EDMI Baseline Calibration Field Steps
EDMI Baseline Calibration Field Steps

NOTE: Adjust this document for the location, conditions and equipment which prevail. This example based on the Passaic CBL (2006) and the Skillman CBL (2005)

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☐ Park Safely

☐ Wear Safety Apparel
☐ Observe All Safety Regulations / Stay Alert!

☐ Respect Other Surveyors Utilizing Baseline
  ☐ Offer Assistance If Appropriate
☐ Verify Radios / Phones / Misc. Equip. Operational
EDMI Baseline Calibration Field Steps

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Record Field Constant Data
- Date
- EDMI:
  - Model & Manufacturer
  - Serial Number
  - Specified Vertical Circular Accuracy
    - Ex: 6 arc second
  - Specified EDMI Accuracy
    - Ex: +/- (5mm + 5 PPM)
- CBL Name & Location
- Constant Field Abnormalities or Comments

EDMI CALIBRATION BASELINE DATA FORM

SECTION 1:
- Firm:
- Telephone No.: ( )
- Date:
- Instrument:
- Serial No.:

SECTION 2:
- Occupied Station:
- Observed Station:

SECTION 3:
- Calibrating Baseline:
  - Instrument Operator:
  - Note Keeper:
  - Location:
  - Weather:
    - Z.A.: Direct:
    - Actual/Relative
    - Temperature:
    - Humidity:
  - Instrument Settings:
    - Z.A. Offset:
    - Computed Inst.
    - Inst. Constant:

SECTION 4:
- From Station:
  - Sta. Elev.: [m] [ft]
  - Published Diff. in Elev.:
  - Height of Instrument:
  - Field Diff. in Elevation:
  - Calculated Difference:
- To Station:
  - Sta. Elev.: [m] [ft]
  - (Z.A. Inst. Precision) [Segment]:
  - Height of Pelm or Target:
  - (Z.A. Inst. Precision) [Segment]:

SECTION 5:
- Observation Group No. 1 (Direct):
  - Slant Distance (mi):
  - Horizontal Distance (mi):
  - Vert. Height Diff. (mi):
  - 1.
  - 2.
  - 3.
  - 4.
  - 5.
  - 6.
  - 7.
  - 8.
  - 9.
- Observation Group No. 2 (Reversed):
  - 1.
  - 2.
  - 3.
  - 4.
  - 5.
  - 6.
  - 7.
  - 8.
  - 9.

SECTION 6:
- Mean Horizontal Distance:
- Horizontal Distance:
- Adjusted Field Distance:
- Sigma Value:
- High/Low Spread:
- Number of Rejections:

SECTION 7:
I hereby acknowledge, as witnessed by my signature and embossed seal, that I have personally compared my EDMI in accordance with the laws of the State of New Jersey and I shall apply the appropriate linear corrections to the EDMI measurements observed with this instrument.

N.J. Professional Land Surveyor/License No. [Signature]

SEAL

Form: NJSA 52:14B:8.94

JAMES A. KUHTA VER. 01, 2006
EDMI Baseline Calibration Field Steps

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- Prism @ 150.0 (m) Monument
  - Properly set-up and level
  - Record Prism Height (ft & mm)
  - Record Prism Offset (mm)
    - Note: prism offset should remain constant
EDMI Baseline Calibration Field Steps

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This example based on the Passaic CBL (2006) and the Skillman CBL (2005)

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☐ EDMI @ 0.0 (m) Monument
  o Position Tripod / Affix EDMI
  o Position Parasol
EDMI Baseline Calibration Field Steps

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This example based on the Passaic CBL (2006) and the Skillman CBL (2005)

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- Properly Level EDMI
  - Verify 360 (deg) Plumb w/Monument
EDMI Baseline Calibration Field Steps

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- Record EDMI Height (ft & mm)

- Acclimate EDMI (per manufacture’s recommendations)
  - NOTE: once acclimated EDMI should remain so throughout calibration, however if EDMI is moved between set-ups in a vehicle utilizing AC / Heater than reasonable acclimation time must be allocated at each set-up

☐ Record Specific Data (unique for each completed Baseline Data Form)

- Occupied Station / Observed Station
- EDMI Operator / Note Keeper
- Local Time (Watch / Cell Phone)
  - 202-762-1401 & 202-762-1069
- Weather (Weather Radio / Internet / Text Messaging Service)
  - Temperature
EDMI Baseline Calibration Field Steps

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- Record at EDMI height (after acclimation)
  - Barometric Pressure
  - P.P.M. Set at
  - Wind Speed / Direction
  - Humidity

  *NOTE: Set the EDMI to match this Meteorological data!*

- Zenith Angle Check
  - 1 Direct
  - 1 Reverse

- Instrument Settings
  - Instrument Constant Set to

- Specific Field Abnormalities and Comments

☐ Record Elevations
  - From (Station #)
  - To (Station #)

☐ Make & Record Independent Observations
  - Record Independent Distance Observations
    - After each Direct and Reverse single observation, the EDMI must:
      - Be removed from the Tribrach
      - Reattached to Tribrach
      - Properly Releveled for use

James A. Kuhta VER. 01, 2006
EDMI Baseline Calibration Field Steps

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This example based on the Passaic CBL (2006) and the Skillman CBL (2005)

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- 5 Direct (Slope Dist., Horiz. Dist. & Vert. Height Diff.)

- 5 Reverse (Slope Dist., Horiz. Dist. & Vert. Height Diff.)
EDMI Baseline Calibration Field Steps

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NOTE: Repeat above steps as necessary at each monument.

Remember: Each set of observations from any station to any other station, requires you to complete a separate N.J. EDMI Calibration Baseline Data Form for verifiable submittal.

An additional continuous company private logbook, “...provides a history of the instrument that may be used later either to isolate changes in instrument characteristics or for legal verification purposes.”

**Using: 3 Tripods & 3 Tribachs (example)**

Order of Observations:

<table>
<thead>
<tr>
<th>EDMI</th>
<th>Prism1</th>
<th>Prism2</th>
<th>Notes</th>
<th>Obs. From - To</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0m</td>
<td></td>
<td>400.0 m</td>
<td></td>
<td>0.0 m – 400.0 m</td>
</tr>
<tr>
<td>0.0 m</td>
<td>150.0 m</td>
<td>1000.0 m</td>
<td>Move Prism2 w/Tripod to</td>
<td>0.0 m – 150.0.0 m</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Remove Prism1 from Tribach</td>
<td></td>
</tr>
<tr>
<td>0.0 m</td>
<td></td>
<td>1000.0 m</td>
<td></td>
<td>0.0 m – 1000.0 m</td>
</tr>
<tr>
<td>Swap EDMI w/Prism1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>150.0 m</td>
<td>0.0 m</td>
<td>1000.0 m</td>
<td></td>
<td>150.0 m -0.0 m</td>
</tr>
<tr>
<td>150.0 m</td>
<td>0.0 m</td>
<td>1000.0 m</td>
<td></td>
<td>150.0 m – 1000.0 m</td>
</tr>
<tr>
<td></td>
<td>Move Prism1 w/Tripod to 400.0 m</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>150.0 m</td>
<td>400.0 m</td>
<td>1000.0 m</td>
<td>Prism2 Reversed</td>
<td>150.0 m – 400.0 m</td>
</tr>
<tr>
<td>Swap EDMI w/Prism1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>400.0 m</td>
<td>150.0 m</td>
<td>1000.0 m</td>
<td></td>
<td>400.0 m – 150.0 m</td>
</tr>
<tr>
<td></td>
<td>Move Prism1 w/Tripod to 0.0 m</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>400.0 m</td>
<td>0.0 m</td>
<td>1000.0 m</td>
<td></td>
<td>400.0 m – 1000.0 m</td>
</tr>
<tr>
<td>400.0 m</td>
<td>0.0 m</td>
<td>1000.0 m</td>
<td></td>
<td>400.0 m – 0.0 m</td>
</tr>
<tr>
<td>Swap EDMI w/Prism2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1000.0 m</td>
<td>0.0 m</td>
<td>400.0 m</td>
<td>Prism1 Reversed</td>
<td>1000.0 m – 400.0 m</td>
</tr>
<tr>
<td></td>
<td>Move Prism 2 w/Tripod to 150.0 m</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1000.0 m</td>
<td>0.0 m</td>
<td>150.0 m</td>
<td>Prism1 Reversed</td>
<td>1000.0 m – 150.0 m</td>
</tr>
<tr>
<td></td>
<td>Breakdown Prism2</td>
<td></td>
<td></td>
<td>Prism1 Forward</td>
</tr>
<tr>
<td>1000.0 m</td>
<td>0.0 m</td>
<td></td>
<td></td>
<td>1000.0 m – 0.0 m</td>
</tr>
</tbody>
</table>

James A. Kuhta Ver. 01, 2006
Using: 1 Tripod w/Tribach & 2 Prism Poles w/BiPods(example)

Order of Observations:

<table>
<thead>
<tr>
<th>EDMI</th>
<th>Prism1</th>
<th>Prism2</th>
<th>Notes</th>
<th>Obs. From – To</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0 m</td>
<td></td>
<td>400.0 m</td>
<td></td>
<td>0.0 m – 400.0 m</td>
</tr>
<tr>
<td>150.0 m</td>
<td>Move Prism2 to 1000.0 m</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.0 m</td>
<td>150.0 m</td>
<td>1000.0 m</td>
<td>Prism2 Reversed</td>
<td>0.0 m – 150.0 m</td>
</tr>
<tr>
<td>Remove Prism1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.0 m</td>
<td>1000.0 m</td>
<td>Prism2 Forward</td>
<td>0.0 m – 1000.0 m</td>
<td></td>
</tr>
<tr>
<td>Move EDMI w/Tripod to 400.0 m</td>
<td>Replace Prism1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>400.0 m</td>
<td>150.0 m</td>
<td>1000.0 m</td>
<td>400.0 m – 150.0 m</td>
<td></td>
</tr>
<tr>
<td>400.0 m</td>
<td>0.0 m</td>
<td>1000.0 m</td>
<td>400.0 m – 1000.0 m</td>
<td></td>
</tr>
<tr>
<td>400.0 m</td>
<td>0.0 m</td>
<td>1000.0 m</td>
<td>400.0 m – 0.0 m</td>
<td></td>
</tr>
<tr>
<td>Move EDMI w/Tripod to 150.0 m</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>150.0 m</td>
<td>0.0 m</td>
<td>1000.0 m</td>
<td>150.0 m – 1000.0 m</td>
<td></td>
</tr>
<tr>
<td>Move Prism2 to 400.0 m</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>150.0 m</td>
<td>0.0 m</td>
<td>400.0 m</td>
<td>150.0 m – 0.0 m</td>
<td></td>
</tr>
<tr>
<td>150.0 m</td>
<td>0.0 m</td>
<td>400.0 m</td>
<td>150.0 m – 400.0 m</td>
<td></td>
</tr>
<tr>
<td>Move EDMI w/Tripod to 1000.0 m</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1000.0 m</td>
<td>0.0 m</td>
<td>400.0 m</td>
<td>Prism1 Reversed</td>
<td>1000.0 m – 400.0 m</td>
</tr>
<tr>
<td>Breakdown Prism2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1000.0 m</td>
<td>0.0 m</td>
<td>1000.0 m</td>
<td>1000.0 – 0.0 m</td>
<td></td>
</tr>
<tr>
<td>Move Prism 1 to 150.0 m</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1000.0 m</td>
<td>150.0 m</td>
<td></td>
<td>1000.0 m – 150.0 m</td>
<td></td>
</tr>
</tbody>
</table>