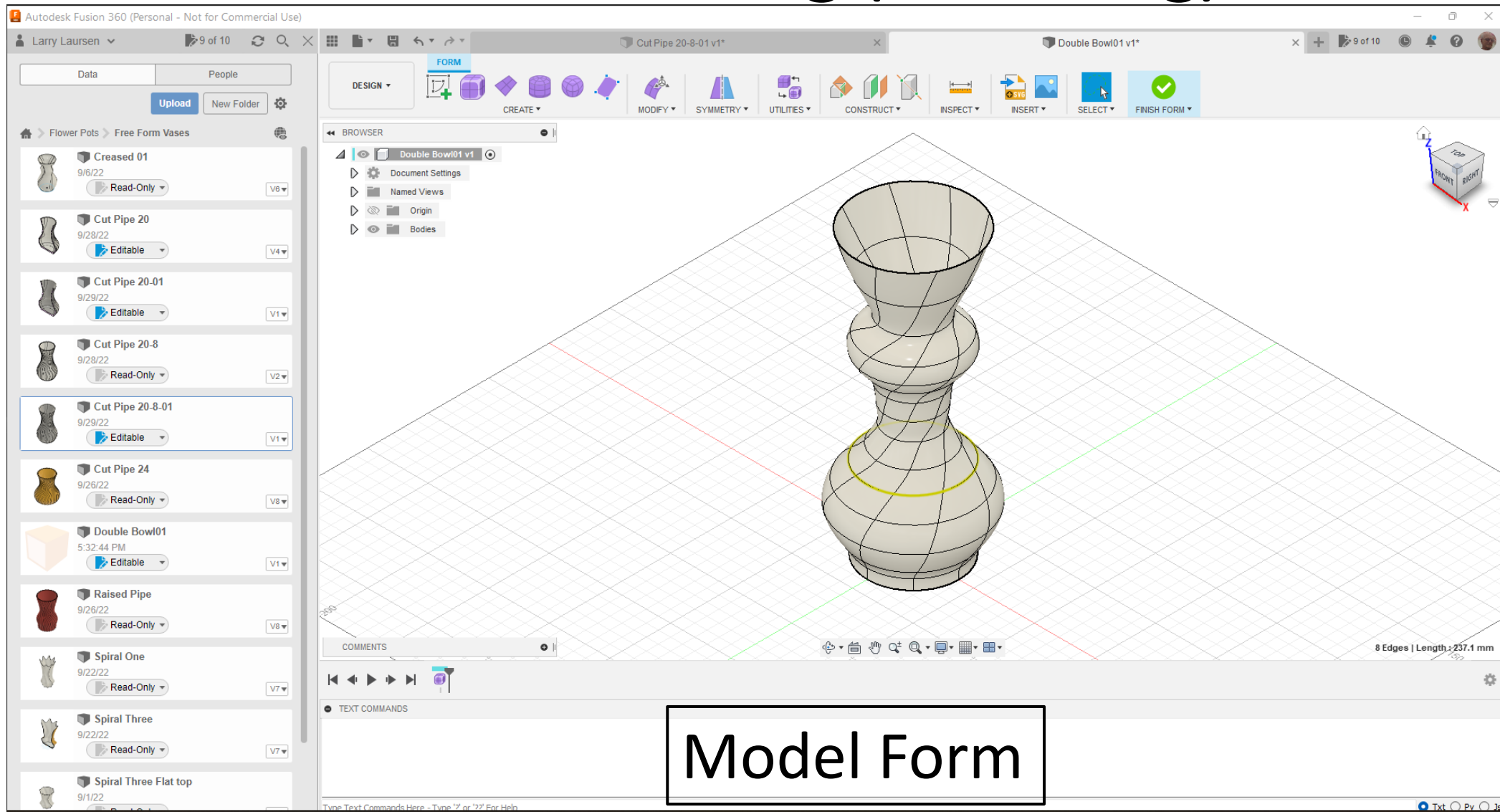
3D Modeling Space



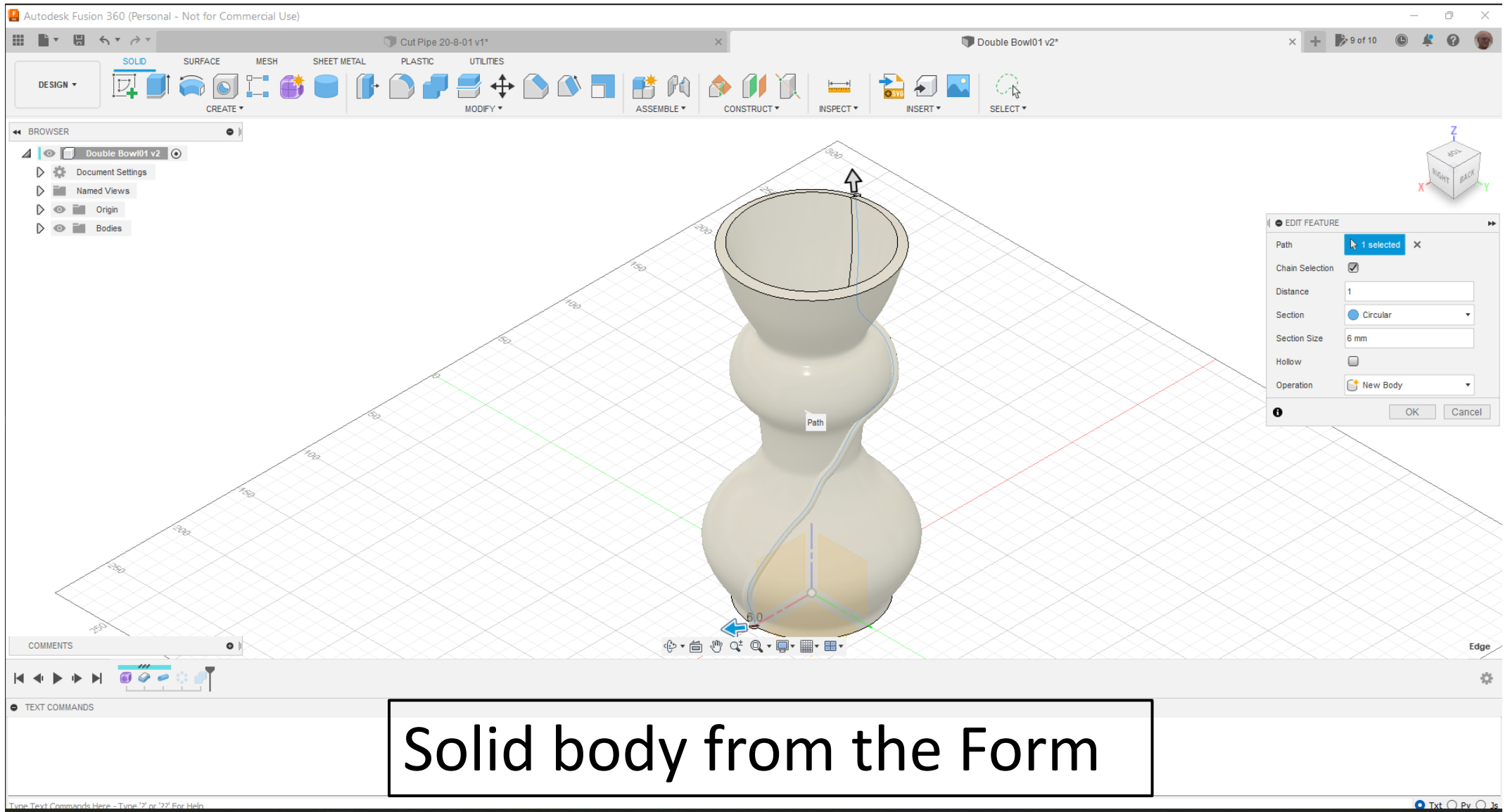
3 D Printing (Modeling)



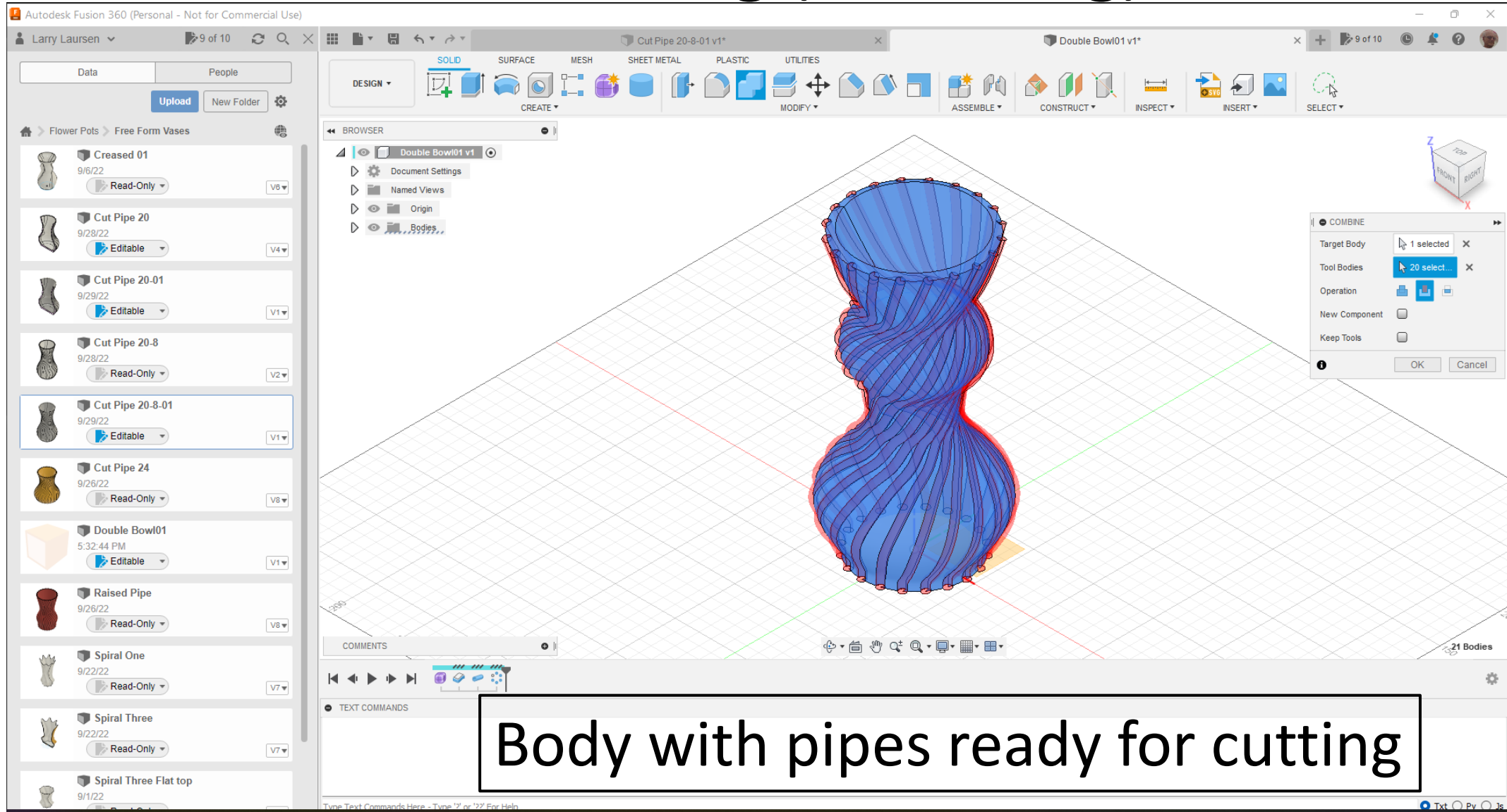
3 D Printing (Modeling)



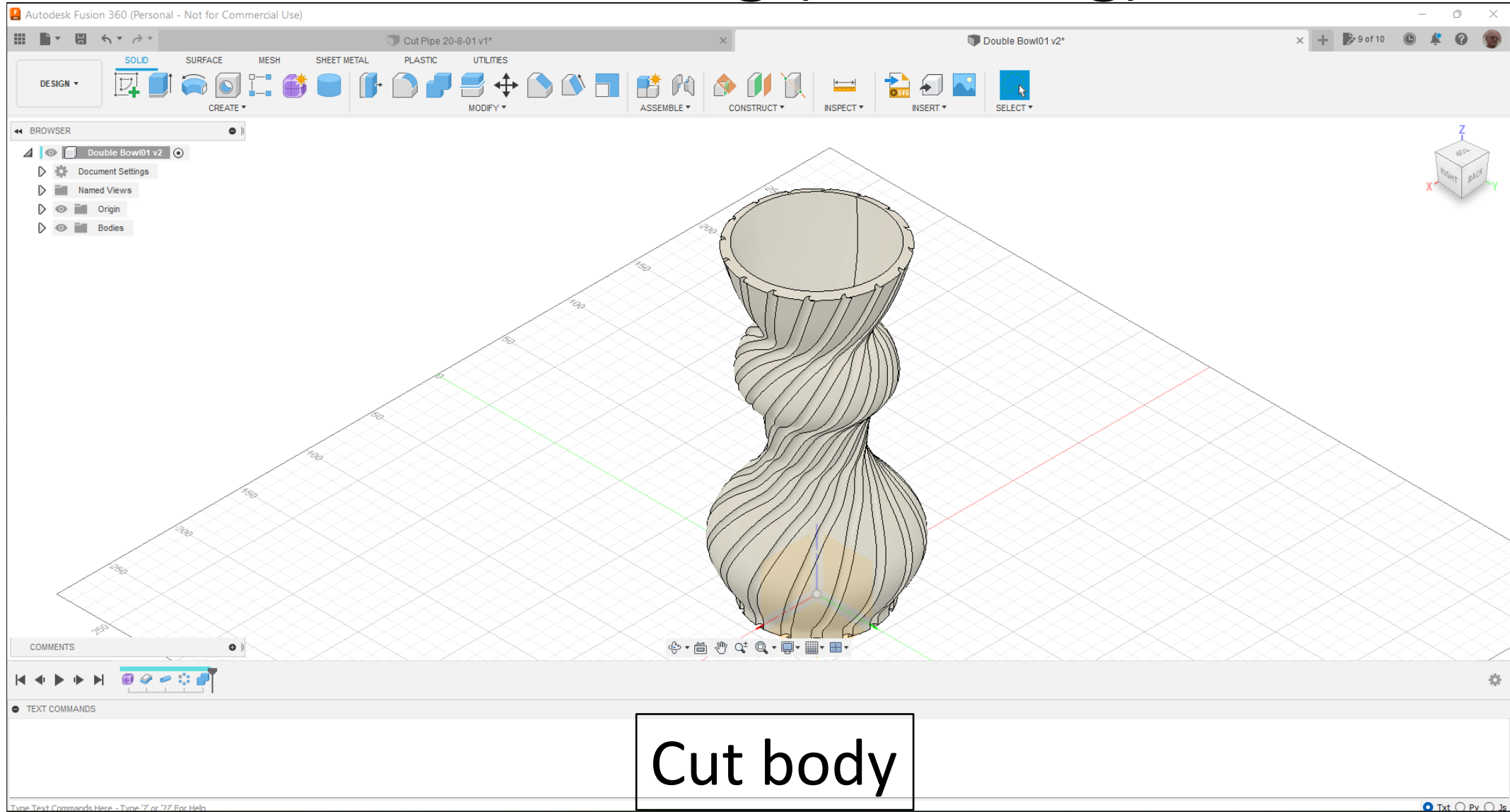
3 D Printing (Modeling)



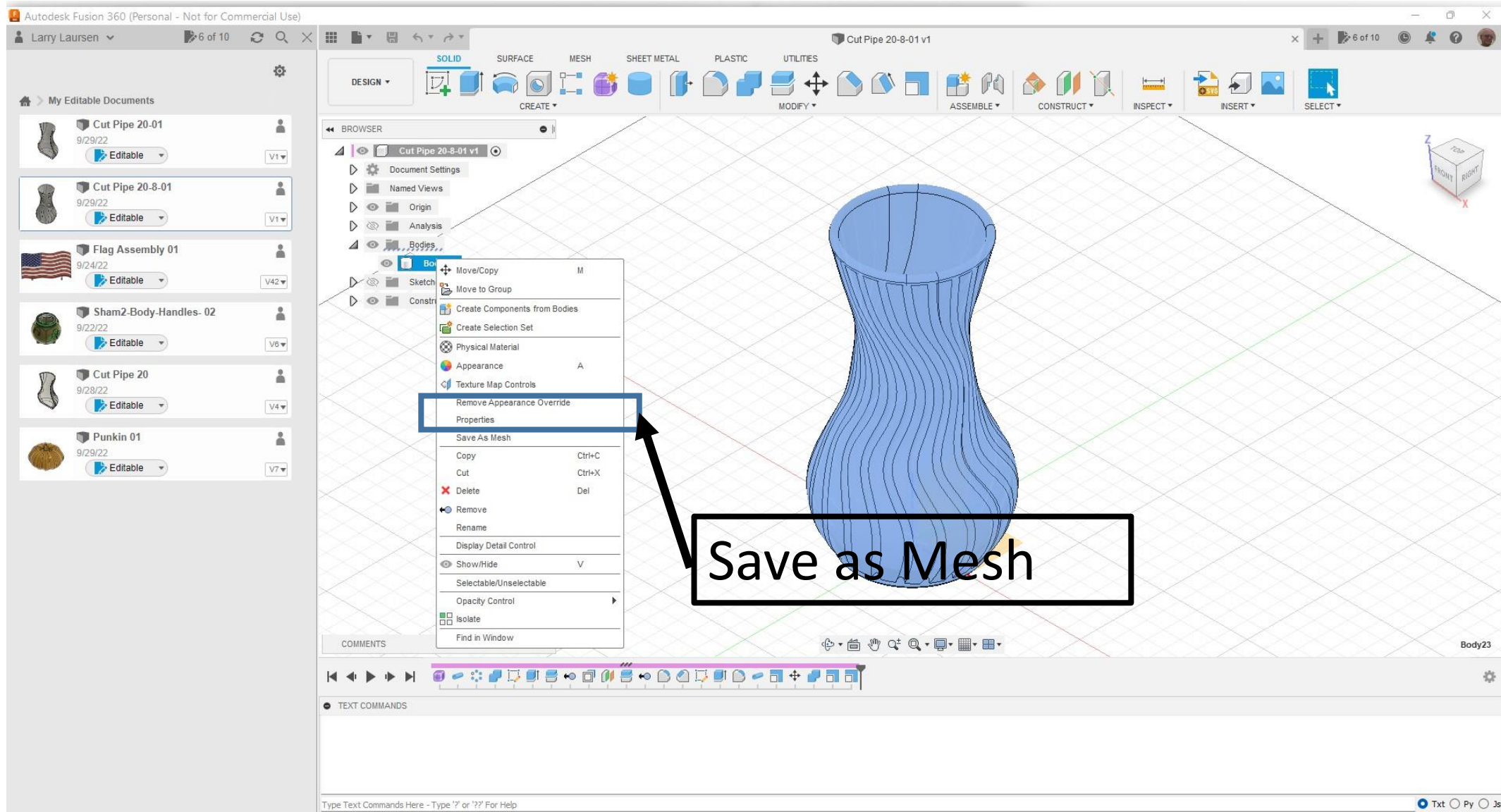
3 D Printing (Modeling)



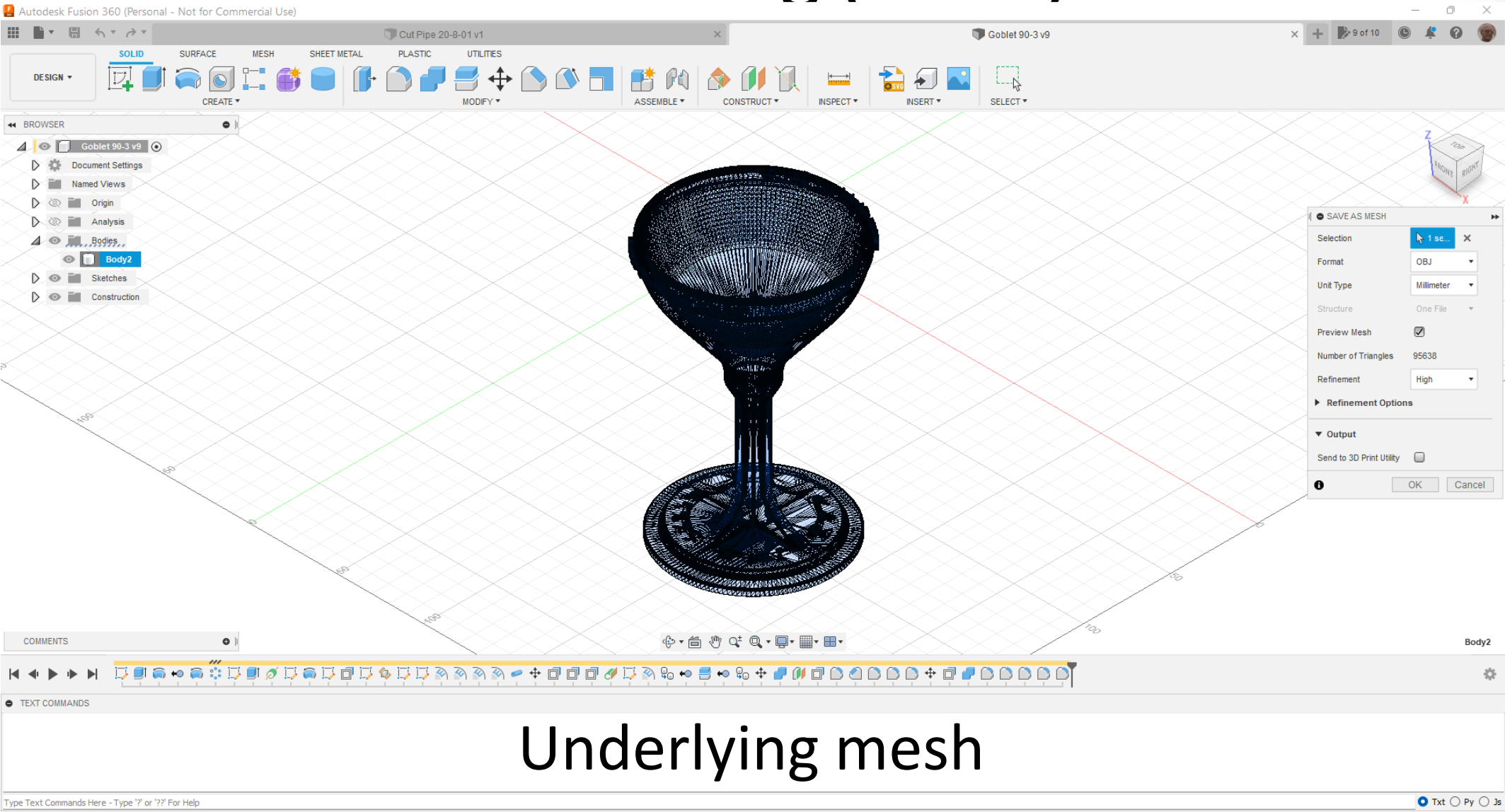
3 D Printing (Modeling)



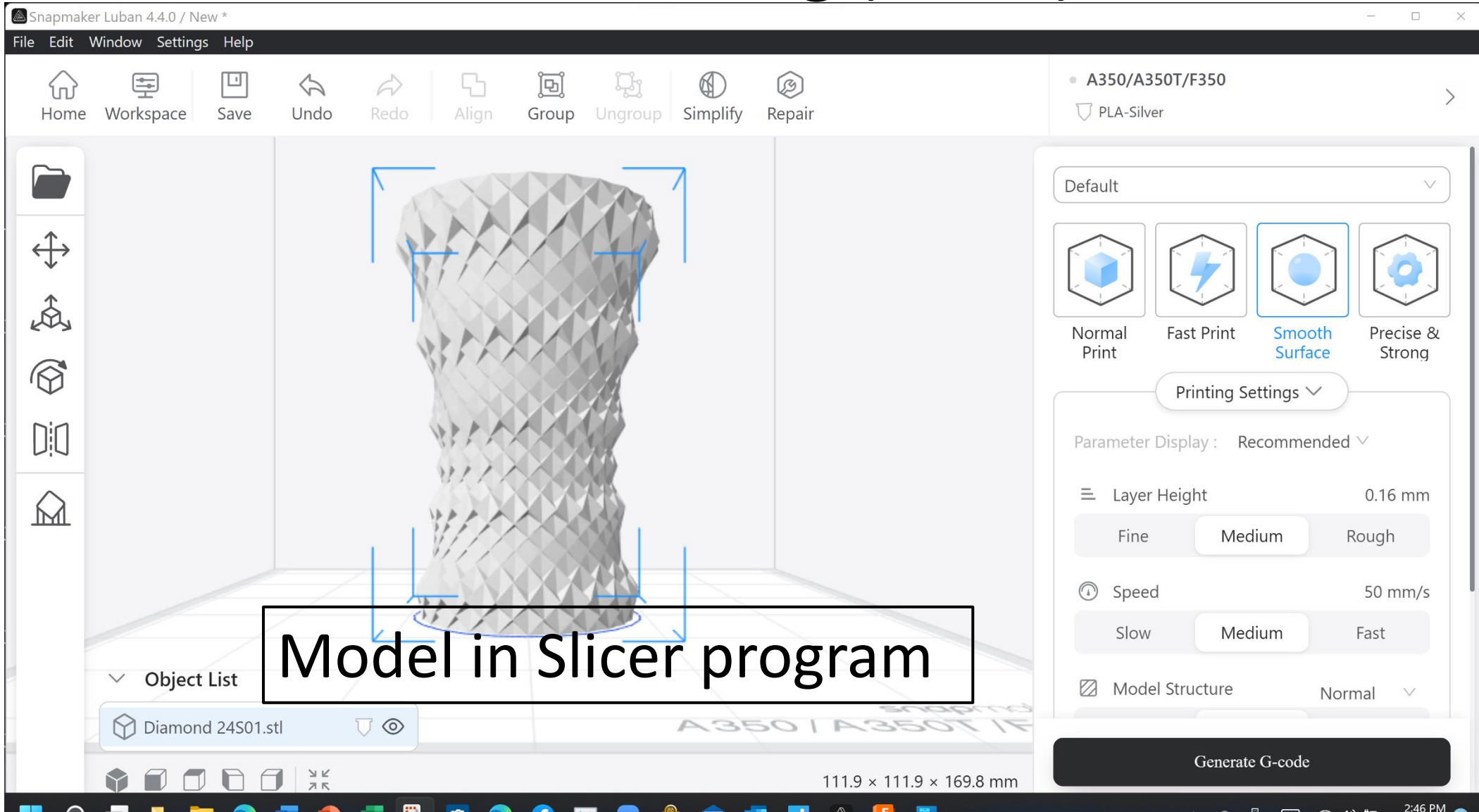
3 D Printing (Final Model)



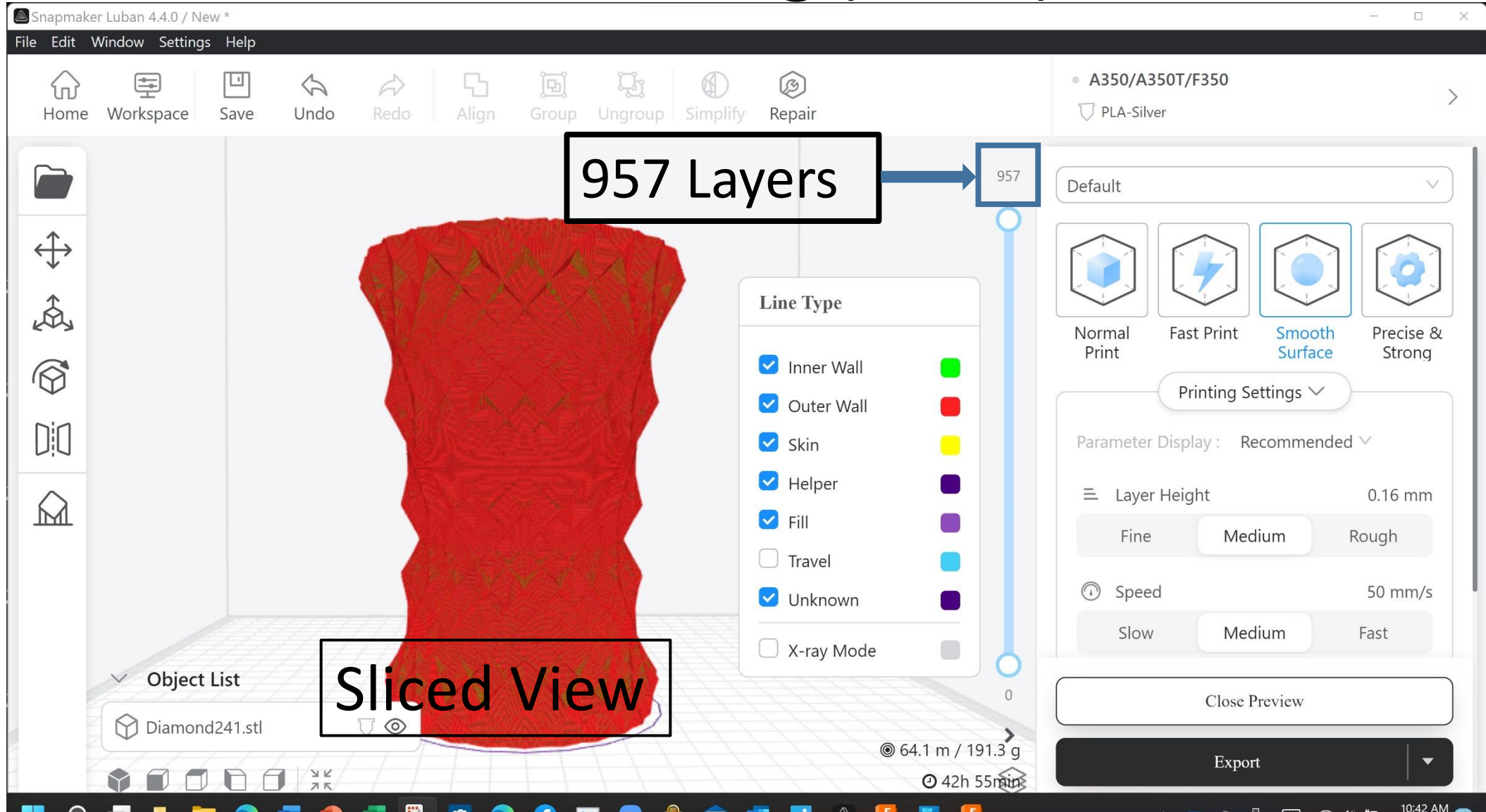
3 D Printing (Mesh)



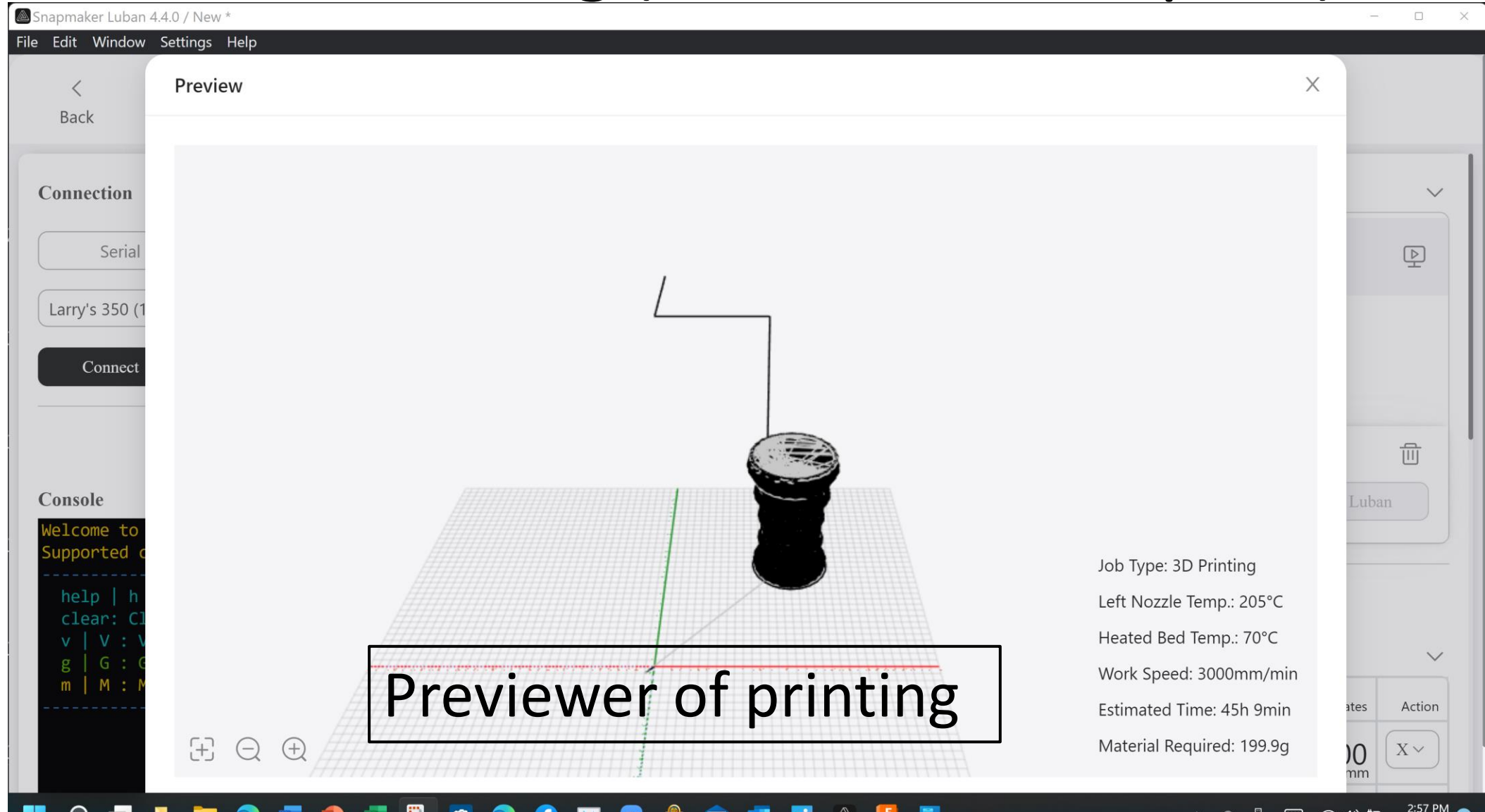
3 D Printing (Slicer)



3 D Printing (Slicer)



3 D Printing (Machine Workspace)



3 D Printing

The screenshot shows the Snapmaker Luban 4.4.0 software interface. A central dialog box with a green three-dot icon and the text "Send to Device" and "Sending file. Please wait..." is overlaid on the main workspace. The background interface includes a "Connection" panel on the left for "Larry's 350 (Snapmaker 2.0 A350/A350T/F350)", a "G-code Files" panel on the right showing a file named "Goblet 64_1665...0.gcode", and a "Console" at the bottom left with system messages. A text box at the bottom of the dialog area contains the text "File transfert to printer".

3 D Printing (Gcode)

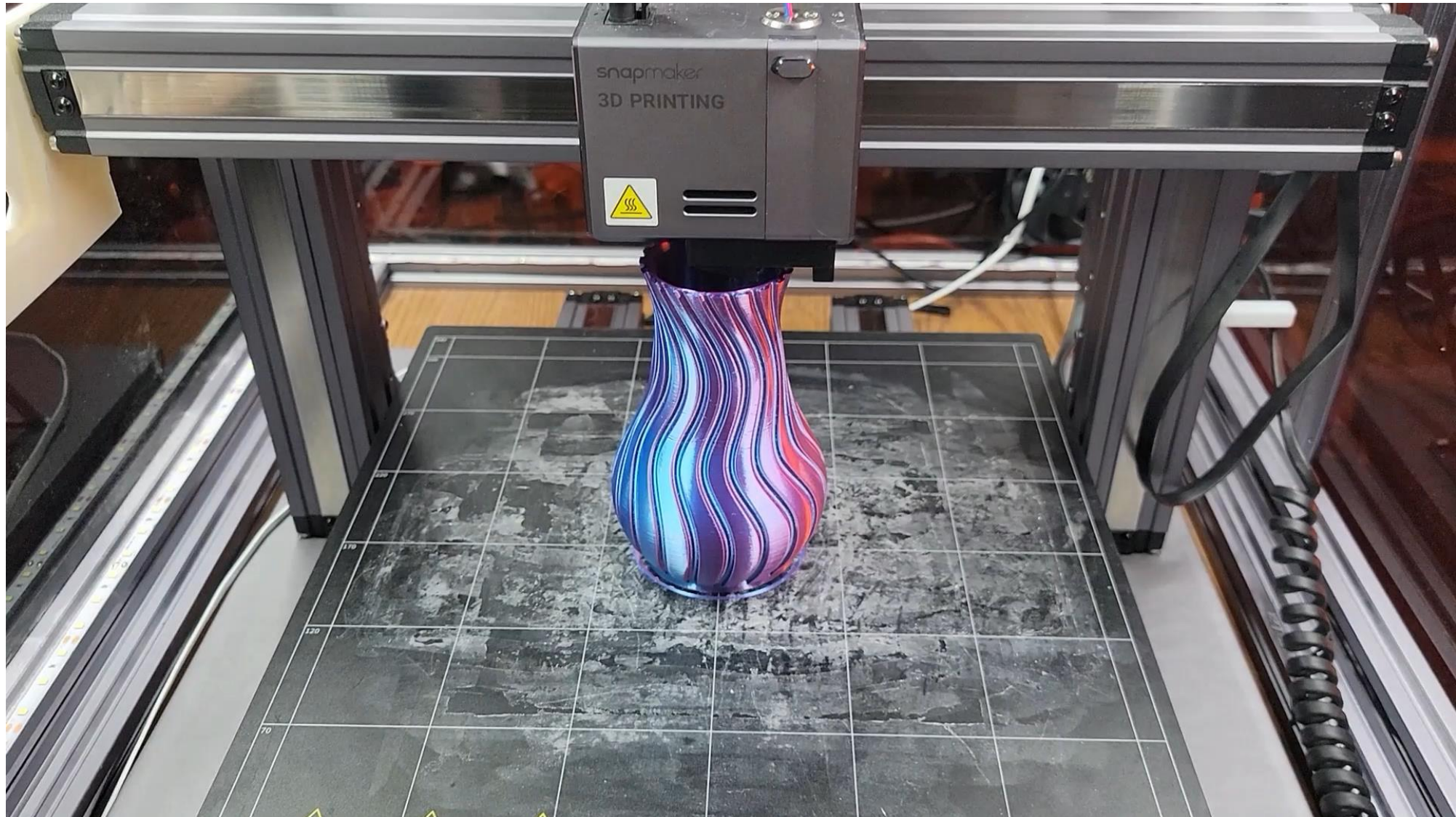
1,764,799 Lines
1059 Layers
169.9 mm/6.7 In
45 hours

```
File Edit Selection View Go Run Terminal Help
Restricted Mode is intended for safe code browsing. Trust this window to enable all features. Ma

Diamond 24S 01_1665093190434.gcode X
C: > Users > ljlau > OneDrive > 3D Objects > Vase Designs > Diamond 24S 01_1665093190434.gcode X
11 ;MAXY: -2.14748e+06
12 ;MAXZ: -2.14748e+06
13
14
15 ;header_type: 3dp
16 ;tool_head: singleExtruderToolhead
17 ;machine: A350
18 ;thumbnail: data:image/png;base64
19 ;file_total_lines: 1764786
20 ;estimated_time(s): 162564.03
21 ;nozzle_temperature(°C): 205
22 ;nozzle_1_temperature(°C): -1
23 ;nozzle_0_diameter(mm): 0.4
24 ;nozzle_1_diameter(mm): -1
25 ;build_plate_temperature(°C): 70
26 ;work_speed(mm/minute): 3000
27 ;max_x(mm): 55.95012664794922
28 ;max_y(mm): 55.949867248535156
29 ;max_z(mm): 169.7519989013672
30 ;min_x(mm): -55.95012664794922
31 ;min_y(mm): -55.949867248535156
32 ;min_z(mm): 0
33 ;layer_number: 0
34 ;layer_height: 0.16

Diamond 24S 01_1665093190434.gcode X
C: > Users > ljlau > OneDrive > 3D Objects > Vase Designs > Diamond 24S 01_1665093190434.gcode X
61 G92 E0
62 G92 E0
63 G1 X125.868 Y141.049 Z0.28 COUNT:1060
96 X125.868 Y141.049 Z0.28
SKIRT
00 E0
80 X126.502 Y140.502 E0.05849
7.184 Y140.017 E0.11694
8.08 Y139.4 E0.19292
0.322 Y137.758 E0.38702
2.449 Y136.106 E0.57513
4.308 Y134.584 E0.74294
5.306 Y133.746 E0.83397
77 G1 X135.788 Y133.409 E0.87504
78 G1 X136.029 Y133.271 E0.89444
79 G1 X136.512 Y133.044 E0.93172
80 G1 X137.245 Y132.771 E0.98635
81 G1 X138.536 Y132.311 E1.08208
82 G1 X141.119 Y131.307 E1.27564
83 G1 X143.62 Y130.25 E1.46528
84 G1 X146.158 Y129.093 E1.6601
85 G1 X146.809 Y128.788 E1.71032
86 G1 X147.356 Y128.588 E1.751
87 G1 X148.215 Y128.414 E1.81221
88 G1 X149.245 Y128.329 E1.8844
```

3 D Printing



3 D Printing



3 D Printing

A Short Demonstration of software.

With Questions.

3 D Printing

**Thank You
For
Attending**

3 D Printing



***Thank You
Questions?***

