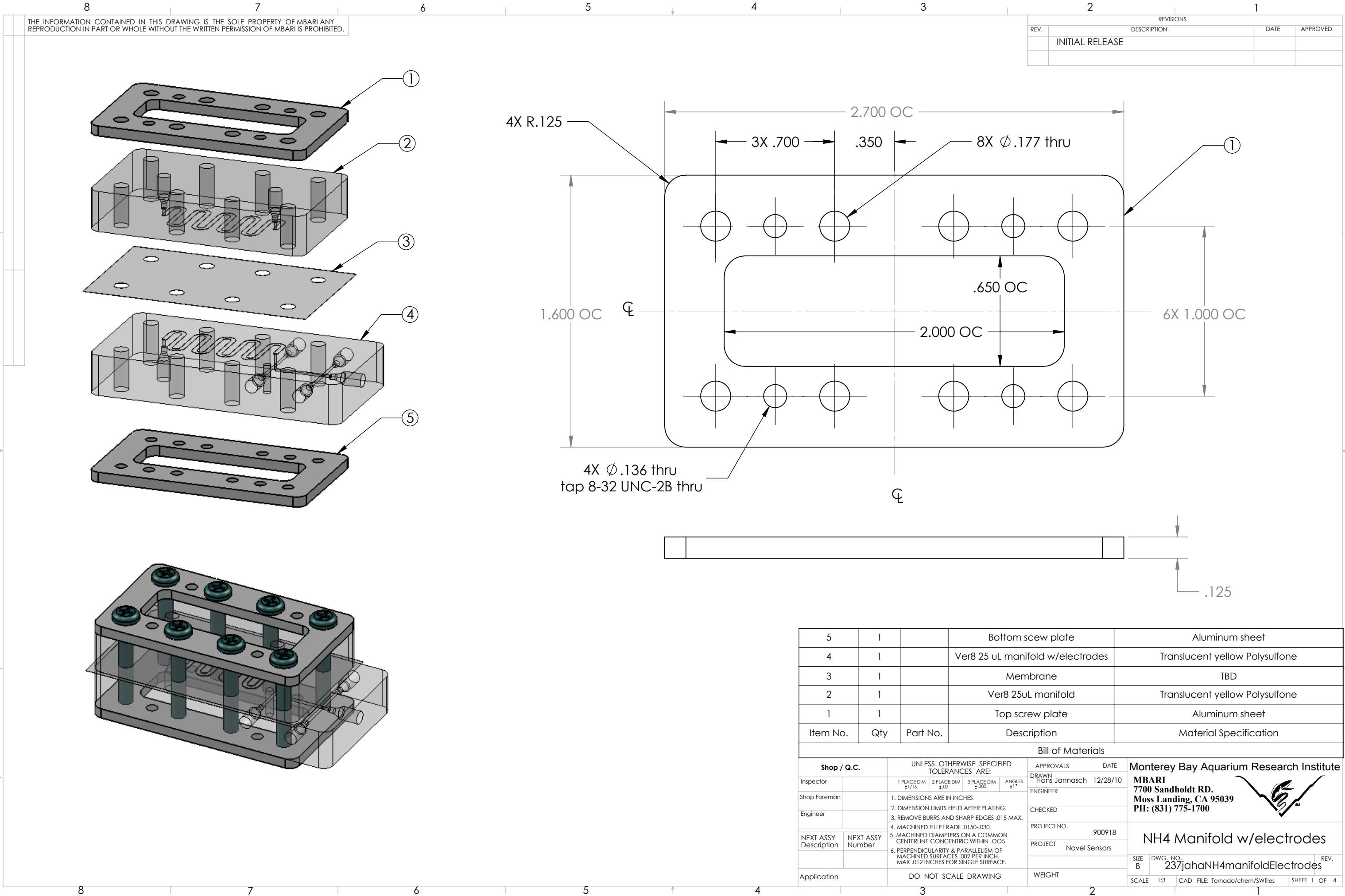
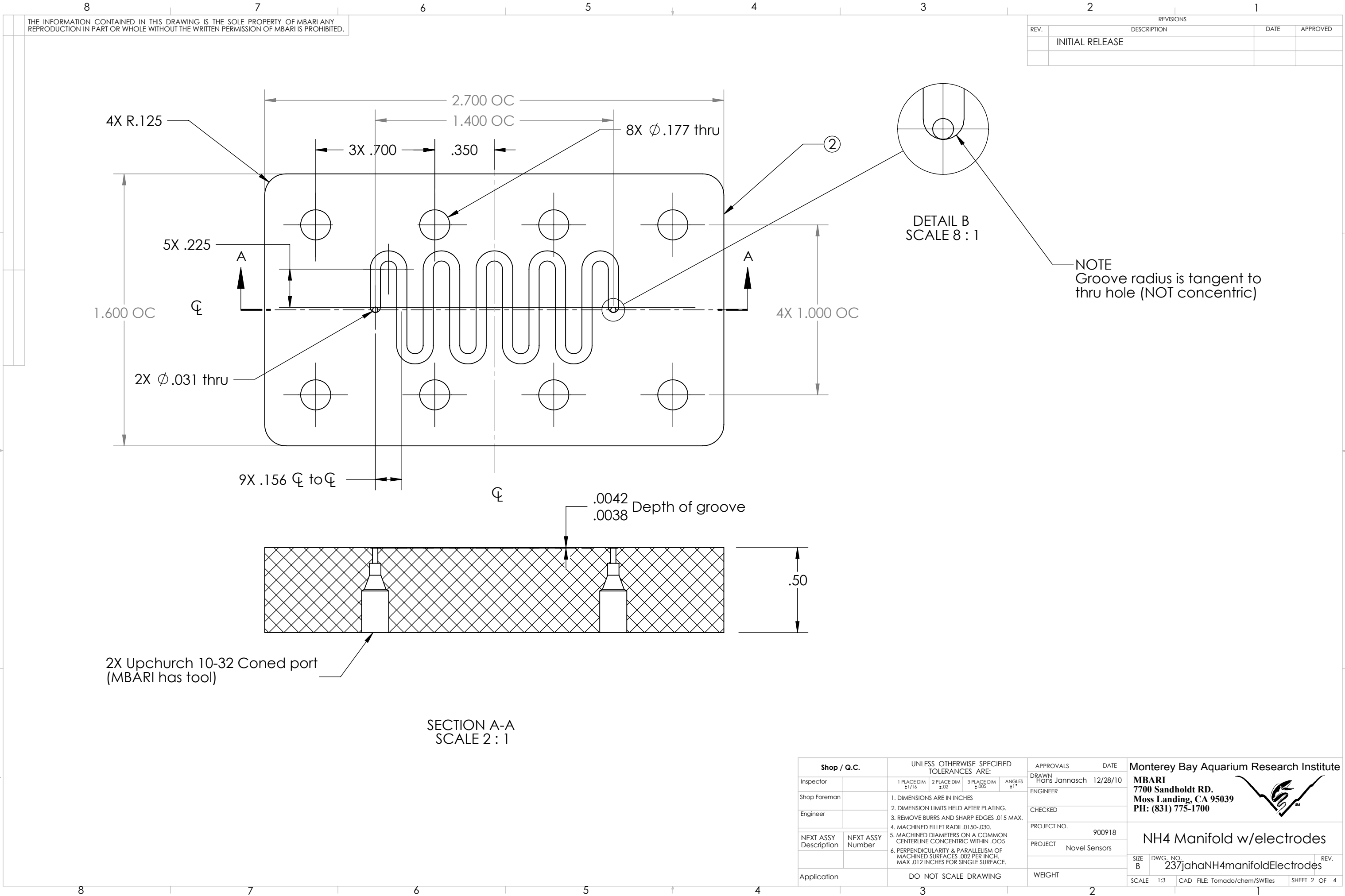






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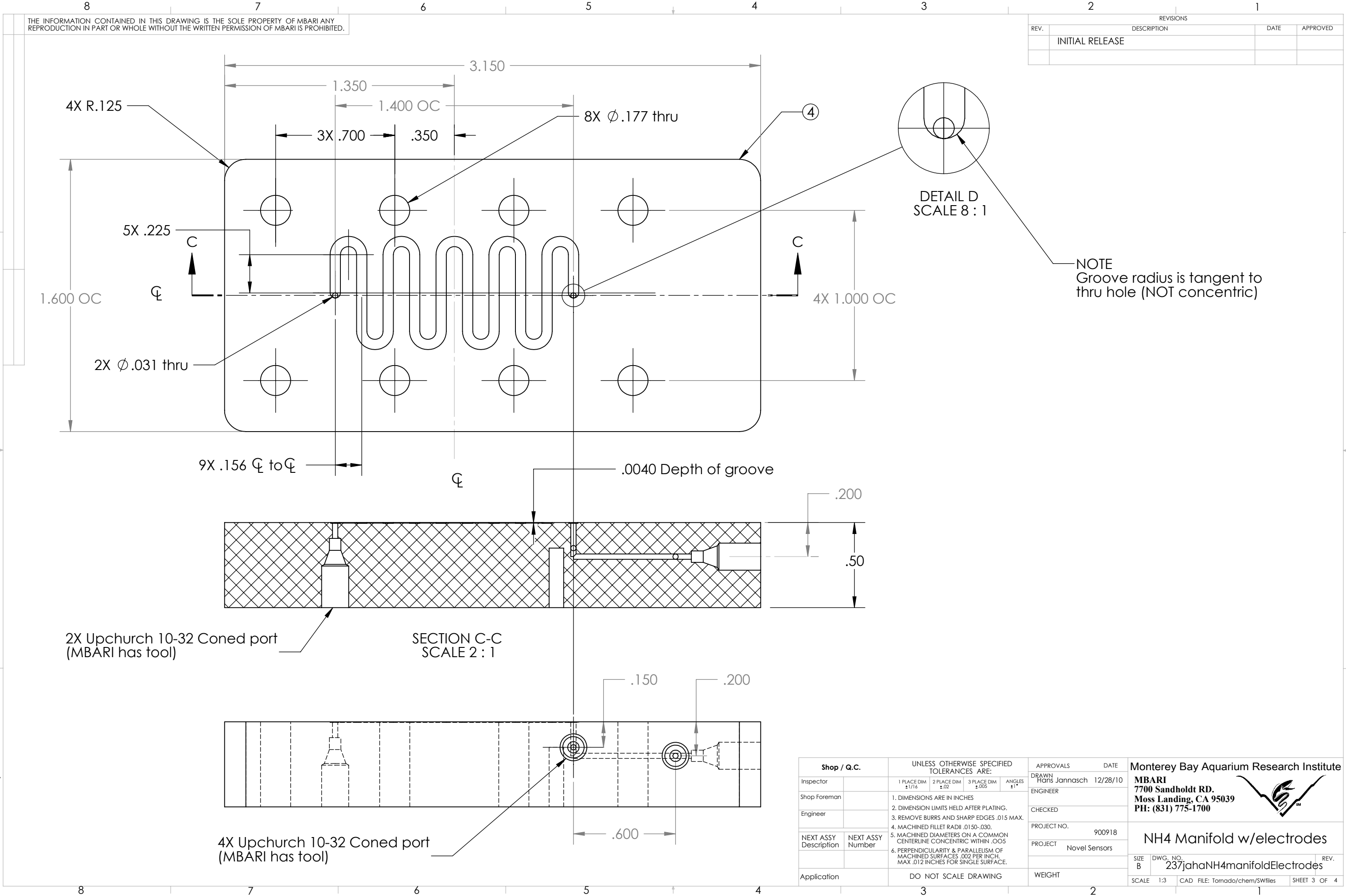
| REVISIONS |                 |      |          |
|-----------|-----------------|------|----------|
| REV.      | DESCRIPTION     | DATE | APPROVED |
|           | INITIAL RELEASE |      |          |
|           |                 |      |          |

DETAIL B  
SCALE 8 : 1

NOTE  
Groove radius is tangent to  
thru hole (NOT concentric)

SECTION A-A  
SCALE 2 : 1

| Shop / Q.C.           |                  | UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:                                                                |                     |                      |               | APPROVALS              | DATE          | Monterey Bay Aquarium Research Institute                                              |  |  |
|-----------------------|------------------|-----------------------------------------------------------------------------------------------------------|---------------------|----------------------|---------------|------------------------|---------------|---------------------------------------------------------------------------------------|--|--|
| Inspector             |                  | 1 PLACE DIM<br>±1/16                                                                                      | 2 PLACE DIM<br>±.02 | 3 PLACE DIM<br>±.005 | ANGLES<br>±1° | DRAWN<br>Hans Jannasch | 12/28/10      | <b>MBARI</b><br>7700 Sandholdt RD.<br>Moss Landing, CA 95039<br>PH: (831) 775-1700    |  |  |
| Shop Foreman          |                  | 1. DIMENSIONS ARE IN INCHES                                                                               |                     |                      |               | ENGINEER               |               |                                                                                       |  |  |
| Engineer              |                  | 2. DIMENSION LIMITS HELD AFTER PLATING.                                                                   |                     |                      |               | CHECKED                |               |  |  |  |
| NEXT ASSY Description | NEXT ASSY Number | 3. REMOVE BURRS AND SHARP EDGES .015 MAX.                                                                 |                     |                      |               | PROJECT NO.            | 900918        |                                                                                       |  |  |
|                       |                  | 4. MACHINED FILLET RADII .0150-.030.                                                                      |                     |                      |               | PROJECT                | Novel Sensors | NH4 Manifold w/electrodes                                                             |  |  |
|                       |                  | 5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCENTRIC WITHIN .005                                       |                     |                      |               |                        |               |                                                                                       |  |  |
|                       |                  | 6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .002 PER INCH. MAX .012 INCHES FOR SINGLE SURFACE. |                     |                      |               |                        |               | SIZE B DWG. NO. 237jahaNH4manifoldElectrodes REV.                                     |  |  |
| Application           |                  | DO NOT SCALE DRAWING                                                                                      |                     |                      |               | WEIGHT                 |               | SCALE 1:3 CAD FILE: Tornado/chem/SWfiles SHEET 2 OF 4                                 |  |  |



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| REVISIONS |                 |      |          |
|-----------|-----------------|------|----------|
| REV.      | DESCRIPTION     | DATE | APPROVED |
|           | INITIAL RELEASE |      |          |
|           |                 |      |          |

DETAIL D  
SCALE 8 : 1

NOTE  
Groove radius is tangent to thru hole (NOT concentric)

SECTION C-C  
SCALE 2 : 1

4X Upchurch 10-32 Coned port  
(MBARI has tool)

Shop / Q.C.

|                       |                  |
|-----------------------|------------------|
| Inspector             |                  |
| Shop Foreman          |                  |
| Engineer              |                  |
| NEXT ASSY Description | NEXT ASSY Number |
| Application           |                  |

UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:

|                      |                     |                      |               |
|----------------------|---------------------|----------------------|---------------|
| 1 PLACE DIM<br>±1/16 | 2 PLACE DIM<br>±.02 | 3 PLACE DIM<br>±.005 | ANGLES<br>±1° |
|----------------------|---------------------|----------------------|---------------|

1. DIMENSIONS ARE IN INCHES  
2. DIMENSION LIMITS HELD AFTER PLATING.  
3. REMOVE BURRS AND SHARP EDGES .015 MAX.  
4. MACHINED FILLET RADII .0150-.030.  
5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCENTRIC WITHIN .005  
6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .002 PER INCH, MAX .012 INCHES FOR SINGLE SURFACE.

APPROVALS

|                          |                  |
|--------------------------|------------------|
| DRAWN<br>Hans Jannasch   | DATE<br>12/28/10 |
| ENGINEER                 |                  |
| CHECKED                  |                  |
| PROJECT NO.<br>900918    |                  |
| PROJECT<br>Novel Sensors |                  |
| WEIGHT                   |                  |

Monterey Bay Aquarium Research Institute

MBARI

7700 Sandholdt RD.

Moss Landing, CA 95039

PH: (831) 775-1700

NH4 Manifold w/electrodes

SIZE  
B

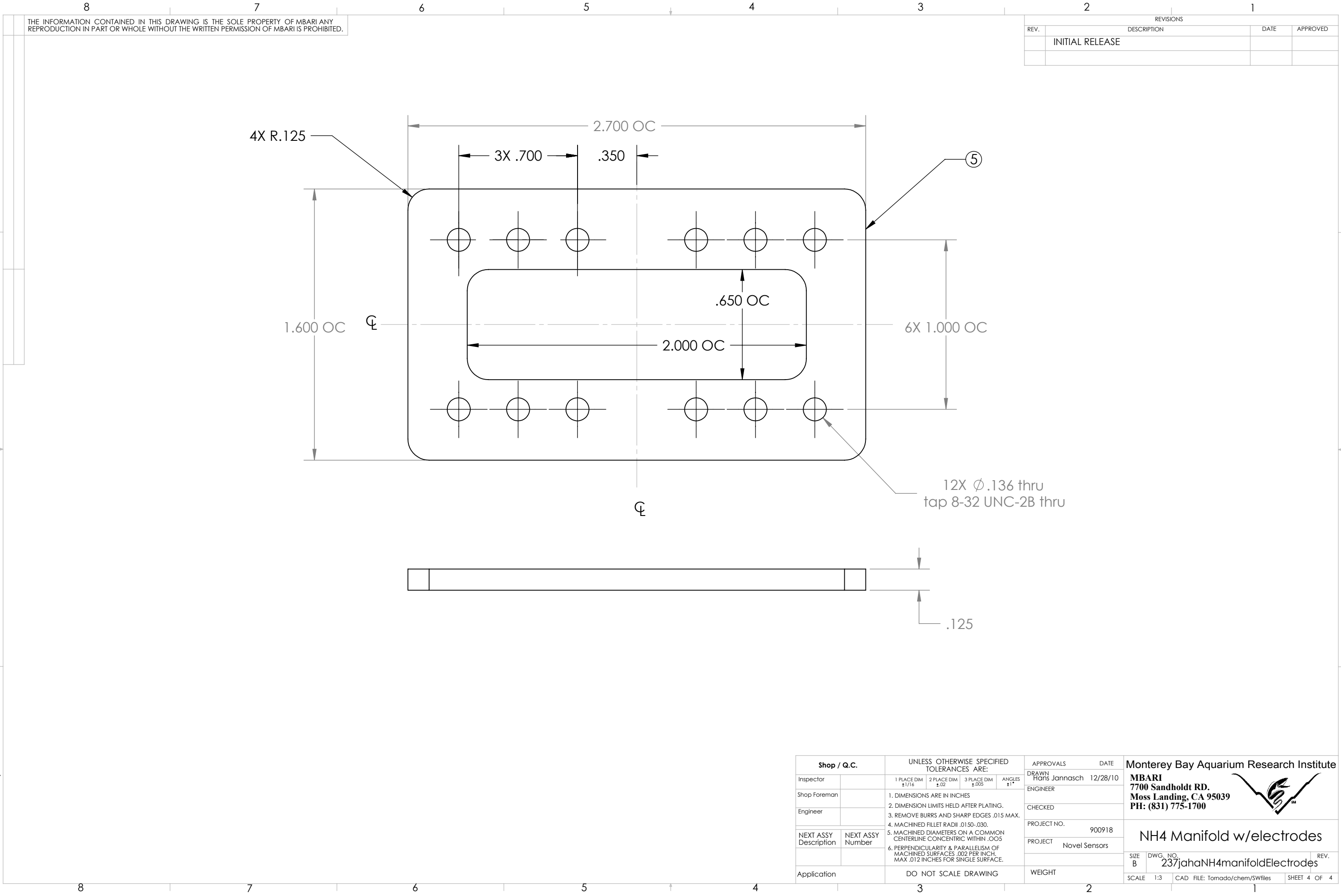
DWG. NO.  
237jahaNH4manifoldElectrodes

REV.

SCALE  
1:3

CAD FILE: Tornado/chem/SWfiles

SHEET 3 OF 4



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| REVISIONS |                 |      |          |
|-----------|-----------------|------|----------|
| REV.      | DESCRIPTION     | DATE | APPROVED |
|           | INITIAL RELEASE |      |          |
|           |                 |      |          |

| Shop / Q.C.           |                  | UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:                                                                                                                                                                                                                                                                                                      |                     |                      |               | APPROVALS              | DATE          | Monterey Bay Aquarium Research Institute                                                                                                                                 |                                          |              |
|-----------------------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|----------------------|---------------|------------------------|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|--------------|
| Inspector             |                  | 1 PLACE DIM<br>±1/16                                                                                                                                                                                                                                                                                                                            | 2 PLACE DIM<br>±.02 | 3 PLACE DIM<br>±.005 | ANGLES<br>±1° | DRAWN<br>Hans Jannasch | 12/28/10      | <b>MBARI</b><br>7700 Sandholdt RD.<br>Moss Landing, CA 95039<br>PH: (831) 775-1700  |                                          |              |
| Shop Foreman          |                  | 1. DIMENSIONS ARE IN INCHES<br>2. DIMENSION LIMITS HELD AFTER PLATING.<br>3. REMOVE BURRS AND SHARP EDGES .015 MAX.<br>4. MACHINED FILLET RADII .0150-.030.<br>5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCENTRIC WITHIN .005<br>6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .002 PER INCH, MAX .012 INCHES FOR SINGLE SURFACE. |                     |                      |               | ENGINEER               |               |                                                                                                                                                                          |                                          |              |
| Engineer              |                  |                                                                                                                                                                                                                                                                                                                                                 |                     |                      |               | CHECKED                |               |                                                                                                                                                                          |                                          |              |
| NEXT ASSY Description | NEXT ASSY Number |                                                                                                                                                                                                                                                                                                                                                 |                     |                      |               | PROJECT NO.            | 900918        | NH4 Manifold w/electrodes                                                                                                                                                |                                          |              |
|                       |                  |                                                                                                                                                                                                                                                                                                                                                 |                     |                      |               | PROJECT                | Novel Sensors |                                                                                                                                                                          |                                          |              |
| Application           |                  | DO NOT SCALE DRAWING                                                                                                                                                                                                                                                                                                                            |                     |                      |               | WEIGHT                 |               | SIZE<br>B                                                                                                                                                                | DWG. NO.<br>237jahaNH4manifoldElectrodes | REV.         |
|                       |                  |                                                                                                                                                                                                                                                                                                                                                 |                     |                      |               |                        |               | SCALE 1:3                                                                                                                                                                | CAD FILE: Tornado/chem/SWfiles           | SHEET 4 OF 4 |