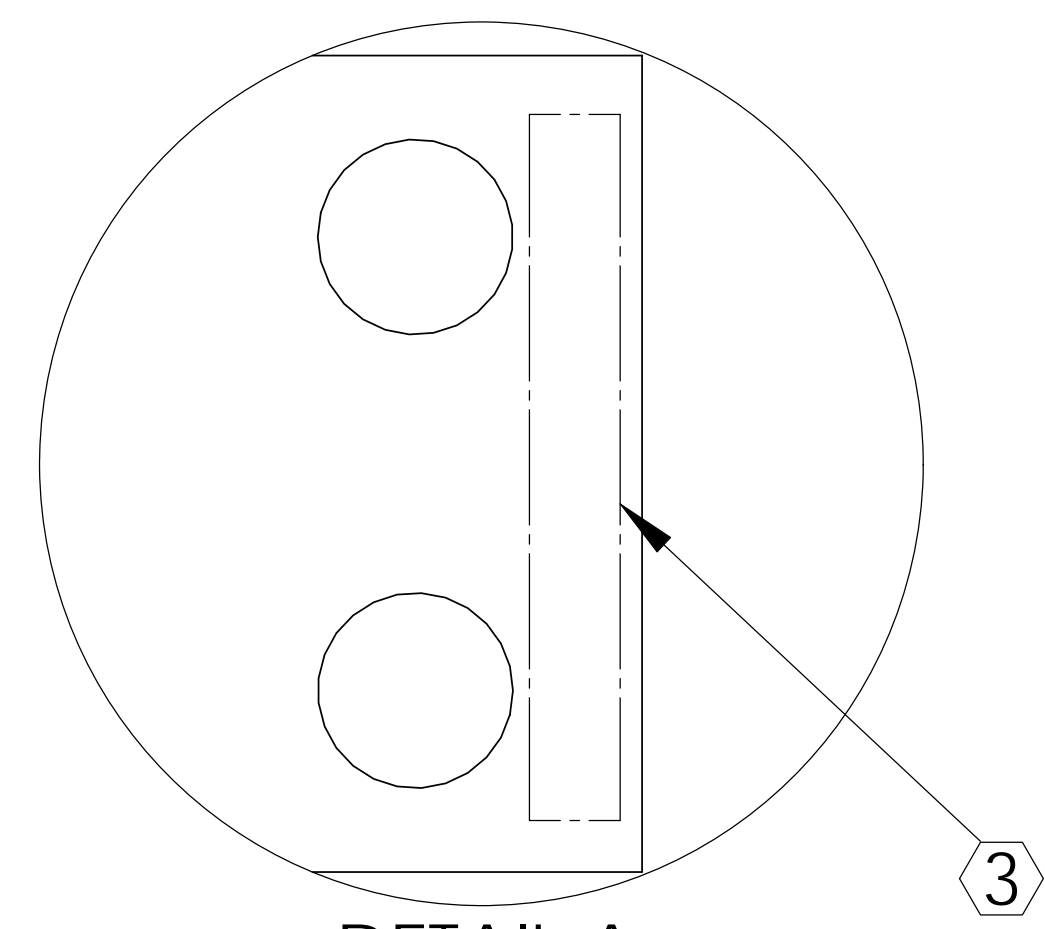
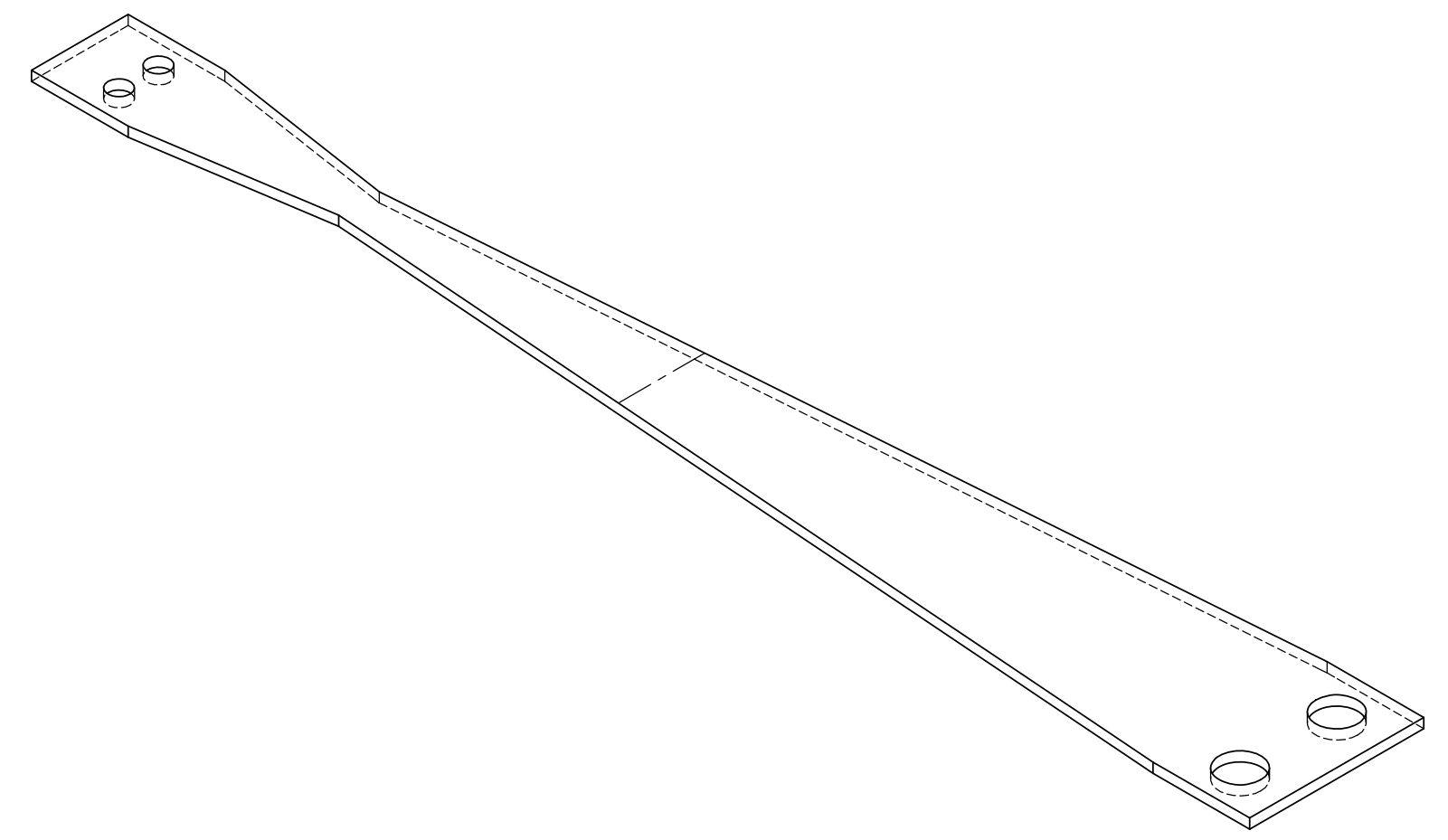
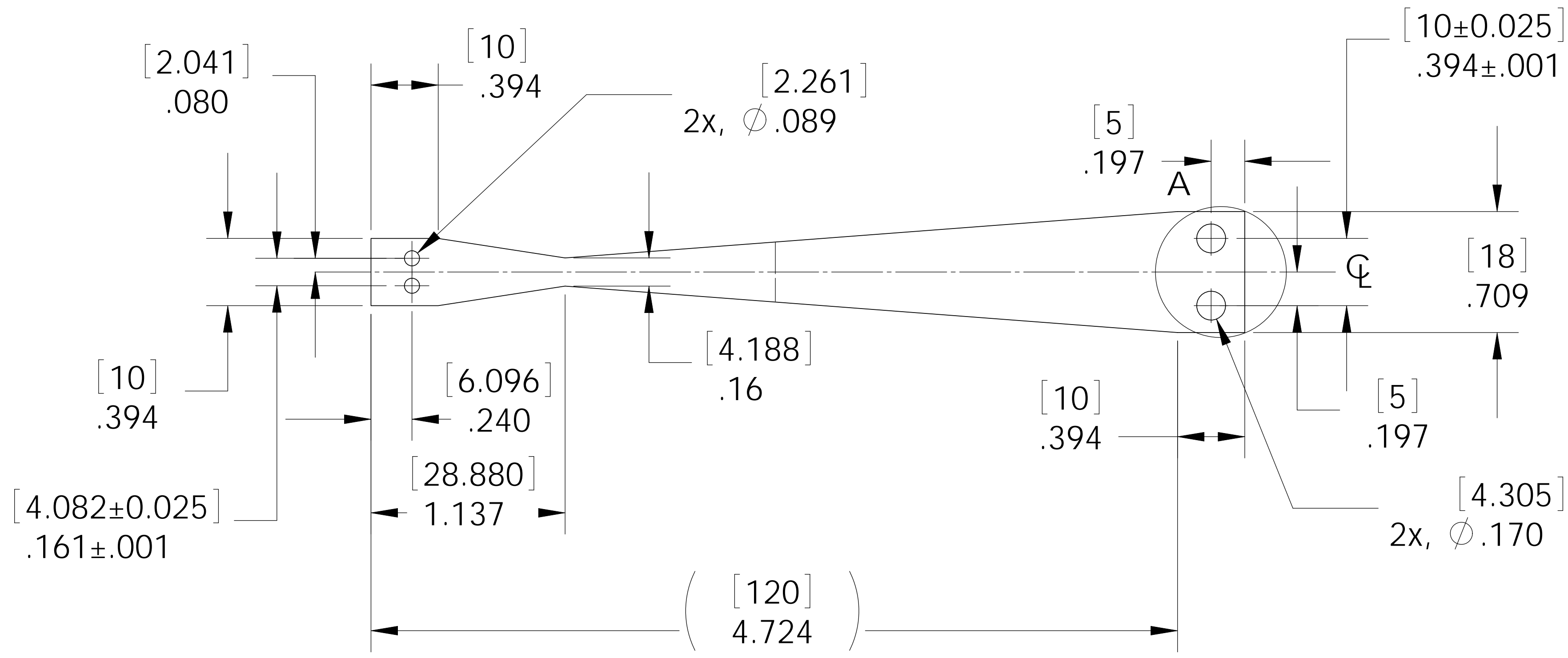


8 7 6 5 4 3 2 1

| REV. | DATE | DCN # | DRAWING TREE # |
|------|----------------|------------|----------------|
| A | 24th JUNE 2004 | E040303-00 | |

D
C
B
A



| NOTES: (UNLESS OTHERWISE SPECIFIED) | | | PARTS LIST | | | | | | | | | | | | | | | | | |
|---|------|---------|---|--|--|--|------|------|-------|-----|-------|---------|-----|---------|----------|--|--|-----------------------------|--|--|
| 1. REMOVE ALL SHARP EDGES, R.02 MIN. 2. ALL MACHINING FLUIDS SHALL BE WATER SOLUBLE AND FREE OF SULFUR, CHLORINE AND SILICONE, SUCH AS CINCINNATI MILACRON'S CIMTECH 410 (STAINLESS STEEL) 3. ENGRAVE OR STAMP DRAWING PART NUMBER ON NOTED SURFACE OF PART AND A THREE DIGIT SERIAL NUMBER. SERIAL NUMBERS START AT 001 FOR THE FIRST PART AND PROCEED CONSECUTIVELY. USE .07" HIGH CHARACTERS. EXAMPLE: D020188- 001. A VIBRATORY TOOL MAY BE USED. 4. VIEWS PRIOR TO FORMING 5. AFTER FORMING THE BLADES ARE ANNEALED AT 490°C FOR 4 HOURS AND AIR COOLED BACK TO ROOM TEMPERATURE | | | DUAL DIMENSIONS [mm] INCHES TOLERANCES: XX ± .01 XXX ± .005 ANGULAR ± 0.5 ° | | | CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY IGR, GLASGOW UNIVERSITY GEO 600 GROUP | | | | | | | | | | | | | | |
| | | | MATERIAL MARAGING STEEL C250 | | | SYSTEM ADVANCED LIGO | | | | | | | | | | | | | | |
| | | | FINISH | | | SUB-SYSTEM SUS | | | | | | | | | | | | | | |
| | | | <table border="1"> <thead> <tr> <th></th> <th>NAME</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>DRAWN</td> <td>CIT</td> <td>MAY02</td> </tr> <tr> <td>CHECKED</td> <td>MPL</td> <td>07JUL03</td> </tr> <tr> <td>APPROVED</td> <td></td> <td></td> </tr> </tbody> </table> | | | | NAME | DATE | DRAWN | CIT | MAY02 | CHECKED | MPL | 07JUL03 | APPROVED | | | NEXT ASSY MC: UPPER MASS | | |
| | NAME | DATE | | | | | | | | | | | | | | | | | | |
| DRAWN | CIT | MAY02 | | | | | | | | | | | | | | | | | | |
| CHECKED | MPL | 07JUL03 | | | | | | | | | | | | | | | | | | |
| APPROVED | | | | | | | | | | | | | | | | | | | | |
| | | | PART NAME LOWER BLADE | | | | | | | | | | | | | | | | | |
| | | | SIZE DWG. NO. REV. B D020201 A | | | | | | | | | | | | | | | | | |
| | | | SCALE: NTS PROJECTION: SHEET 1 OF 2 | | | | | | | | | | | | | | | | | |

FILE NAME/LOCATION: 1

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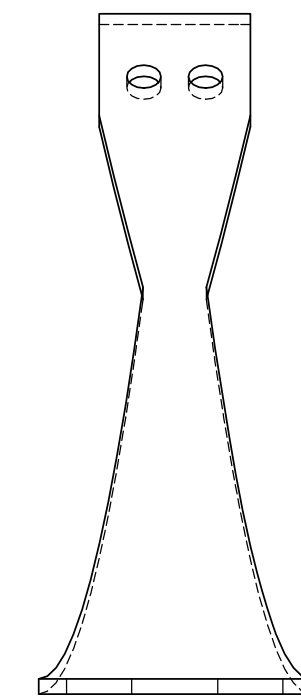
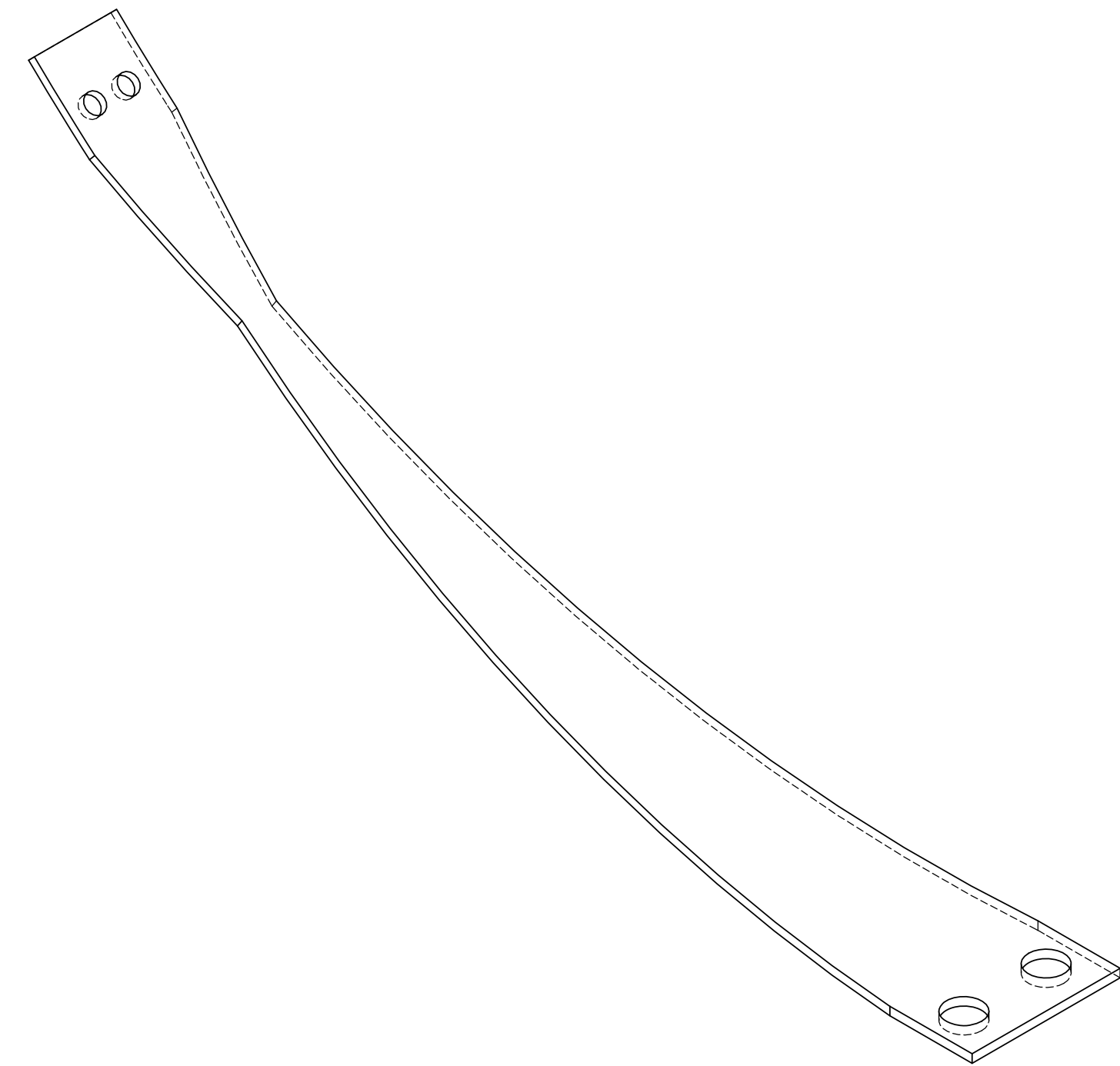
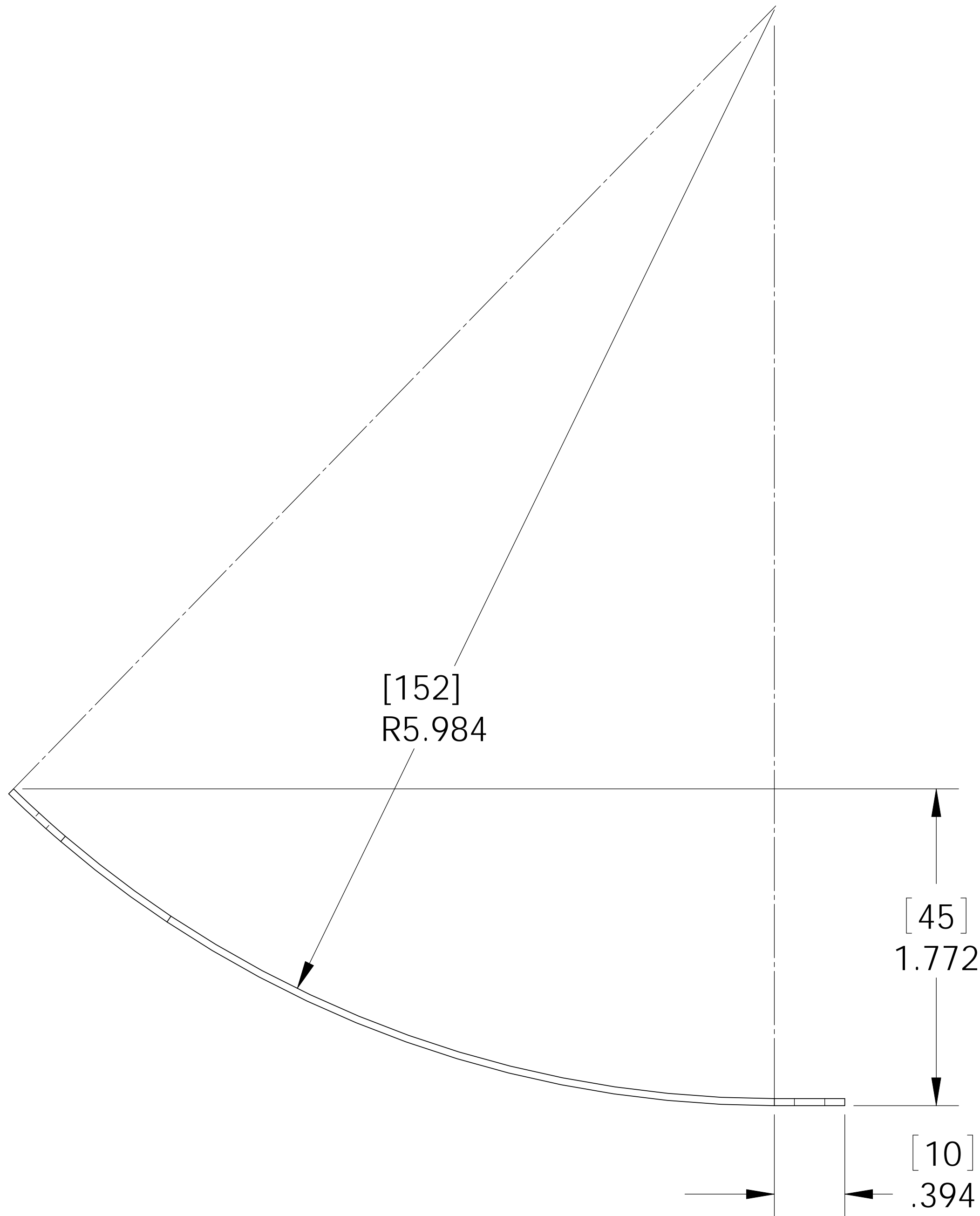
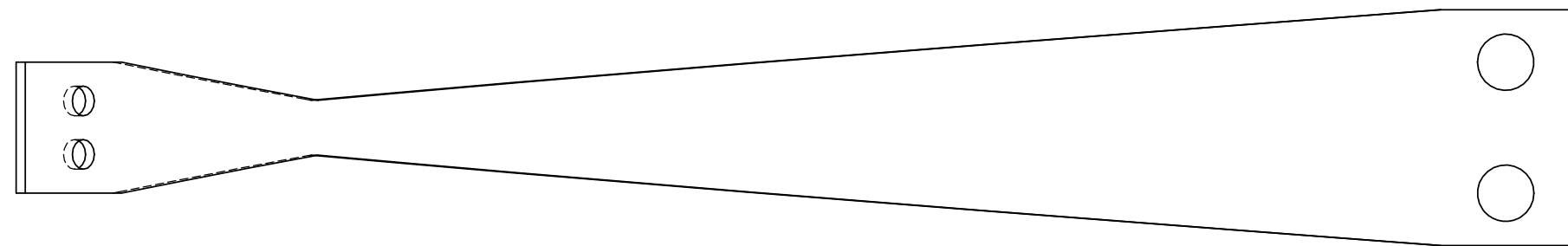
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| NOTES: (UNLESS OTHERWISE SPECIFIED) | | PARTS LIST | | | | | | | | | |
|---|------|---|-------------|------|------|--|--|--|--|--|--|
| <p>1. MANUFACTURE NOTES</p> <p>1.1 VIEWS SHOWN ARE THOSE AFTER FORMING AND ANNEALING.</p> <p>1.2 AS SHOWN, THE RADIUS OF CURVATURE IS THE INTERNAL RADIUS.</p> <p>1.3 AS SHOWN, THE OVERALL DEFLECTION IS MEASURED FROM THE BOTTOM OF THE BASE POINT TO THE HIGHEST POINT ON THE TIP OF THE BLADE.</p> <p>2. OTHER NOTES (FOR INTERNAL USE)</p> <p>2.1 SHAPE FACTOR FOR LOWER BLADE = 1.54</p> <p>2.2 LOAD ON LOWER BLADE (FLAT) = 1.5kg</p> <p>2.3 PREDICTED UNCOUPLED FREQUENCY = 3.4Hz</p> <p>2.4 PREDICTED FIRST INTERNAL MODE = 260Hz</p> <p>(These were extrapolated from an earlier blade design using Equations highlighted in MVP blade paper)</p> <p>2.5 MAXIMUM STRESS = 580MPa</p> <p>2.6 SOLIDWORKS RADIUS VALUE OVER WRITTEN, WITH VALUE CALCULATED BY MVP.</p> <p>2.7 IN SW PART, BLADE MUST BE DRAWN WITH SHEET METAL AND EXTRUDED VERTICALLY DOWNWARDS.</p> <p>2.8 IN SW PART RADIUS SHOULD BE ADJUSTED TO ATTAIN DESIRED LENGTH ON DRAWING SHEET.</p> | | <p>DUAL DIMENSIONS [mm] INCHES</p> <p>TOLERANCES:</p> <p>.XX ± .01</p> <p>.XXX ± .005</p> <p>ANGULAR ± 0.5 °</p> <p>MATERIAL</p> <p>FINISH</p> <table border="1"> <thead> <tr> <th>NAME</th> <th>DATE</th> </tr> </thead> <tbody> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </tbody> </table> <p>DRAWN</p> <p>CHECKED</p> <p>APPROVED</p> | | NAME | DATE | | | | | | |
| NAME | DATE | | | | | | | | | | |
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| CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY IGR, GLASGOW UNIVERSITY GEO 600 GROUP | | <p>SYSTEM ADVANCED LIGO</p> <p>SUB-SYSTEM SUS</p> <p>NEXT ASSY MC: UPPER MASS</p> <p>PART NAME LOWER BLADE</p> | | | | | | | | | |
| <p>SCALE: NTS PROJECTION: </p> | | <p>SIZE DWG. NO. D020201</p> | <p>REV.</p> | | | | | | | | |
| <p>SHEET 2 OF 2</p> | | <p>FILE NAME/LOCATION: 1</p> | | | | | | | | | |

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