



INTRALINK NAME: D070435_PROCESS

REV.	DATE	DCN #	DRAWING TREE #

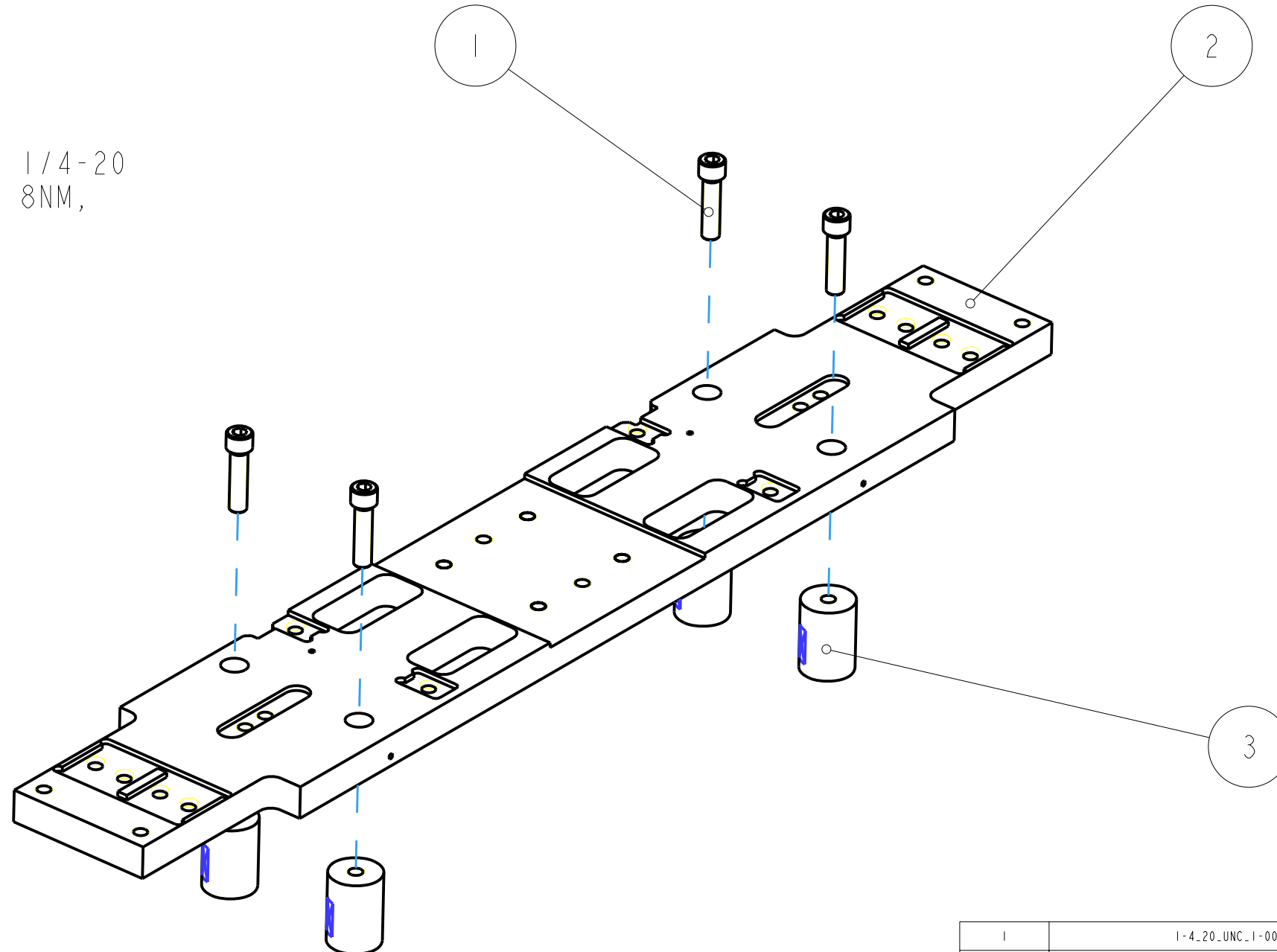
STEP	DESCRIPTION	PART#	QTY	TIME
1	STABILITY LEGS TO BASEPLATE ASSEMBLY	I-4.20 UNC. 1-001NCH	4	
		D070422	1	
		D070434	4	
2	BLADE AND BLADE CLAMP ASSEMBLY TO BASE PLATE	I-4.20 UNC. 1-001NCH	8	
		I-4.20 UNC. 2-001NCH	8	
		I-4.20 UNC. 2-001NCH_ROUND	4	
		I-4. SPERICAL_WASHER	8	
		D070417	4	
		D070418	2	
		D070419	4	
3	BLADE STRAIGHTENING AND TIP STOP ASSEMBLY	I-4.20 UNC. 1-001NCH_SIL_PLT	4	
		I-4.20 UNC. 2-501NCH_ROUND	4	
		I-4.20 UNC_NUT_	4	
		D070428	4	
		D070417_FLAT	4	
4	PITCH ADJUSTER TO BASE PLATE ASSEMBLY	I-4.20 UNC. 2-001NCH_SIL_PLT	4	
		I-4.20 UNC_X_0-188_GRUBSCREW	1	
		D060405	1	
		D070423	1	
5	TOP PLATE AND STAND OFF ASSEMBLY TO BASE PLATE	I-4.20 UNC. 0-751NCH_SIL_PLT	4	
		I-4.20 UNC. 1-001NCH	4	
		I-4.20 UNC. 1-001NCH_SIL_PLT	4	
		D070429	2	
		D070430	2	
6	MASS FLAG AND SHEILDING MAGNET ASSEMBLY, AND ASSEMBLY OF ADDABLE/REMOVABLE MASS TO THE TOP PLATES	I-4.20 UNC. 1-001NCH	4	
		D060400	1	
		D060401	3	
		D060418	2	
		D0901344	2	
		D060359-050_0	4	
7	MASS FLAG ASSEMBLY, AND ASSEMBLY OF ADDABLE/REMOVABLE MASS TO BASE PLATE	I-4.20 UNC. 1-001NCH_SIL_PLT	2	
		D060400	1	
		D060401	2	
		D060418	1	
		D0901344	1	
		D060359-100_0	2	
8	EDDIE CURRENT DAMPER ASSEMBLY TO MASS TOP AND BASE PLATES	I-4.20 UNC. 1-001NCH	6	
		I-4.20 UNC. 1-001NCH_SIL_PLT	2	
		D060400	4	
		D060401	40	
		D060407	4	
		D060408	8	
		D060413	8	
		D060418	4	
		D0901344	36	

NOTES: (UNLESS OTHERWISE SPECIFIED)		 CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY IGR, GLASGOW UNIVERSITY GEO 600 GROUP RUTHERFORD APPLETON LABORATORIES	
1.	PROCESS PLAN TO BE USED FOR ASSEMBLY ONLY	SYSTEM	ADVANCED LIGO
	NOT TO BE USED FOR MANUFACTURE	SUB-SYSTEM	SUS
		NEXT ASSY	BEAMSPLITTER
		PART NAME	BS TOP MASS BEAMSPLITTER TRIPPLE
	NAME	DATE	SIZE
DRAWN	J O'DELL	10/JAN/09	B
CHECKED	IW	10/JAN/09	DRG. NO.
APPROVED	J O'DELL	10/JAN/09	D-070435_PROCESS
SCALE 1:2		PROJECTION: 	SHEET 1 OF 9

REV.	DATE	DCN #	DRAWING TREE #

NOTE:

NOMINAL TORQUES FOR ALL 1/4-20
UNC SCREWS THROUGHOUT = 8NM,
UNLESS OTHERWISE STATED

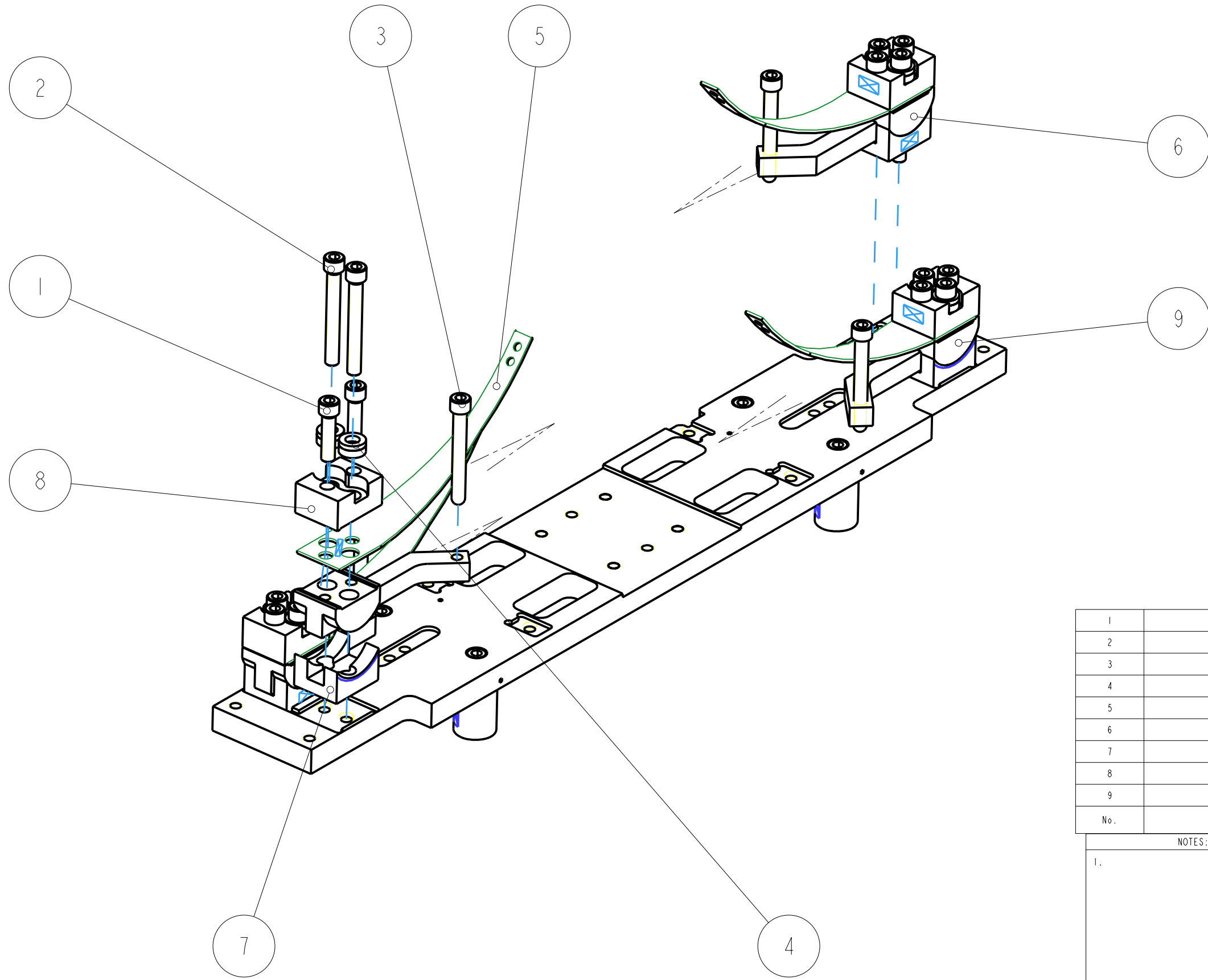


1	1-4_20 UNC_1-001NCH	1/4" 20 UNC X 1" CAP HEAD	4
2	D070422	BASE PLATE	1
3	D070434	STABILITY LEG	4
No.	PART NUMBER	PART DESCRIPTION	NO. REOD

NOTES: (UNLESS OTHERWISE SPECIFIED)

1. PROCESS PLAN TO BE USED FOR ASSEMBLY ONLY NOT TO BE USED FOR MANUFACTURE

CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY IGR, GLASGOW UNIVERSITY GEO 600 GROUP RUTHERFORD APPLETON LABORATORIES															
SYSTEM ADVANCED LIGO															
SUB-SYSTEM SUS															
NEXT ASSY BEAMSPLITTER															
PART NAME BS TOP MASS BEAMSPLITTER TRIPPLE															
<table border="1"> <tr> <th>NAME</th> <th>DATE</th> </tr> <tr> <td>DRAWN J O'DELL</td> <td>10/JAN/09</td> </tr> <tr> <td>CHECKED IW</td> <td>10/JAN/09</td> </tr> <tr> <td>APPROVED J O'DELL</td> <td>10/JAN/09</td> </tr> </table>	NAME	DATE	DRAWN J O'DELL	10/JAN/09	CHECKED IW	10/JAN/09	APPROVED J O'DELL	10/JAN/09	<table border="1"> <tr> <th>SIZE</th> <th>DRG. NO.</th> <th>REV</th> </tr> <tr> <td>B</td> <td>D070435_PROCESS</td> <td>D-</td> </tr> </table>	SIZE	DRG. NO.	REV	B	D070435_PROCESS	D-
NAME	DATE														
DRAWN J O'DELL	10/JAN/09														
CHECKED IW	10/JAN/09														
APPROVED J O'DELL	10/JAN/09														
SIZE	DRG. NO.	REV													
B	D070435_PROCESS	D-													
SCALE 1:2		PROJECTION:	SHEET 2 OF 9												



NOTE:

TORQUE ALL 1/4-20 UNC X 1" AND 1/4-20 UNC X 2" SCREWS IN THIS STAGE TO 20Nm

LEAVE 1/4-20 UNC X 2" ROUND SCREWS SFINGER TIGHT, DO NOT USE A TORQUE WRENCH.

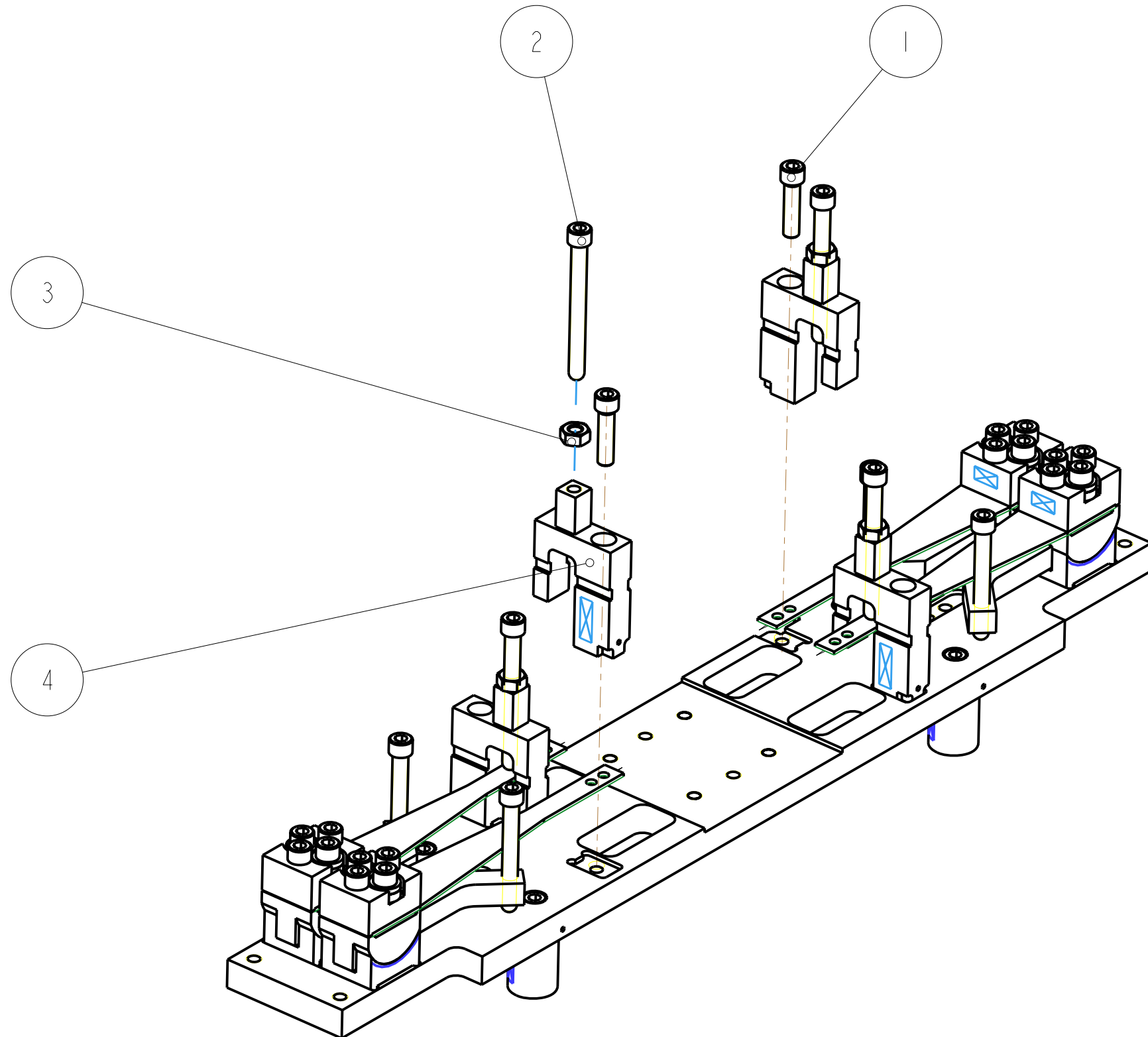
No.	PART NUMBER	PART DESCRIPTION	NO. REQD
1	1-4_20 UNC 1-001NCH	1/4" 20 UNC X 1" CAP HEAD	8
2	1-4_20 UNC 2-001NCH	1/4" 20 UNC X 2" CAP HEAD	8
3	1-4_20 UNC 2-001NCH_ROUND	1/4" 20 UNC X 2" CAP HEAD, SPHERICAL TIP	4
4	1-4_SPERICAL_WASHER	1/4 SPHERICAL WASHER	8
5	D070417	BOTTOM BLADE SPRINGS	4
6	D070418	BLADE TIP HEIGHT ADJ#1	2
7	D070419	BLADE CLAMP BOTTON JAW	4
8	D070420	BLADE CLAMP TOP JAW	4
9	D070421	BLADE TIP HEIGHT ADJ#2	2

NOTES: (UNLESS OTHERWISE SPECIFIED)

1.

PROCESS PLAN TO BE USED FOR ASSEMBLY ONLY NOT TO BE USED FOR MANUFACTURE		CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY IGR, GLASGOW UNIVERSITY GEO 600 GROUP RUTHERFORD APPLETON LABORATORIES	
		SYSTEM ADVANCED LIGO	
		SUB-SYSTEM SUS	
		NEXT ASSY BEAMSPLITTER	
		PART NAME BS TOP MASS BEAMSPLITTER TRIPPLE	
DRAWN	J O'DELL	10/JAN/09	SIZE B DRG. NO. D070435_PROCESS REV D-
CHECKED	IW	10/JAN/09	
APPROVED	J O'DELL	10/JAN/09	
SCALE 1:2		PROJECTION:	SHEET 3 OF 9

REV.	DATE	DCN #	DRAWING TREE #



NOTE:

PULL BLADES DOWN FLAT
USING A HANGING MASS,
AND ADD BLADE TIP STOPS

DO NOT TORQUE 1/4-20 UNC
X 2" ROUND SCREWS IN THIS STEP

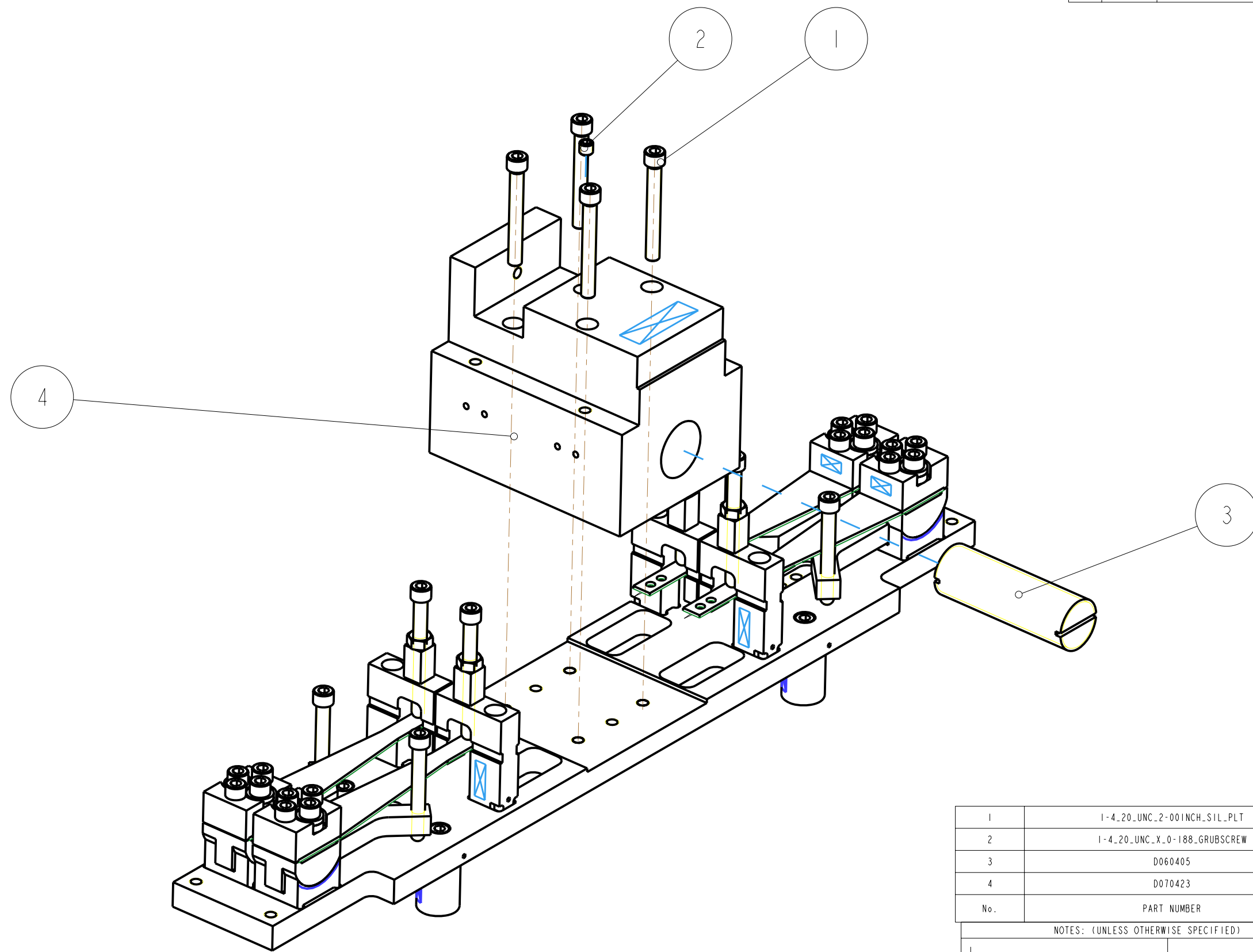
No.	PART NUMBER	PART DESCRIPTION	NO. REOD
1	1-4_20 UNC_1-001NCH_SIL_PLT	1/4" 20 UNC X 1" CAP HEAD SILVER PLATED	4
2	1-4_20 UNC_2-501NCH_ROUND	1/4" 20 UNC X 2" CAP HEAD, SPHERICAL TIP	4
3	1-4_20 UNC_NUT_	1/4" 20 UNC NUT	4
4	D070428	STOP BRIDGE	4
5	D070417_FLAT	BOTTOM BLADE SPRINGS	4

NOTES: (UNLESS OTHERWISE SPECIFIED)

1.

PROCESS PLAN TO BE USED FOR ASSEMBLY ONLY NOT TO BE USED FOR MANUFACTURE		CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY IGR, GLASGOW UNIVERSITY GEO 600 GROUP RUTHERFORD APPLETON LABORATORIES	
		SYSTEM ADVANCED LIGO	
		SUB-SYSTEM SUS	
		NEXT ASSY BEAMSPLITTER	
		PART NAME BS TOP MASS	
		PART NAME BEAMSPLITTER TRIPPLE	
DRAWN	J O'DELL	10/JAN/09	SIZE
CHECKED	IW	10/JAN/09	DRG. NO. D070435_PROCESS
APPROVED	J O'DELL	10/JAN/09	
		SCALE 1:2	PROJECTION:

SHEET 4 OF 9



1	1-4_20_UNC_2-001INCH_SIL_PLT	1/4" 20 UNC X 2" CAP HEAD SILVER PLATED	4
2	1-4_20_UNC_X_0-188_GRUBSCREW	1/4" 20 UNC X 0.188" GRUBSCREW	1
3	D060405	PITCH ADJUSTER	1
4	D070423	PITCH ADJUSTER & MASS	1
No.	PART NUMBER	PART DESCRIPTION	NO. REOD

NOTES: (UNLESS OTHERWISE SPECIFIED)

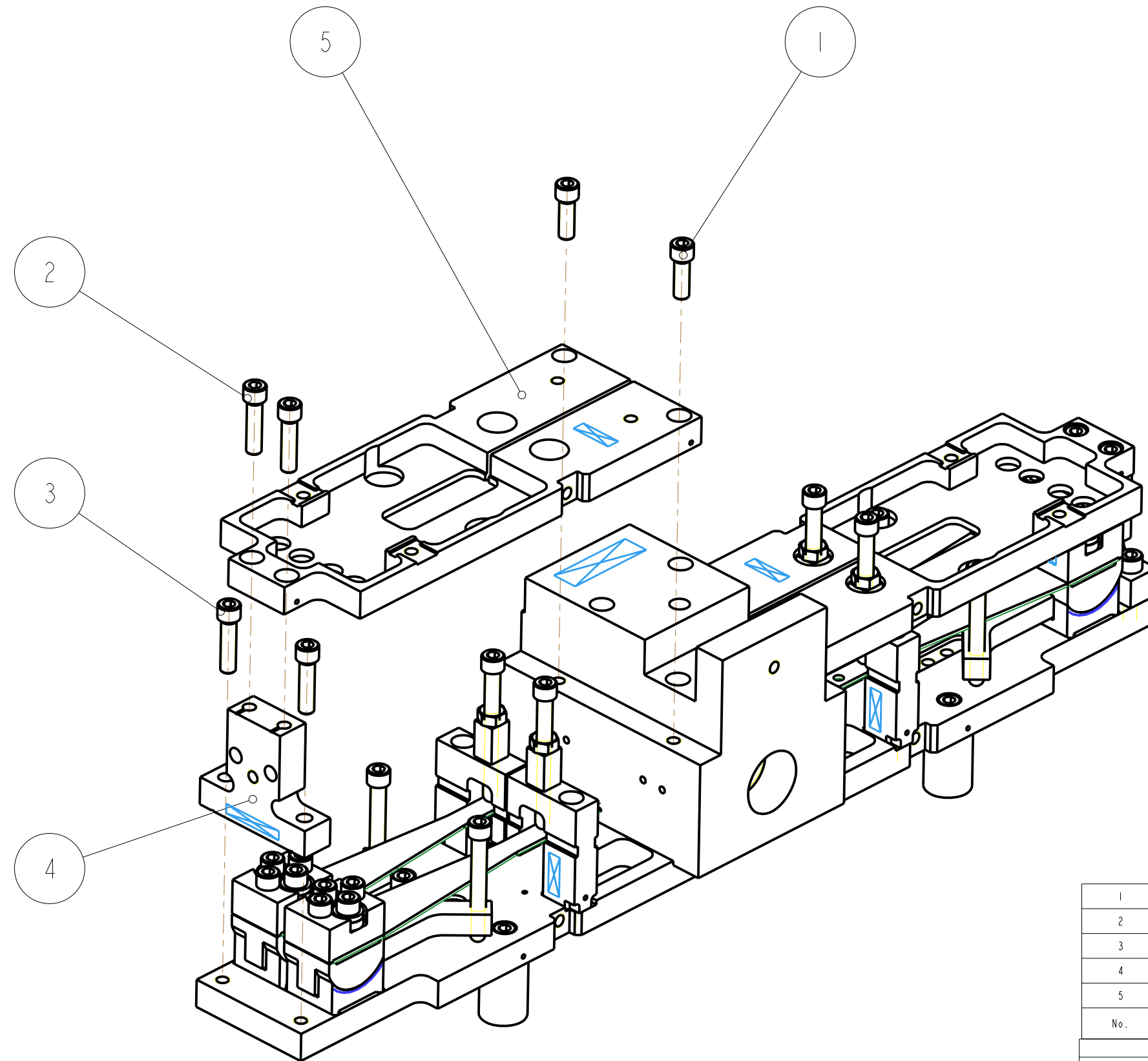
1. PROCESS PLAN TO BE USED FOR ASSEMBLY ONLY NOT TO BE USED FOR MANUFACTURE

CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY 1GR, GLASGOW UNIVERSITY GEO 600 GROUP RUTHERFORD APPLETON LABORATORIES	
SYSTEM	ADVANCED LIGO
SUB-SYSTEM	SUS
NEXT ASSY	BEAMSPLITTER
PART NAME	BS TOP MASS BEAMSPLITTER TRIPPLE
SCALE	1:2
PROJECTION	1st Angle
SHEET	5 OF 9

DRAWN	J O'DELL	10/JAN/09
CHECKED	IW	10/JAN/09
APPROVED	J O'DELL	10/JAN/09

SIZE	B
DRG. NO.	D070435_PROCESS
REV	D-

REV.	DATE	DCN #	DRAWING TREE #



1	I-4_20_UNC_0-75INCH_SIL_PLT	1/4" 20 UNC X 0.75" CAP HEAD SILVER PLATED	4
2	I-4_20_UNC_1-00INCH	1/4" 20 UNC X 1" CAP HEAD	4
3	I-4_20_UNC_1-00INCH_SIL_PLT	1/4" 20 UNC X 1" CAP HEAD SILVER PLATED	4
4	D070429	TOP MASS SPACER	2
5	D070430	TOP PLATE	2
No.	PART NUMBER	PART DESCRIPTION	NO. REOD

NOTES: (UNLESS OTHERWISE SPECIFIED)

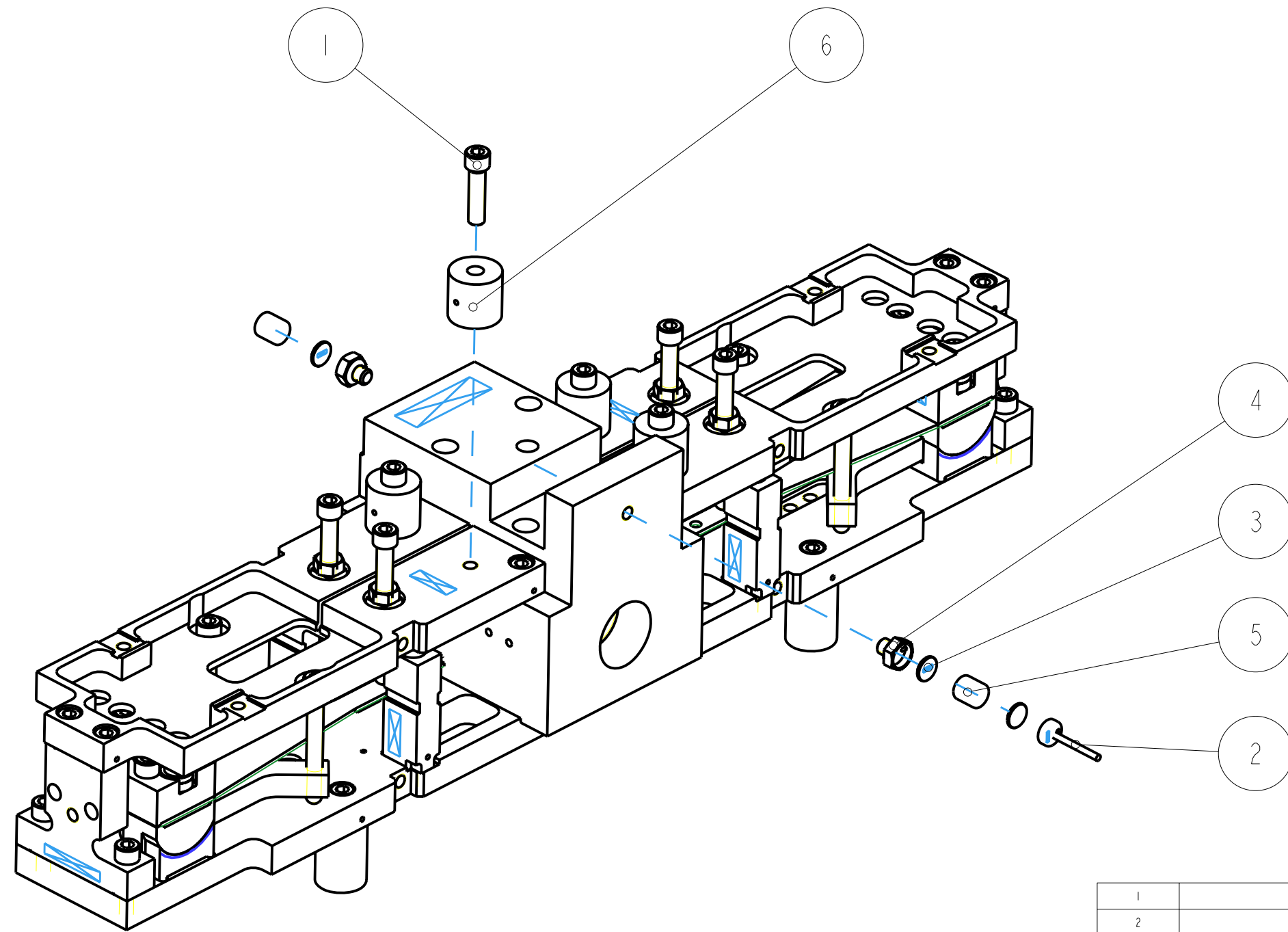
1. PROCESS PLAN TO BE USED FOR ASSEMBLY ONLY NOT TO BE USED FOR MANUFACTURE

CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY 1GR, GLASGOW UNIVERSITY GEO 600 GROUP RUTHERFORD APPLETON LABORATORIES	
SYSTEM	ADVANCED LIGO
SUB-SYSTEM	SUS
NEXT ASSY	BEAMSPLITTER
PART NAME	BS TOP MASS BEAMSPLITTER TRIPPLE
SCALE	1:2
PROJECTION	1st Angle
SHEET	6 OF 9

DRAWN	J O'DELL	10/JAN/09
CHECKED	IW	10/JAN/09
APPROVED	J O'DELL	10/JAN/09

SIZE	B
DRG. NO.	D070435_PROCESS
REV	D-

REV.	DATE	DCN #	DRAWING TREE #



NOTE:
PRESS MAGNETIC PLUGS
INTO OSEM MAGNET FLAGS
AND MAGNET RETAINERS

No.	PART NUMBER	PART DESCRIPTION	NO. RECD
1	1-4-20-UNC-1-001NCH	1/4" 20 UNC X 1" CAP HEAD	4
2	D060400	OSEM MAGNET FLAG	1
3	D060401	MAGNETIC PLUG	3
4	D060418	MAGNET RETAINER	2
5	D0901344	10MM DIA X 10MM MAGNET	2
6	D060359-050_0	ADDITIONAL MASS	4

NOTES: (UNLESS OTHERWISE SPECIFIED)

1. PROCESS PLAN TO BE USED FOR ASSEMBLY ONLY NOT TO BE USED FOR MANUFACTURE

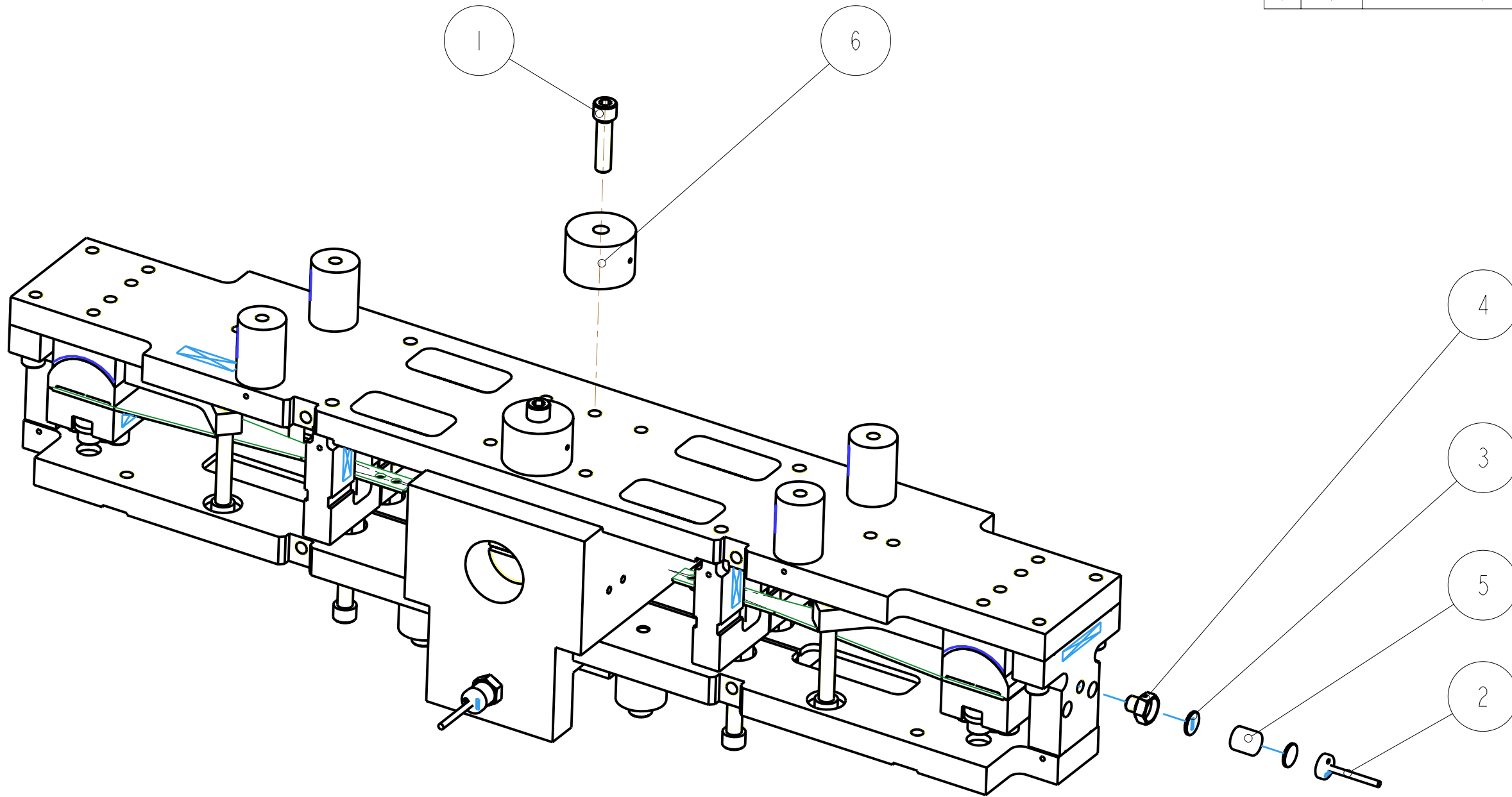
DRAWN		J O'DELL	10/JAN/09
CHECKED		IW	10/JAN/09
APPROVED		J O'DELL	10/JAN/09

SCALE	1:2
PROJECTION	First Angle

SYSTEM	ADVANCED LIGO
SUB-SYSTEM	SUS
NEXT ASSY	BEAMSPLITTER
PART NAME	BS TOP MASS BEAMSPLITTER TRIPPLE

DRG. NO.	D070435_PROCESS	REV.	D-
SCALE	1:2	PROJECTION	First Angle
SHEET		7	OF 9

CALIFORNIA INSTITUTE OF TECHNOLOGY
MASSACHUSETTS INSTITUTE OF TECHNOLOGY
IGR, GLASGOW UNIVERSITY GEO 600 GROUP
RUTHERFORD APPLETON LABORATORIES



NOTE:
 PRESS MAGNETIC PLUGS
 INTO OSEM MAGNET FLAGS AND
 MAGNET RETAINERS

 TURN MASS OVER, TO ADD
 MASS ON UNDERSIDE

No.	PART NUMBER	PART DESCRIPTION	NO. REOD
1	1-4_20_UNC_1-00INCH_SIL_PLT	1/4" 20 UNC X 1" CAP HEAD SILVER PLATED	2
2	D060400	OSEM MAGNET FLAG	1
3	D060401	MAGNETIC PLUG	2
4	D060418	MAGNET RETAINER	1
5	D0901344	10MM DIA X 10MM MAGNET	1
6	D060359-100_0	ADDITIONAL MASS	2

NOTES: (UNLESS OTHERWISE SPECIFIED)

1. PROCESS PLAN TO BE USED FOR ASSEMBLY ONLY NOT TO BE USED FOR MANUFACTURE

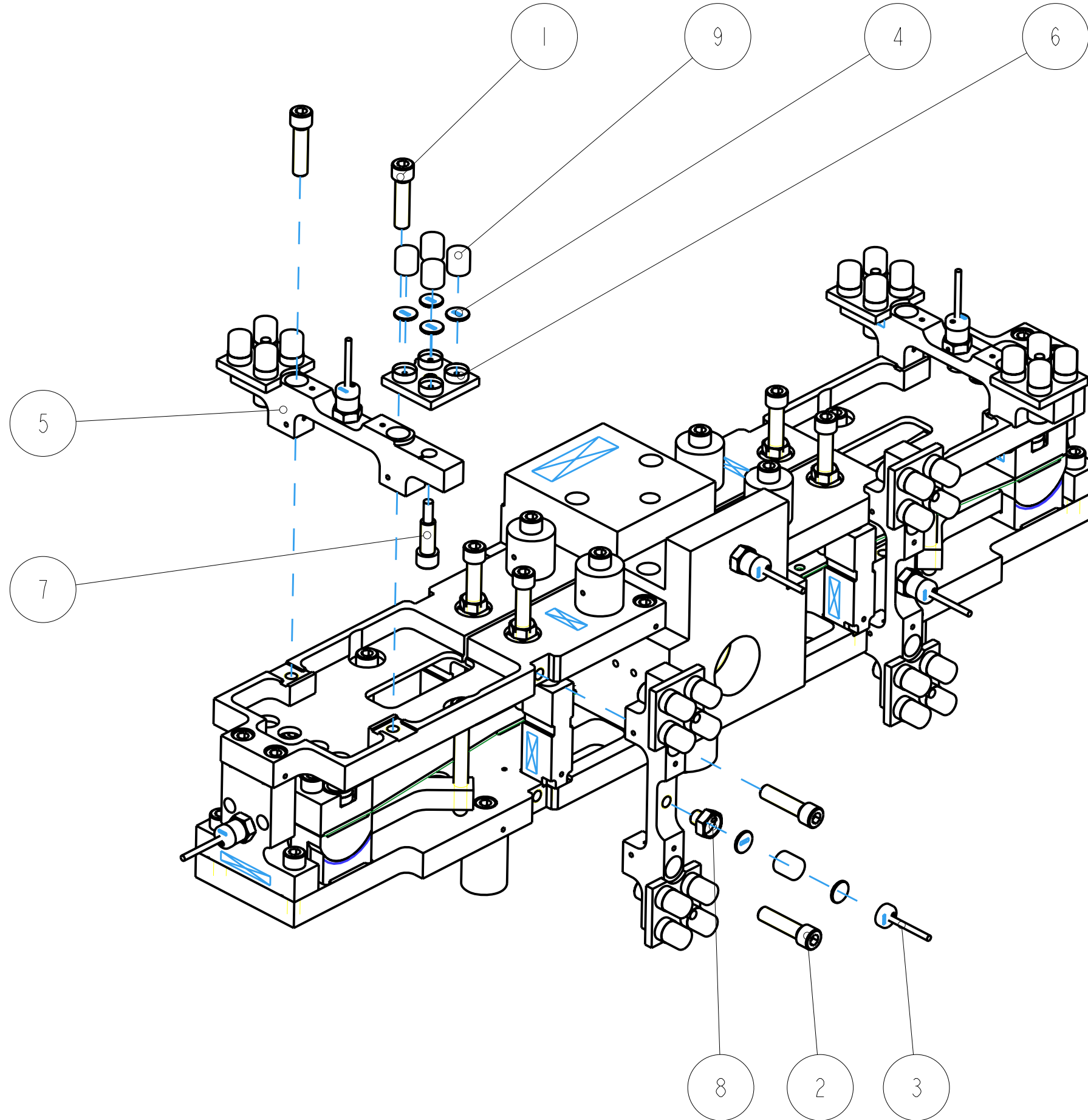
NAME	DATE	SIZE	DRG. NO.	REV
DRAWN J O'DELL	10/JAN/09	B	D070435_PROCESS	D
CHECKED IW	10/JAN/09			
APPROVED J O'DELL	10/JAN/09			

CALIFORNIA INSTITUTE OF TECHNOLOGY
 MASSACHUSETTS INSTITUTE OF TECHNOLOGY
 IGR, GLASGOW UNIVERSITY GEO 600 GROUP
 RUTHERFORD APPLETON LABORATORIES

SYSTEM **ADVANCED LIGO**
 SUB-SYSTEM **SUS**
 NEXT ASSY **BEAMSPLITTER**
 PART NAME **BS TOP MASS**
BEAMSPLITTER TRIPPLE

SCALE 1:2 PROJECTION: SHEET 8 OF 9

REV.	DATE	DCN #	DRAWING TREE #



NOTE:

PRESS MAGNETIC PLUGS INTO OSEM MAGNET FLAGS AND MAGNET RETAINERS

No.	PART NUMBER	PART DESCRIPTION	NO. REOD
1	I-4_20_UNC_1-001NCH	1/4" 20 UNC X 1" CAP HEAD	6
2	I-4_20_UNC_1-001NCH_SIL_PLT	1/4" 20 UNC X 1" CAP HEAD SILVER PLATED	2
3	D060400	OSEM MAGNET FLAG	4
4	D060401	MAGNETIC PLUG	40
5	D060407	OSEM & ECD UNIT BACKBONE	4
6	D060408	ECD MAGNET MOUNT PLATE	8
7	D060413	1/4" 20 UNC X 1" CAP HEAD	8
8	D060418	MAGNET RETAINER	4
9	D0901344	10MM DIA X 10MM MAGNET	36

NOTES: (UNLESS OTHERWISE SPECIFIED)

1. PROCESS PLAN TO BE USED FOR ASSEMBLY ONLY NOT TO BE USED FOR MANUFACTURE

CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY 1GR, GLASGOW UNIVERSITY GEO 600 GROUP RUTHERFORD APPLETON LABORATORIES	
SYSTEM	ADVANCED LIGO
SUB-SYSTEM	SUS
NEXT ASSY	BEAMSPLITTER
PART NAME	BS TOP MASS BEAMSPLITTER TRIPPLE
SCALE	1:2
PROJECTION	1st Angle
SHEET	9 OF 9

NAME	DATE	SIZE	DRG. NO.	REV
DRAWN J O'DELL	10/JAN/09	B	D070435_PROCESS	D-
CHECKED IW	10/JAN/09			
APPROVED J O'DELL	10/JAN/09			