NOTES

1. MATERIAL CERTIFICATIONS REQUIRED

ALL DIMENSIONS ARE IN INCHES

1. INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5M

2. CONCENTRICITY .010 TIR

3. MACHINED ANGLES 1/2 FORMED ANGLES 1

4. BREAK SHARP CORNERS AND REMOVE ALL BURRS

5. WHOLE NUMBERS AND FRACTIONS 1/16

6. DECIMALS .030

7. XX DECIMALS .010

8. XXX DECIMALS .005

UNLESS OTHERWISE NOTED

DATE

V GRAVES 06/04/2005

T OQUIN 06/04/2005

DRAWING APPROVALS

DATE

C 203-HJT-0001

9b
NOTES
1. MATERIAL CERTIFICATIONS REQUIRED
2. TACK WELD NUTS ON ENDS OF JACK SCREWS AFTER ASSY

ITEM EXPLODED QTY. NAME MATERIAL DESCRIPTION DWG
21 12 Socket Head Cap Screw AI SS - 18-8 SHCS - 5/8-11 x 2.25 N/A
20 4 CSBOLT 0.3125-18x0.625x0.625-S-N SS - 18-8 FHMS - 5/16-18 UNC x 9/16 N/A
19 10 HX-SHCS 0.138x0.625x0.625 SS - 18-8 SHCS - 1/2-13 x 6.63 N/A
18 2 HHNUT 0.625x11-D-N SS - 18-8 HEX NUT - 3/8-11 UNC N/A
17 2 HK-SHC 0.625x11-D-N SS - 18-8 SHCS - 5/8-11 x 6.63 N/A
16 2 HK-SHC 0.625x11-D-N SS - 18-8 SHCS - 5/8-11 x 4.50 N/A
15 4 HHNUT 0.750-10-D-N SS - 18-8 HEX NUT - 3/4-10 UNC N/A
14 4 HK-SHC 0.75-16x4.5x4.5 SS - 18-8 SHCS - 3/4-16 x 4.50 N/A
13 4 PW 0.625 SS - 18-8 FLAT WASHER - 3/8 N/A
12 8 PW 0.75 SS - 18-8 FLAT WASHER - 7/16 N/A
11 6 leveling foot hjt SS - 303 S & W MFG. C.O., Bensenville, IL, Phone 888-538-3548, #SSW-5G N/A
10 4 hyd jack weldment hjt CRS - 1018 ANCHOR PLATE WELDMENT 203-HJT-0134
9 4 hyd jack assembly hjt — — 203-HJT-0130
8 4 sidemount swivel hold ring ALLOY STEEL MCMASTER CARR 29525T83 N/A
7 4 hyd jack weldment hjt CRS - 1018 HYD JACK WELDMENT 203-HJT-0131
6 2 magnet restraint plate hjt AL - 6061 T611, ASM B-221 PLATE - 3"X 6"X .062 203-HJT-0114
5 1 magnet support plate hjt AL - 6061 T611, ASM B-207 MAGNET SUPPORT PLATE 203-HJT-0113
4 1 slick sheet hjt UHMW MCMASTER CARR #8752K813 203-HJT-0112
3 2 cart anchor assy hjt CARTANCHOR ASSY 203-HJT-0120
2 2 flat rail hjt SS - 304L BAR - 2 X 52 X 1 203-HJT-0111
1 1 base weldment hjt AL - 6061 T6 BASE WELDMENT 203-HJT-0110

S & W MFG. C.O., Bensenville, IL, Phone 888-538-3548, #SSW-5G

This drawing was prepared by ORNL, solely for use in work performed under Department of Energy contract number DE-AC05-00OR22725 and applicable Work for Others Agreements and Cooperative Research and Development Agreements. This drawing is property of ORNL and must be returned upon request.

OAK RIDGE NATIONAL LABORATORY operated for the U.S. Department of Energy under contract DE-AC05-00OR22725 Oak Ridge, TN

REMOTE SYSTEMS GROUP NUCLEAR SCIENCE & TECHNOLOGY DIVISION

MERIT EXPERIMENT COMMON BASE ASSY

CAD FILE COMMON BASE ASSY HJT 203-HJT-0100
PREV ASSY 203-HJ T-0001
SCALE 1:20 SHEET 1 of 2
DRAWING APPROVALS DATE 203-HJT-0100
REV 0
NOTES

1. MATERIAL CERTIFICATIONS REQUIRED

2. TACK WELD NUTS ON ENDS OF JACK SCREWS AFTER ASSY

THIRD-ANGLE PROJECTION

UNLESS OTHERWISE NOTED

1. ALL DIMENSIONS ARE IN INCHES

2. INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5M

3. MACHINED FINISH 125 MICRO-INCHES RMS

4. CONCENTRICITY .010 TIR

5. MACHINED ANGLES 1/2 FORMED ANGLES 1

6. BREAK SHARP CORNERS AND REMOVE ALL BURRS

7. WHOLE NUMBERS AND FRACTIONS 1/16

8. X DECIMALS .030

9. XX DECIMALS .010

10. XXX DECIMALS .005

UNLESS OTHERWISE NOTED

NOTES

MATERIAL CERTIFICATIONS REQUIRED

TACK WELD NUTS ON ENDS OF JACK SCREWS AFTER ASSY

OAK RIDGE NATIONAL LABORATORY
operated for the U.S. Department of Energy under contract DE-AC05-00OR22725 Oak Ridge, TN

REMOTE SYSTEMS GROUP
NUCLEAR SCIENCE & TECHNOLOGY DIVISION

MERIT EXPERIMENT
COMMON BASE ASSY

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Common Base Assy

CAD FILE: 203-HJT-0001
PREV ASSY: -
SCALE: 1:1
SHEET: 1 of 2
SIZE: -
DRAWING NO.: 203-HJT-0100
REV: -
DATE: -
NAME: -
SIGNATURE: -
1. Welding & Inspections shall be performed in accordance with AWS D1.2.

2. All welds shall be dye penetrant inspected.

3. Material certifications required.

**Notes:**

- All dimensions are in inches.
- Interpreting dimensions and tolerances per ASME Y14.5M.
- Machined finish 125 micro-inches RMS.
- Concentricity ±.010 TIR.
- Machined angles ± 1/2° formed angles ± 1°.
- Break sharp corners and remove all burrs.
- Whole numbers and fractions:
  - 1/16
  - .030
  - .010
  - .005

**Material Certifications Required:**

1. Welding & Inspections shall be performed in accordance with AWS D1.2.

2. All welds shall be dye penetrant inspected.

3. Material certifications required.

**Notes:**

- All dimensions are in inches.
- Interpreting dimensions and tolerances per ASME Y14.5M.
- Machined finish 125 micro-inches RMS.
- Concentricity ±.010 TIR.
- Machined angles ± 1/2° formed angles ± 1°.
- Break sharp corners and remove all burrs.
- Whole numbers and fractions:
  - 1/16
  - .030
  - .010
  - .005
NOTES

1. WELDING & INSPECTIONS SHALL BE PERFORMED IN ACCORDANCE WITH AWS D.1.2

2. ALL WELDS SHALL BE DYE PENETRANT INSPECTED

3. MATERIAL CERTIFICATIONS REQUIRED

4. ALL DIMENSIONS ARE IN INCHES

5. INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5M

6. MACHINED FINISH 125 MICRO-INCHES RMS

7. CONCENTRICITY .010 TIR

8. MACHINED ANGLES 1/2 FORMED ANGLES 1

9. BREAK SHARP CORNERS AND REMOVE ALL BURRS

10. WHOLE NUMBERS AND FRACTIONS 1/16

11. X DECIMALS .030

12. XX DECIMALS .010

13. XXX DECIMALS .005

UNLESS OTHERWISE NOTED
1. Welding & Inspections shall be performed in accordance with AWS D.1.2
2. All welds shall be dye penetrant inspected
3. Material certifications required

Base Weldment

Remote Systems Group
Nuclear Science & Technology Division

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Notes:

1. All dimensions are in inches.
2. Interpret dimensions and tolerances per ASME Y14.5M.
3. Machined finish 125 micro-inches RMS.
4. Concentricity ±0.010 TIR.
5. Mached angles ±1/2° formed angles ±1°.
6. Break sharp corners and remove all burrs.
7. Whole numbers and fractions 1/16.
8. X decimals .030.
9. XX decimals .010.
10. XXX decimals .005.

Unless otherwise noted

Third Angle Projection

Remote Systems Group
Nuclear Science & Technology Division

Oak Ridge National Laboratory
Operated for the U.S. Department of Energy under contract DE-AC05-00OR22725 Oak Ridge, TN

Merit Experiment
Common Baseplate Assy
Base Weldment

203-MT-0110
THIRD-ANGLE PROJECTION

UNLESS OTHERWISE NOTED:
1. ALL DIMENSIONS ARE IN INCHES
2. INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5M
3. MACHINED FINISH 125 MICRO-INCHES RMS
4. CONCENTRICITY .010 TIR
5. MACHINED ANGLES 1/2 FORMED ANGLES 1
6. BREAK SHARP CORNERS AND REMOVE ALL BURRS
7. WHOLE NUMBERS AND FRACTIONS 1/16
8. X DECIMALS .030
9. XX DECIMALS .010
10. XXX DECIMALS .005 UNLESS OTHERWISE NOTED

SECTION K-K

SECTION L-L

DEP:  V GRAVES  12/10/2005
ENG:  V GRAVES  12/10/2005
CHK:  T O'CONNOR  12/10/2005

BASE WELDMENT 4 of 4

REMOTE SYSTEMS GROUP
NUCLEAR SCIENCE & TECHNOLOGY DIVISION
OAK RIDGE NATIONAL LABORATORY
operated for the U.S. Department of Energy under contract DE-AC05-00OR22725 Oak Ridge, TN

203-HJT-0110

DRAWING APPROVALS DATE
C  203-HJT-0110
MATERIAL: UHMW

NOTES

1. MATERIAL CERTIFICATIONS REQUIRED
NOTES
1. MATERIAL CERTIFICATIONS REQUIRED

MATERIAL: AL - 6061 T651, ASTM B-209

THIRD-ANGLE PROJECTION

UNLESS OTHERWISE NOTED
1. ALL DIMENSIONS ARE IN INCHES
2. INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5M
3. MACHINED FINISH 125 MICRO-INCHES RMS
4. CONCENTRICITY .010 TIR
5. MACHINED ANGLES 1/2 FORMED ANGLES 1
6. BREAK SHARP CORNERS AND REMOVE ALL BURRS
7. WHOLE NUMBERS AND FRACTIONS 1/16
8. X DECIMALS .030
9. XX DECIMALS .010
10. XXX DECIMALS .005

DRAWING APPROVALS

OAK RIDGE NATIONAL LABORATORY
operated for the U.S. Department of Energy under contract DE-AC05-00OR22725 Oak Ridge, TN

REMOTE SYSTEMS GROUP

NUCLEAR SCIENCE & TECHNOLOGY DIVISION

MERIT EXPERIMENT
COMMON BASEPLATE ASSY
MAGNET SUPPORT PLATE

PREV ASSY
CAD FILE
REV
SIZE
DRAWING NO.

203-HJT-0113
UNLESS OTHERWISE NOTED

1. ALL DIMENSIONS ARE IN INCHES
2. INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5M
3. MACHINED FINISH 125 MICRO-INCHES RMS
4. CONCENTRICITY .010 TIR
5. MACHINED ANGLES 1/2 FORMED ANGLES 1
6. BREAK SHARP CORNERS AND REMOVE ALL BURRS
7. WHOLE NUMBERS AND FRACTIONS 1/16
8. X DECIMALS .030
9. XX DECIMALS .010
10. XXX DECIMALS .000

MATERIAL: AL - 6061 T6511, ASTM B-221

NOTES
1. MATERIAL CERTIFICATIONS REQUIRED
### MATERIAL CERTIFICATIONS REQUIRED

<table>
<thead>
<tr>
<th>ITEM</th>
<th>QTY.</th>
<th>NAME</th>
<th>MATERIAL</th>
<th>DESCRIPTION</th>
<th>DWG</th>
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</thead>
<tbody>
<tr>
<td>3</td>
<td>1</td>
<td>cart jacking plate 1/2</td>
<td>AL - 6061 T6, ASTM B-308</td>
<td>AN 350 ANGLE - 4 x 6</td>
<td>HJT 0121</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>HK-SHC 5/0.75-16x8-N</td>
<td>SS - 18-8 SHCS</td>
<td>3/4-16 x 4.00</td>
<td>N/A</td>
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<tr>
<td>1</td>
<td>1</td>
<td>HK-SHC 5/0.75-16x1.5x1.5-N</td>
<td>SS - 18-8 SHCS</td>
<td>3/4-16 x 1.50</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**NOTES**

1. ALL DIMENSIONS ARE IN INCHES
2. INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5M
3. MACHINED FINISH 125 MICRO-INCHES RMS
4. CONCENTRICITY .010 TIR
5. MACHINED ANGLES .125 FORMED ANGLES .50 FORMED ANGLES
6. WHOLE NUMBERS AND FRACTIONS 1/16
7. X DECIMALS .030
8. XX DECIMALS .010
9. XXX DECIMALS .005

**UNLESS OTHERWISE NOTED**

- Additional notes may apply to specific items.
- Dimensions and tolerances should be interpreted according to ASME Y14.5M standards.
- Machined surface finish is 125 micro-inches RMS.
- Concentricity tolerance is .010 TIR.
- Milled and formed angles are specified with tolerances of .125 and .50, respectively.
- Whole numbers and fractions are used, with decimals up to .030 for X, .010 for XX, and .005 for XXX.

**DATE**

- V GRAVES 05/18/2005
- T OQUIN 05/18/2005

**DRAWING APPROVALS**

- OA
- D
- G
- B
- J
- K
- E
- N
- S
- T
- X

**SCALE**

- 1:1

**SHEET**

- 1 of 1

**REFERENCE**

- CART ANCHOR ASSY 1/1

**DRAWING NUMBER**

- 203-HJT-0120
3. MATERIAL CERTIFICATIONS REQUIRED

2. ALL WELDS SHALL BE DYE PENETRANT INSPECTED IN ACCORDANCE WITH AWS D.1.2

1. WELDING & INSPECTIONS SHALL BE PERFORMED IN ACCORDANCE WITH AWS D.1.2

<table>
<thead>
<tr>
<th>ITEM NO.</th>
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<th>DESCRIPTION</th>
<th>MATERIAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>1</td>
<td>AM STD ANGLE - 6.00 x 4.00</td>
<td>AL - 6061 T6, ASTM B-308</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>PLATE, 3.25 x 4.00 x .50</td>
<td>AL - 6061 T6511, ASTM B-221</td>
</tr>
</tbody>
</table>

NOTES

1. WELDING & INSPECTIONS SHALL BE PERFORMED IN ACCORDANCE WITH AWS D.1.2
2. ALL WELDS SHALL BE DYE PENETRANT INSPECTED
3. MATERIAL CERTIFICATIONS REQUIRED

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REMOTE SYSTEMS GROUP
NUCLEAR SCIENCE & TECHNOLOGY DIVISION
OAK RIDGE NATIONAL LABORATORY
operated for the U.S. Department of Energy under contract DE-AC05-00OR22725

CART JACKING PLATE
CART JACKING WELDMENT
CART ANCHOR ASSY

THIRD-ANGLE PROJECTION

UNLESS OTHERWISE NOTED:
1. ALL DIMENSIONS ARE IN INCHES.
2. INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5M.
3. MACHINED FINISH 125 MICRO- INCHES RMS
4. CONCENTRICITY .010 TIR
5. MACHINED ANGLES 1/2 FORMED ANGLES 1
6. BREAK SHARP CORNERS AND REMOVE ALL BURRS
7. WHOLE NUMBERS AND FRACTIONS 1/16
8. X DECIMALS .030
9. XX DECIMALS .010
10. XXX DECIMALS .005
<table>
<thead>
<tr>
<th>ITEM</th>
<th>QTY.</th>
<th>NAME</th>
<th>MATERIAL</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>1</td>
<td>hyd jack rocker hjt</td>
<td>CRS - 1018</td>
<td>ROUND - 4.000&quot; OD X 2.500&quot;</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>hyd jack #2990T18 hjt</td>
<td>MCMASTER-CARR #2990T18</td>
<td>N/A</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>hyd jack baseplate hjt</td>
<td>---</td>
<td>HYD JACK BASEPLATE WELDMENT</td>
</tr>
</tbody>
</table>

NOTES
1. MATERIAL CERTIFICATIONS REQUIRED

NOTES
1. ALL DIMENSIONS ARE IN INCHES
2. INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5M
3. MACHINED FINISH 125 MICRO-INCHES RMS
4. CONCENTRICITY .010 TIR
5. MACHINED ANGLES ±1/16 FORMED ANGLES ±1/8 
6. BREAK SHARP CORNERS AND REMOVE ALL BURRS
7. WHOLE NUMBERS AND FRACTIONS 1/16
8. X DECIMALS .030
9. XX DECIMALS .010
10. XXX DECIMALS .005

OAK RIDGE NATIONAL LABORATORY
operated for the U.S. Department of Energy under contract DE-AC05-00OR22725 Oak Ridge, TN
REMOTE SYSTEMS GROUP
NATIONAL SCIENCE & TECHNOLOGY DIVISION

MERIT EXPERIMENT
COMMON BASEPLATE ASSY
HYDRAULIC JACK ASSY

SIZE: 203-HJT T-0130
NOTES
1. WELDING & INSPECTIONS SHALL BE PERFORMED IN ACCORDANCE WITH AWS D.1.1
2. ALL WELDS SHALL BE DYE PENETRANT INSPECTED
3. MATERIAL CERTIFICATIONS REQUIRED

<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>QTY.</th>
<th>DESCRIPTION</th>
<th>MATERIAL</th>
<th>LENGTH</th>
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</thead>
<tbody>
<tr>
<td>3</td>
<td>2</td>
<td>PLATE, 4.00 x 10.75 x .50</td>
<td>CRS-1018-ASTM-A-108</td>
<td>10.75</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>PLATE, 4.00 x 6.00 x .50</td>
<td>CRS-1018-ASTM-A-108</td>
<td>6.00</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>PLATE, 6.00 x 11.25 x .50</td>
<td>CRS-1018-ASTM-A-108</td>
<td>11.25</td>
</tr>
</tbody>
</table>

THIRD-ANGLE PROJECTION

UNLESS OTHERWISE NOTED
1. ALL DIMENSIONS ARE IN INCHES
2. INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5M
3. MACHINED FINISH 125 MICRO-INCHES RMS
4. CONCENTRICITY ±.010 TIR
5. MACHINED ANGLES ±.25° FORMED ANGLES ±.10°
6. BREAK SHARP CORNERS AND REMOVE ALL BURRS
7. WHOLE NUMBERS AND FRACTIONS 1/16
8. X DECIMALS .030
9. XX DECIMALS .010
10. XXX DECIMALS .005
NOTES

1. WELDING & INSPECTIONS SHALL BE PERFORMED IN ACCORDANCE WITH AWS D.1.1
2. ALL WELDS SHALL BE DYE PENETRANT INSPECTED
3. MATERIAL CERTIFICATIONS REQUIRED

<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>QTY.</th>
<th>DESCRIPTION</th>
<th>MATERIAL</th>
<th>LENGTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>4</td>
<td>PLATE, 1.25 x 4.00 x .25</td>
<td>CRS - 1018, ASTM A-108</td>
<td>4.00</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>PLATE, 1.06 x 3.38 x .38</td>
<td>CRS - 1018, ASTM A-108</td>
<td>4.16</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>W-4x13</td>
<td>STEEL &quot;W&quot; BEAM, ASTM A-992</td>
<td>3.63</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>TUBE, D.O.M. - 3.13 OD x .38Wall</td>
<td>STEEL, 1020, D.O.M. WELDED TUBE, ASTM A-513 TYPE 5</td>
<td>8.00</td>
</tr>
<tr>
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<td>1</td>
<td>PLATE, 8.00 x 8.00 x .50</td>
<td>CRS - 1018, ASTM A-108</td>
<td>8.00</td>
</tr>
</tbody>
</table>
MATERIAL: CRS - 1018

NOTES

1. MATERIAL CERTIFICATIONS REQUIRED

UNLESS OTHERWISE NOTED

1. ALL DIMENSIONS ARE IN

2. INTERPRET DIMENSIONS AND

3. MACHINED FINISH 125 MICRO-INCHES RMS

4. CONCENTRICITY .010 TIR

5. MACHINED ANGLES .010 TOL

6. BREAK SHARP CORNERS AND

7. WHOLE NUMBERS AND FRACTIONS 1/16

8. X DECIMALS .030

9. XX DECIMALS .010

10. XXX DECIMALS

MATERIAL CERTIFICATIONS REQUIRED
203-HJT-0134

NOTES

1. WELDING & INSPECTIONS SHALL BE PERFORMED IN ACCORDANCE WITH AWS D.1.1

2. ALL WELDS SHALL BE DYE PENETRANT INSPECTED

3. MATERIAL CERTIFICATIONS REQUIRED

<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>QTY.</th>
<th>DESCRIPTION</th>
<th>MATERIAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>2</td>
<td>PLATE, 4.00 x 10.75 x .50 CRS - 1018, ASTM A-108</td>
<td>10.75</td>
</tr>
<tr>
<td>1</td>
<td>4</td>
<td>PLATE, 6.00 x 11.25 x .50 CRS - 1018, ASTM A-108</td>
<td>11.25</td>
</tr>
</tbody>
</table>

---

OAK RIDGE NATIONAL LABORATORY

REMOTE SYSTEMS GROUP

NANOSCIENCE & TECHNOLOGY DIVISION

NUCLEAR SCIENCE & TECHNOLOGY DIVISION

COMMON BASEPLATE ASSY

ANCHOR PLATE WELDMENT

CAD FILE

PREV ASSY

SHEET

DRAWING APPROVALS

DATE

REV

203-HJT-0134

SCALE 1:2

SOLIDWORKS SHEET 1 of 1

THIS DRAWING PRODUCED ON SOLIDWORKS
NOTES
1. MATERIAL CERTIFICATIONS REQUIRED

ITEM
W-1
Hilmans
QTY.
NAME MATERIAL DESCRIPTION DWG

7 12
HX-SHC5 0.5-13x0.625x0.625 - 1/2-13 x .63 SS-N/A

6 4
swivel holostng htj ALLOY STEEL-MACHINED

5 4
leveling foot htj SS-303

4 1
Hilmans --- HILMAN ROLLER

3 2
cart anchor assy hjt --- CART ANCHOR ASSY

2 2
flat rail hjt SS-304L

1 1
base weldment hjt AL-6061 T6

ITEM
WITH
HILMAN/QT.
NAME
MATERIAL
DESCRIPTION
DWG

3.75
34.50
.01
.01

A
B

TOP VIEW

REVERSE

TARGET TRANSPORTER ASSY

OAK RIDGE NATIONAL LABORATORY
NUCLEAR SCIENCE & TECHNOLOGY DIVISION
REMOTE SYSTEMS GROUP
OPERATED FOR THE U.S. DEPARTMENT OF ENERGY UNDER DE-AC05-00OR22725
contract DE-AC05-00OR22725

TARGET EXPERIMENT
MERIT EXPERIMENT

OAK RIDGE NATIONAL LABORATORY
operated for the U.S. Department of Energy under
contract DE-AC05-00OR22725

REV. 0

203-HJT-0200

1/12
1

SCALE
SHEET
DRAWING
APPROVALS
DATE
203-HJT-0200

PREV ASSY
203-HJT-0001

CAD FILE
TARGET TRANSPORTER ASSY

SHEET
1 of 1

REV
DATE
V GRAVES
05/20/2005
T OQUIN
05/20/2005
V GRAVES
05/20/2005

PAGE DIMENSIONS: 612.00 X 792.00

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1. ALL DIMENSIONS ARE IN INCHES

2. INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5M

3. MACHINED FINISH 125 MICRO-INCHES RMS

4. CONCENTRICITY .010 TIR

5. MACHINED ANGLES \( \frac{1}{2} \) FORMED ANGLES

6. BREAK SHARP CORNERS AND REMOVE ALL BURRS

7. WHOLE NUMBERS AND FRACTIONS

8. X DECIMALS .030

9. XX DECIMALS .010

10. XXX DECIMALS .005
2. ALL WELDS SHALL BE DYE PENETRANT INSPECTED
3. MATERIAL CERTIFICATIONS REQUIRED

ITEM NO. QTY. DESCRIPTION MATERIAL LENGTH
1 2 AMER STD "C", 4.00 X 1.72 X .32 AL - 6061 T6, ASTM B-308 8.00
2 4 ANGLE - 3.00 X 3.50 X .50 AL - 6061 T6511, ASTM B-221 8.00
3 1 PLATE, 42.00 x 62.00 x .63 AL - 6061 T651, ASTM B-209 62.00
4 2 AMER STD "C", 4.00 X 1.72 X .32 AL - 6061 T6, ASTM B-308 42
5 8 PLATE - 2.50 X 3.00 X .63 AL - 6061 T6511, ASTM B-221 ---
6 4 PLATE, 10.50 x 10.50 x .63 AL - 6061 T651, ASTM B-209 ---
7 8 PLATE, 4.00 x 6.00 x .50 AL - 6061 T6511, ASTM B-221 ---
NOTES
1. WELDING & INSPECTIONS SHALL BE PERFORMED IN ACCORDANCE WITH AWS D.1.2
2. ALL WELDS SHALL BE DYE PENETRANT INSPECTED
3. MATERIAL CERTIFICATIONS REQUIRED

DETAIL B
SCALE 1 : 5

1/4 3-6 2X

2X .69 THRU ALL
3/4-16 UNF - 2B THRU

54.000
4.00
1.000
2.750
7.00
27.000
61.000
39.250
25.000
13.000
10.500
49.000
37.000
24.000
6.00
5.00
4.00
2.00
1.00
0.50
2X W-1

W-3

5.00 TYP.

.50 TYP.

49.00

62.00

11.75 TYP.

6.00

2X

3/16 3-6

W-2

4X

3/16 3-6

4.00

62.00

1/4 3-6

2X

W-1

1/4 3-6

2X

W-3

\[ \phi 5.00 \times 0.10 \]

\[ (45°) \]
MATERIAL: SS - 304L

NOTES
1. MATERIAL CERTIFICATIONS REQUIRED
## Drawings

### Cart Assay

**Third Angle Projection**

- **Design:** V GRAVES
- **Date:** 06/05/2005

**Material:**
- **Description:**
  - **Name:** Cart Assay
  - **Material:** Aluminum - 6061 T651, ASTM B-209

### Notes

1. Welding & inspections shall be performed in accordance with AWS D1.2.
2. All welds shall be dye penetrant inspected.
3. Material certifications are required.

### Items

<table>
<thead>
<tr>
<th>Item</th>
<th>Default QTY</th>
<th>Name</th>
<th>Material</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td></td>
<td>Cart Lower Plate</td>
<td>Aluminum - 6061 T651, ASTM B-209</td>
<td>Plate - 32&quot; x 46&quot; x 1.25&quot;</td>
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<tr>
<td>2</td>
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<td>Slick Sheet</td>
<td>McMaster-Carr #8752K813</td>
<td>203-HJT-0302</td>
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<td>Cart Upper Plate</td>
<td>Aluminum - 6061 T651, ASTM B-209</td>
<td>Plate - 32&quot; x 46&quot; x 1.25&quot;</td>
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<tr>
<td>4</td>
<td></td>
<td>Track Roller</td>
<td>McMaster-Carr 2091K33</td>
<td>203-HJT-0304</td>
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<td>5</td>
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<td>Swivel Hoist Ring</td>
<td>Cocoa MCF#2949T32</td>
<td>203-HJT-0306</td>
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<tr>
<td>6</td>
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<td>Cart Tower Plate</td>
<td>Aluminum - 6061 T651, ASTM B-209</td>
<td>Plate - 32&quot; x 46&quot; x 1.25&quot;</td>
</tr>
</tbody>
</table>

### Dimensions

- **No Weld This Edge:** 4 Plcs.
- **W-1:** 24.00
- **W-2:** 2.25
- **A:** 0.01
- **.01 A:** 29.75
- **.01 A:** 7.5

---

The drawing was prepared by ORNL solely for use in work performed under Department of Energy contract number DE-AC05-000R22725 and applicable Work for Others Agreements and Cooperative Research and Development Agreements. This drawing is property of ORNL and is furnished upon request.
NOTES
1. WELDING & INSPECTIONS SHALL BE PERFORMED IN ACCORDANCE WITH AWS D.1.2
2. ALL WELDS SHALL BE DYE PENETRANT INSPECTED
3. MATERIAL CERTIFICATIONS REQUIRED

<table>
<thead>
<tr>
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<th>MATERIAL</th>
<th>LENGTH</th>
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</thead>
<tbody>
<tr>
<td>7</td>
<td>4</td>
<td>PLATE, 2.50&quot; x 3.00&quot; x 1.00&quot;</td>
<td>AL - 6061 T6511, ASTM B-221</td>
<td>3.00&quot;</td>
</tr>
<tr>
<td>6</td>
<td>4</td>
<td>STUD, 3/4-10 UNC</td>
<td>SS - 8-18 ALL-THREAD</td>
<td>2.75&quot;</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>PLATE, 32.00&quot; x 46.00&quot; x 1.25&quot;</td>
<td>AL - 6061-T651, ASTM B-209</td>
<td>46.00&quot;</td>
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<tr>
<td>4</td>
<td>2</td>
<td>PLATE, 1.5&quot; x 1.5&quot; x 50&quot;</td>
<td>AL - 6061 T6511, ASTM B-221</td>
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<td>PLATE, 2.75&quot; x 3.00&quot; x 0.50&quot;</td>
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<tr>
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<td>PLATE, 1.88&quot; x 3.00&quot; x 0.75&quot;</td>
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<tr>
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<td>PLATE, 4.31&quot; x 6.00&quot; x 0.75&quot;</td>
<td>AL - 6061 T6511, ASTM B-221</td>
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</tr>
</tbody>
</table>
NOTES
1. WELDING & INSPECTIONS SHALL BE PERFORMED IN ACCORDANCE WITH AWS D.1.2
2. ALL WELDS SHALL BE DYE PENETRANT INSPECTED
3. MATERIAL CERTIFICATIONS REQUIRED
NOTES
1. WELDING & INSPECTIONS SHALL BE PERFORMED IN ACCORDANCE WITH AWS D.1.2
2. ALL WELDS SHALL BE DYE PENETRANT INSPECTED
3. MATERIAL CERTIFICATIONS REQUIRED
MATERIAL: AL - 6061 T6, ASTM B-308

NOTES
1. MATERIAL CERTIFICATIONS REQUIRED

THRU ALL
1.00
2.00
0.56

1.00
1.50

2.00
0.56 THRU ALL

NOTES
1. ALL DIMENSIONS ARE IN INCHES
2. INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5M
3. MACHINED FINISH 125 MICRO-INCHES RMS
4. CONCENTRICITY .010 TIR
5. MACHINED ANGLES 1/2 FORMED ANGLES
6. BREAK SHARP CORNERS AND REMOVE ALL BURRS
7. WHOLE NUMBERS AND FRACTIONS 1/16
8. X DECIMALS .030
9. XX DECIMALS .010
10. XXX DECIMALS .005

SCALE: 1:1

DRAWING APPROVALS

DATE

C

REV
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OAK RIDGE NATIONAL LABORATORY
 operated for the U.S. Department of Energy under contract DE-AC05-00OR22725

REMOTE SYSTEMS GROUP
NATIONAL SCIENCE & TECHNOLOGY DIVISION

MERIT EXPERIMENT
TARGET CART ASSY
HG SYS LOCATING BKT

PREV ASSY
203-MJ T-0300

SCALE
1:1

SHEET
1 of 1

DWG NO.
203-MJ T-0304
NOTES
1. WELDING & INSPECTIONS SHALL BE PERFORMED
   IN ACCORDANCE WITH AWS D.1.2
2. ALL WELDS SHALL BE DYE PENETRANT INSPECTED
3. MATERIAL CERTIFICATIONS REQUIRED

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<th>MATERIAL</th>
<th>LENGTH</th>
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<tbody>
<tr>
<td>5</td>
<td>2</td>
<td>PLATE, 5.00 x 10.00 x .50</td>
<td>AL 6061 T651, ASTM B-209</td>
<td>10.00</td>
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<tr>
<td>4</td>
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<td>PLATE, 5.00 x 5.00 x .38</td>
<td>AL 6061 T651, ASTM B-209</td>
<td>5.00</td>
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<tr>
<td>3</td>
<td>1</td>
<td>I-BEAM, ALUM. ASSOC. 6.00 x 4.00 x .21</td>
<td>AL 6061-T6, ASTM B-308</td>
<td>49.50</td>
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<tr>
<td>2</td>
<td>4</td>
<td>PLATE, 5.68 x 5.00 x .25</td>
<td>AL 6061 T651, ASTM B-209</td>
<td>5.00</td>
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<tr>
<td>1</td>
<td>4</td>
<td>PLATE, 3.00 x 5.68 x .50</td>
<td>AL 6061 T651, ASM B-209</td>
<td>---</td>
</tr>
</tbody>
</table>

UNLESS OTHERWISE NOTED
1. ALL DIMENSIONS ARE IN INCHES
2. INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5M
3. MACHINED FINISH 125 MICRO-INCHES RMS
4. CONCENTRICITY .010 TIR
5. MACHINED ANGLES 1/2 FORMED ANGLES 1
6. BREAK SHARP CORNERS AND REMOVE ALL BURRS
7. WHOLE NUMBERS AND FRACTIONS 1/16
8. X DECIMALS .030
9. XX DECIMALS .010
10. XXX DECIMALS .006

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MERIT EXPERIMENT
MAGNET END SUPPORT WELDMENT

OAK RIDGE NATIONAL LABORATORY
NUCLEAR SCIENCE & TECHNOLOGY DIVISION
REMOTE SYSTEMS GROUP

DATE
V GRAVES 05/25/2005
T OQUIN 05/25/2005
V GRAVES 05/25/2005

REV
O
C

PREV ASSY
203-HJT-0001

SHEET 1 of 1
SCALE 1:4
DRAWING NO. 203-HJT-0400

REV
0