Instructions for Completion of ADA Feature As-Built Measurement Records – For Contractor and Design/Builder

I. Basic Information

The instructions below are to be used by a Contractor when an ADA feature is constructed (project construction using either the typical design-bid-build or a Design/Build project).

A. Requirements of the Contractor

Per the contract specifications, “Contractor Surveying – ADA Features” requires the Contractor to stake, measure, record the information on WSDOT provided forms, and transmit the as-built information to the Project Engineer.

(April 2, 2018)

Contractor Surveying – ADA Features

ADA Feature Staking Requirements
The Contractor shall be responsible for setting, maintaining, and resetting all alignment stakes, and grades necessary for the construction of the ADA features. Calculations, surveying, and measuring required for setting and maintaining the necessary lines and grades shall be the Contractor's responsibility. The Contractor shall build the ADA features within the specifications in the Standard Plans and contract documents.

ADA Feature As-Built Measurements
The Contractor shall be responsible for providing electronic As-Built records of all ADA feature improvements completed in the Contract.

The survey work shall include but not be limited to completing the measurements, recording the required measurements and completing other data fill-ins found on the ADA Measurement Forms, and transmitting the electronic Forms to the Engineer. The ADA Measurement Forms are found at the following website location:

http://www.wsdot.wa.gov/Design/ADAGuidance.htm

In the instance where an ADA Feature does not meet accessibility requirements, all work to replace non-conforming work and then to measure, record the as-built measurements, and transmit the electronic Forms to the Engineer shall be completed at no additional cost to the Contracting Agency, as ordered by the Engineer.

Payment
Payment will be made for the following bid item that is included in the Proposal:

"ADA Features Surveying", lump sum.

The unit Contract price per lump sum for "ADA Features Surveying" shall be full pay for all the Work as specified.

B. Types of ADA Features to be Collected

The following ADA Features may be included in a project and measurements are to be recorded and transmitted to WSDOT:
• Curb Ramps
  o Perpendicular
  o Parallel
  o Combination
  o Parallel One-Direction
• Median and Traffic Island Cut-Through (Added July 2018)
• Sidewalk
• Independent Shared Use Path (Added July 2018)
• Driveway
• End Ramps for a Sidewalk or Bridge End
• APS Button and Signal

1. Equipment Needed for Measurements
   The Contractor can use any method to collect the measurements. Past practice has been to use the tools below to complete the required measurements:
   
   Smart Level – Slope Measurement
   • Minimum of 2.0 feet in length
   • Inclinometer capable of slope accuracy measurements of maximum of 1/16” per foot
   • Display slope measurements up to two-significant figures
   • Display slope in percent
   • Calibrate the level per the manufacturers’ recommendations, not less than once per day.
   
   Steel Tape Measure – Dimension Measurements
   • Capable of measuring to 0.01 foot

2. Forms
   Record the measurements for the ADA Features identified above using the Excel spreadsheet, ADA_Measurements.xlsx, which can be downloaded from the ADA Guidance website located at:

   When you follow the above link and open the ‘ADA Measurement Forms’ link, a dialog box will open asking you “What do you want to do with ADA_Measurements.xlsx?” You will want to ‘Save As’ in your own folder. You can then make as many copies as needed for your project.

   HINT: Check the webpage often for the most current form. For your convenience, the form is being updated to help you in the completion of measurements and transmitting data more intuitive.

Form Design
   ➤ Each form is a separate tab (worksheet) in the spreadsheet. When opening up the spreadsheet, the READ-ME tab is the default tab that it opens up to, to inform the user that there are a number of forms contained in the Excel spreadsheet that are to be used to record measurements.
   ➤ The forms are designed to only include those measurement fields or information that are identified with the specific project phase. Select the Phase from the drop-down list that the data is being collected for:
• Scoping
• Design/Build
• Contractor As-Builds

The forms are designed to record the basic project information in the upper portion of the worksheet.

Each form has “Required Field” (Fuchsia color shaded cells) that need to be completed in order for the form to be submitted.

As the form is filled-in, the shading disappears.
Until there is no shading shown on the form

The forms have been designed for the recorder to select information found in a drop-down menu.

OR:

Information boxes are included in many of the drop-down lists to help the recorder input the correct information.

HINT: Sometimes the Information box may cover a portion of the drop-down cell. To move the Information box, just click on it, and using the mouse, drag the Information box to a new location.
Diagram(s) are provided to identify what and where the different measurements are found. The diagrams have a data box beside the database attribute code to help in completing the form correctly.

A measurement may be entered into the data box on the diagram and the information will be automatically populated onto the right side of the form.

OR
The measurement may be entered into the right side of the form.

And after hitting the Enter button the measurement will automatically populate into the data box on the diagram.

The forms have been designed to provide sufficient information to the recorder so the correct format of information is placed onto the form.
As the measurements are performed and recorded into the form, the form will automatically identify if the measurement “Passes” or “Fails” the ADA Compliance Criteria.

The Survey/Feature Status of the feature will be identified as either “Pass”, “Fail”, or “Incomplete Form”.

The “Incomplete Form” message is displayed when required data is missing.
ADA Measurement Forms
Instructions For Contractor or Design-Build

Each form has the ability to document a measurement(s) that does not meet ADA compliance criteria but has been processed and received approval allowing the use of that dimension.

*Maximum Extent Feasible (MEF)* - The forms have been designed to include the tracking of a MEF dimension, slope, or other ADA compliance criteria that has been approved by the region’s Assistant State Design Engineer and ADA Compliance Manager or Assistant State Construction Engineer.

It is intended that during the Design Phase, designers are to identify on the form where a value does not meet ADA compliance, obtain MEF approval, and provide the completed forms to the WSDOT Construction Project Engineer.

Contractors will need to coordinate with the Construction Project Engineer to obtain MEF information in order for the form to be completed properly. If not the Survey/Feature Status will show the feature as “FAIL”.

The approved MEF document needs to be referenced on the form. Provide the “L #” (Design Work Order Number) in the MEF Reference box.

If there is an approved MEF, the form tests the recorded measurement against the MEF dimension or slope to determine “Pass” or “Fail”.

Note: The MEF criteria can be set to be evaluated to the following parameters:

- Min
- Equal to
- Max
II. General Information for Completing a Form

A. First, identify the Phase – “Design/Build” or “Contractor As-Builts”.

B. Basic information required for each Feature measured includes:

1. Some of the forms are site specific, and will need to be completed separately for each ADA Feature constructed (the various Curb Ramps, Sidewalk End Ramps, Cut Thru, Driveway, and APS Button/Signal), while other forms provide the capability to record more than one ADA Feature location on the same form (Sidewalk and Independent Shared Use Path).

2. All the forms require basic information to be filled-out:
   - As noted above, each form has “Required Field” (Fuchsia color shaded cells) that need to be completed in order for the form to be submitted.
3. Field Descriptions:

1. **Contract** – Enter the contract number; six digits. “001234” (For non-WSDOT construction projects, enter the entire project number and when the reminder box pops up, select “Yes” to continue, which will allow the entire project number to be entered).

2. **Date Measured** – Enter the date measured.

3. **Measured By** – Enter the name/title of person completing the measurements.

4. **Cross Street Name** – Enter the name of the cross street, if available.

5. **Plan Sheet Reference** (if this is applicable) – Enter the contract plan sheet number the feature is found on.

6. **Feature Location Code** - Identify each feature by a Feature Location Code schema.

   Provide a schematic plan that shows each ADA Feature and the associated unique Feature Location Code (this can be the designation from the contract plans, or any system to identify each location separately (sequentially, alphabetically, etc)).
7. **Site History** – Select from the drop-down list to identify what this feature is addressing.

8. **Diagonally Orientated** – Identify whether or not the curb ramp points into the center of the intersection (diagonal).

9. **Site** – Identify where the feature is located. Click on the hyperlink and the diagram (shown below) will provide more information about the Site.

Select from the dropdown list the general location where the feature is located.
10. **Location** – This is used provide more specific location detail to distinguish the feature’s location (especially when there are other similar features on the same corner). Move the mouse button over the “Location” cell and a schematic drawing (below) will pop up showing the naming convention used to identify the location of the feature.

![Location Diagram](image)

10a – **Corner Compass Location**: From the dropdown list identify the “Cardinal” Corner Compass Location for where the feature is located.

![Corner Compass Location Dropdown](image)

10b – **Compass Location**: From the dropdown list identify the “Ordinal” Corner Compass Location where the feature is located.

![Compass Location Dropdown](image)

N/A

Not Applicable, or only one feature (ramp): 0
11. Jurisdiction – Identify who has jurisdiction of the feature from the dropdown list

12. Constructed By – Identify who constructed the feature from the dropdown list

13. Clear Space Achieved (Does not apply to all ramps) See details in the Section 4 below.

14. SR – Enter the State Route identification (number only).

15. Mile Post (MP) - Provide the State Route mile post for the feature.
   The MP can be calculated possibly using the contract plan information found on the vicinity map.

16. Ahead/Back Indicators (A/B) – Identify if the feature’s MP is ahead or back. For most State Routes this will typically be identified as “Ahead”.
   The State Route Milepost Back (B) indicator designates whether the milepost value is the ‘back’ duplicate of a milepost value ‘ahead’ on the route.

Click on the hyperlink to see further documentation pertaining to Milepost Back Indicator
17. **Project stationing** - Enter the Project station of the feature, if known.

18. **Lt or Rt** - Identify where the feature is located in relationship to the State Route centerline (while being oriented and facing in the Increasing MP direction on the SR) from the drop-down list.

For more information click on the hyperlink

19. **Latitude** – Provide the latitude coordinate for the feature.

If the coordinate is not obtainable from a collection device, use the WSDOT Geoportal application to identify the coordinate. Instructions for using the Geoportal application can be found by click on the Instructions hyperlink.
20. **Longitude** – Provide the longitude coordinate for the feature.

If the coordinate is not obtainable from a collection device, use the WSDOT Geoportal application to identify the coordinate Instructions for using the Geoportal application can be found by click on the Instructions hyperlink.

21. **Accuracy** – Identify the method used to obtain the Lat/Long coordinates.

Select from the drop-down list

22. **NOTES** - Each form has a “Notes” block to provide additional details on a measurement or details about the feature.

23. **Measurement tool information and calibration** – Provide the following information pertaining to the measurement tool used to measure slopes.
   a) The serial number of the equipment used for measuring slopes
   b) The name of the person who did the calibration
   c) **The date the tool was calibrated.** At a minimum, the tool is to be calibrated daily.
III. Status of a Feature

The forms have been designed to provide immediate feedback.

A. Additional measurement or information data is needed to complete the form

B. For each measurement recorded, the status of ADA compliancy is provided for immediate feedback

C. In addition, as measurements are recorded, the running and then Final status of the feature will be shown on the form.
D. Acceptance

If, as measurements are being recorded, any of the measurements result in a “FAIL” to meet the compliance criteria, there is a problem. If there is no MEF information attributed to the measurement, the Feature Status will show “FAIL” and is considered non-compliant and will not be accepted by WSDOT.

IV. ADA Features

Each Feature has a different set of required measurements. Below is detailed information or an explanation of various data fields found on the various forms.

A. Curb Ramps

1. Forms to Record Data:
   - Perpendicular
   - Parallel Curb Ramp
   - Parallel 1-Direction
   - Combination

2. Data Fields Explanation:
   a) For each of the fields listed below select whether or not the attribute applies:
      i) **Diagonally Orientated** – Identify whether or not the ramp points into the center of the intersection.

      ![Diagonally Orientated](image)

      Visually Identified the Feature is ADA

      a) Diagonally Orientated – Identify whether or not the ramp points into the center of the intersection.

      ii) **Clear Space Achieved** – Identify whether or not a clear space is provided at the bottom of the curb ramp.

      ![Clear Space Achieved](image)

      4 ft Min if Diagonally Oriented

      Clear Space Achieved?

      1510.09(2) Clear Space

      - Beyond the curb face where the bottom of a curb ramp or landing meets the gutter, a clear space of 4 feet minimum by 4 feet minimum shall be provided in the roadway that is contained within the width of the crosswalk and located wholly outside the parallel vehicle travel lane.

      *Note:* Clear space is easily achieved when a separate curb ramp is provided, oriented in each direction of pedestrian travel within the width of the crosswalk it serves.
b) **Landing** – Provide measurements

![Landing Table]

- **CSW**
  - 2.00% Max
  - % Max

- **CSL**
  - 2.00% Max
  - % Max

- **W**
  - 4.00 ft Min
  - ft Min

- **L**
  - 4.00 ft Min
  - ft Min

**Special Note:**

For Curb Ramp types Parallel and Combination, the feature may have or may not have a Ramp Left or Right associated with it and requires the recorder to identify if the Ramp is Present or not.

c) **Ramp** – Provide measurements

![Ramp Table]

- **RS**
  - 8.30% Max
  - % Max

- **CS**
  - 2.00% Max
  - % Max

- **W**
  - 4.00 ft Min
  - ft Min

- **L**
  - 15.00 ft Max
  - ft Max

**Special Note:**

For Curb Ramp types Parallel and Combination, the feature may have or may not have a Ramp Left or Right associated with it and requires the recorder to identify if the Ramp is Present or not.
(1) If the Ramp is present select **Present** from the drop-down list and record the information required.

(2) If a ramp is not present, select **Not Present** and notice that the associated data cells and ramp Grade Breaks are shaded and auto-filled with “n/a”.

![Ramp Left #2](image1)

![Ramp Right #3](image2)
d) **Flare Slope** – *Provide measurements*

<table>
<thead>
<tr>
<th>Flare Slope</th>
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<tbody>
<tr>
<td>FS#1</td>
<td>10% Max</td>
<td>% Max</td>
</tr>
<tr>
<td>FL#2</td>
<td>10% Max</td>
<td>% Max</td>
</tr>
</tbody>
</table>

1510.09(2)(e) **Flares**
- Flared sides are to be used only where a pedestrian circulation path crosses the curb ramp from the side.
- Flared sides are to have a slope of 10% maximum, measured parallel to the back of curb.

1510.09(2)(f) **Counter Slope**
- The counter slope of the gutter or street at the foot of a curb ramp or landing shall be 5% maximum.

**e) Counter Slope** – *Provide measurement.*

<table>
<thead>
<tr>
<th>Counter Slope</th>
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<tbody>
<tr>
<td>S</td>
<td>5.00% Max</td>
<td>% Max</td>
</tr>
<tr>
<td>RS + S sum</td>
<td>11.00% Max</td>
<td>% Max</td>
</tr>
</tbody>
</table>
f) **Grade Breaks** – Grade breaks (GB) are shown on the drawings.

Special Note:

Be aware that the diagram does not provide sufficient space for a data box, therefore, select the type of Grade Break from the drop-down list. Notice that a large check will show up on the diagram showing that the measurement was completed.
Special Note:

If the form is being filled out in the field by hand first, record the measurement between the two surfaces so that the correct drop-down selection can be selected on the electronic form.

1510.09(2)(i) Grade Breaks

- Vertical alignment shall be planar within curb ramp runs, landings, and gutter areas within the pedestrian access route.
- Grade breaks at the top and bottom of curb ramps shall be perpendicular to the direction of travel on the ramp run.
- Surface slopes that meet at grade breaks shall be flush.

Type of DWS – Provide measurements. Also identify the type of DWS found (Select from the drop-down list)
h) **Curb Gap** – Provide measurement.

- **Curb Gap**
  - Max: 0.17 ft

Top Area – Parallel 1-Direction Ramp only

- Provide measurements.

**Special Note:** CSL Measurement

CSL Measurement is informational only as it can follow the grade of the road.
B. Median and Island Cut Thru

1. Forms to Record Data:
   - CutThru

2. Data Fields Explanation:
   a) **Cut-Thru – Type:** Select the type of roadway feature from the drop-down list.
b) **PAR Material:** Select the material type the PAR thru the roadway feature is constructed of from the drop-down list.

![Diagram showing PAR Material selection]

**Special Note:**

Depending on the type of Cut-thru selected, portions of the form that are not relevant are shaded.

(1) For a Median

![Diagram showing Median and Island sections]
(a) Record the measurements for MW, ML, RS, CS

(b) Record the measurements for C1 and C2

a. Record the measurements for grade breaks
(2) For an Island

<table>
<thead>
<tr>
<th>Cut-throat Type</th>
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<table>
<thead>
<tr>
<th>FM Material</th>
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<table>
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<table>
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<table>
<thead>
<tr>
<th>SW</th>
<th>SE</th>
<th>ES</th>
<th>CS</th>
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<tbody>
<tr>
<td>120.3 ft Min</td>
<td>48 ft Min</td>
<td>30 ft Min</td>
<td>120 ft Min</td>
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<table>
<thead>
<tr>
<th>Island</th>
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<table>
<thead>
<tr>
<th>CER</th>
<th>CTR</th>
<th>CCE</th>
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<thead>
<tr>
<th>Detectable Warning Surface - 01</th>
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<tbody>
<tr>
<td>L</td>
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<thead>
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<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Grade Break Depth - Inches or Feet of an angle</th>
</tr>
</thead>
<tbody>
<tr>
<td>CGB1</td>
</tr>
</tbody>
</table>
(a) Record the measurements for CRS, C1W, C1CS, C2RS, C2W, C2CS, C3RS, C3W, C3CS

(b) Record the measurements for C1, C2, and C3
(c) Record the measurements for grade breaks

### C. Sidewalk

1. Forms to Record Data:
   - Sidewalk

   ![ADA Feature - Sidewalk Measurements Diagram](image)

   This form allows multiple measurements to be recorded (on the same form) along one length of sidewalk. The limits of the sidewalk are from the edge of the curb ramp at one intersection to the edge of the curb ramp at the other end of the block.

   Where the sidewalk is not interrupted by street intersections with curb ramps, it may begin and end with sidewalk end ramps. Use multiple forms to account for longer lengths of uninterrupted, paved sidewalk.

   **Special Note:**

   Note, if there is sidewalk on each side of the road, use separate forms for measurement collection; a form for the right side and a separate form for the left side.
For Sidewalk the “Site” location defaults to “Side”

2. Data Fields Explanation:
   a) **Latitude** – Provide the latitude coordinate for the feature.
   b) **Longitude** – Provide the longitude coordinate for the feature.
   c) **Provide the Station** if used
   d) **Provide the MP**
   e) **Sidewalk Characteristics** - There are eight choices that apply to construction
      Select from the drop-down list to identify the context for the measurement.

   (1) **Start of Sidewalk** – This identifies where the sidewalk begins. Could be where the curb ramp adjoins the sidewalk. Record the width and cross slope at that location.

   (2) **Interval Measurement** – At approx.. 50-ft intervals along the sidewalk record the width and cross slope.

   (3) **Vertical Surface Discontinuity** - Record any location where there is a vertical difference in sidewalk surfaces of more than ¼ inch.
(4) **Change In Width** - Record any locations where there is a change in the sidewalk width. Record the width and cross slope at that location.

(5) **Change In Cross Slope** - Record any location where the cross slope changes. Record the width and cross slope at that location.

(6) **End of Sidewalk** – This identifies where the sidewalk section ends, or where a transition segment begins, or where the sidewalk adjoins a curb ramp. Record the width and cross slope at that location.

(7) **Transition Segment to Existing Sidewalk** – If the sidewalk transitions back to an existing sidewalk, record measurements at the match line with the existing sidewalk.

(8) **Obstruction** – An obstruction is any object within the sidewalk that reduces the **clear width** to less than 4-ft. Record any location where these are found.

**Special Note:**

If the reason for the measurement is related to an Obstruction, complete the Obstruction Type.
f) **Obstruction Type** - Select from the drop-down list to identify the obstruction type.

Obstructions might include:

<table>
<thead>
<tr>
<th>Obstruction Type 1</th>
<th>Obstruction Type 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bench</td>
<td>Branch</td>
</tr>
<tr>
<td>Building</td>
<td>Catch Basin</td>
</tr>
<tr>
<td>Fire Hydrant</td>
<td>Grate Inlet</td>
</tr>
<tr>
<td>Guardrail</td>
<td>Guy Anchor</td>
</tr>
<tr>
<td>Junction Box</td>
<td>Large Vault -Electric</td>
</tr>
<tr>
<td>Manhole</td>
<td>Newspaper Stand</td>
</tr>
<tr>
<td>Parked Vehicle</td>
<td>Portable Sign Board</td>
</tr>
<tr>
<td>Shrubs</td>
<td>Sign</td>
</tr>
<tr>
<td>Tree</td>
<td>Telephone Booth</td>
</tr>
<tr>
<td>Water Valve</td>
<td>Other</td>
</tr>
</tbody>
</table>

**Special Note:**

If an obstruction has been documented as a MEF, select MEF from the drop-down list, record the measurements, and in the NOTES box on the form add any additional pertinent information.
g) **Sidewalk Width** – Record the sidewalk width at that location. **Cross Slope** – Record the cross slope of the sidewalk at that location.

D. **Independent Shared Use Paths (ISUP)**

1. Forms to Record Data:
   - ISUP

This form allows multiple measurements to be recorded on the same form along a shared use path.

For ISUP the “Site” location defaults to “Side”
2. Data Fields Explanation:
   a) **Latitude** – Provide the latitude coordinate for the feature.
   b) **Longitude** – Provide the longitude coordinate for the feature.
   c) **Provide the Station** if used
   d) **Provide the MP** for each measurement, if available.
   e) **Characteristics** - There are nine choices, select from the drop-down list to identify the reason for the measurement. Enter the measurements made.

   (1) **Start of ISUP** – This identifies where the ISUP begins. Record the width and cross slope at that location.

   (2) **Interval Measurement** – At approx. 50-ft intervals along the ISUP record the width and cross slope.

   (3) **Vertical Surface Discontinuity** - Record any locations where there is a vertical difference in surfaces of more than ¼ inch.

   (4) **Change In Width** - Record any locations where there is a change in the ISUP width. Record the width and cross slope at that location.

   (5) **Change In Cross Slope** - Record any location where the cross slope changes. Record the width and cross slope at that location.

   (6) **Change in Running Slope** – Record location where the running slope changes.

   (7) **End of ISUP** – This identifies where the ISUP section ends, or where a transition segment begins, or where the ISUP adjoins another feature. Record the width and cross slope at that location.

   (8) **Transition Segment to Existing ISUP** – If the ISUP transitions back to an existing ISUP, record measurements at the match line with the existing ISUP.

   (9) **Obstruction** – An obstruction is any object within the ISUP that reduces the **clear width** to less than 10-ft. Record any location where these are found.
**Special Note:**

If the reason for the measurement is related to an Obstruction, complete the Obstruction Type.

**f) Obstruction Type** - Select from the drop-down list to identify the obstruction type.

<table>
<thead>
<tr>
<th>Location</th>
<th>ISUP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Longitude</td>
<td>Station</td>
</tr>
<tr>
<td>8. Obstruction</td>
<td></td>
</tr>
</tbody>
</table>

**Special Note:**

If an obstruction has been documented as a MEF, select MEF from the drop-down list, record the measurements, and in the NOTES box on the form add any additional pertinent information.
### Left Shoulder Width (LSW)
- Record the measurement.

<table>
<thead>
<tr>
<th>Measurement</th>
<th>MEF Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.00</td>
<td>ft Min</td>
</tr>
</tbody>
</table>

### ISUP Width (PW)
- Record the measurement.

<table>
<thead>
<tr>
<th>Measurement</th>
<th>MEF Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.00</td>
<td>ft Min</td>
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</tbody>
</table>

### Right Shoulder Width (RSW)
- Record the measurement.

<table>
<thead>
<tr>
<th>Measurement</th>
<th>MEF Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.00</td>
<td>ft Min</td>
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</tbody>
</table>

### Cross Slope (CS)
- Record the measurement.

<table>
<thead>
<tr>
<th>Measurement</th>
<th>MEF Criteria</th>
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</thead>
<tbody>
<tr>
<td>1.85</td>
<td>% Max</td>
</tr>
</tbody>
</table>
k) **Running Slope (RS)** – Record the measurement.

<table>
<thead>
<tr>
<th>Running Slope (RS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADA Compliance</td>
</tr>
<tr>
<td>5.00% Max</td>
</tr>
<tr>
<td>Measurement</td>
</tr>
<tr>
<td>4.20</td>
</tr>
<tr>
<td>% Max</td>
</tr>
</tbody>
</table>

(a) **Shared-Use Path Widths**

The appropriate paved width for a shared-use path is dependent on the context, volume, and mix of users. The desirable paved width of a shared-use path, excluding the shoulders on either side, is 12 feet. The minimum paved width, excluding the shoulders on either side, is 10 feet.

A paved width of more than 12 feet, excluding the shoulders on either side, may be appropriate when substantial use by both pedestrians and bicyclists is expected or maintenance vehicles are anticipated.

Shared-use path shoulders are typically unpaved and 2 feet wide on either side. Exhibits 1515-3 through 1515-5 provide additional information and cross-sectional elements.

On bridges or tunnels, it is common to pave the entire shared-use path, including shoulders. This usable width can be advantageous for emergency, patrol, and maintenance vehicles and allows for maneuvering around pedestrians and bicyclists who may have stopped. It also keeps the structure uncluttered of any loose gravel shoulder material.

1. **Exceptions to Minimum Path Widths**

A reduced path width of 8 feet may be designed at spot locations that present a physical constraint such as an environmental feature or other obstacle. Refer to the MUTCD for signing and pavement markings for such conditions.

In very rare circumstances, a reduced width of 8 feet may be used where the following conditions prevail:

- Bicycle traffic is expected to be low, even on peak days or during peak hours.
- Pedestrian use of the facility is not expected to be more than occasional.
- Horizontal and vertical alignments provide frequent, well-designed passing and resting opportunities.
- The shared-use path will not be regularly subjected to maintenance vehicle loading conditions that would cause pavement edge damage.
- The shared-use path is for a short distance such as a spur connection to a neighborhood.
(e) Clearances

The minimum horizontal clearance from the edge of pavement to an obstruction (such as bridge piers or guardrail) is 2 feet. Provide a minimum vertical clearance of 10 feet from the pavement surface to overhead obstructions to accommodate maintenance vehicles, bicyclists, and equestrians.

(a) Running Slopes

Design running slopes (grades) on shared-use paths less than or equal to 5% to accommodate all user types, including pedestrians with disabilities.

When the path is within the highway right of way, its running slope can match the general grade established for the adjacent roadway.

(b) Landings

Shared-use path landings provide users a level place to rest on extended grades. Exhibits 1515-6 and 1515-7 show these features.

Design landings to:

- Permit users to stop periodically and rest.
- Not exceed maximum running slopes and cross slopes of 2%.
- Be in line and as wide as the shared-use path. Landings are to be at least 5 feet long.
- Avoid abrupt grade changes or angle points. Design transitions to landings using vertical curves.

![Shared-Use Path Landing Profile](Exhibit 1515-6)

Notes:

- Landings are desirable on extended grades.
- Design vertical curves to transition from the grade to the landing.
- Exhibit 1515-7 illustrates a landing and a rest area.
E. Driveways

1. Forms to Record Data:
   - Driveway

2. Data Fields Explanation:
   
   a) **Driveway – Type**: Select the type of driveway from the drop-down list.

   📝 Special Note:

   Depending on which type of driveway was selected, some measurements are shaded out and are not measured.
b) **Driveway – PAR Material** – Select the type of material the driveway is constructed of.

<table>
<thead>
<tr>
<th>Driveway</th>
<th>Type</th>
<th>Access Jogs Around</th>
</tr>
</thead>
<tbody>
<tr>
<td>pass</td>
<td>PAR Material</td>
<td>Cement Concrete</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Point #1</th>
</tr>
</thead>
<tbody>
<tr>
<td>pass</td>
</tr>
<tr>
<td>pass</td>
</tr>
<tr>
<td>pass</td>
</tr>
</tbody>
</table>
c) **Points #1, #2, and #3** – Using the pictures on the form, identify where the Point #'s are located, and record the width “W”, cross slope “CS”, and run slope “RS” measurements on the form.

d) **Grade Breaks** – Provide measurements where shown on the drawings.

**F. Ramp for Sidewalk or Bridge Ends**

1. Forms to Record Data:
   - **End Ramp**

   ![Diagram of End Ramp](image)

   **ADA Feature - End Ramp Measurements**

   - **End Ramp Type**
     - Bridge
     - Sidewalk

   **Data Fields Explanation:**
   
   a) **Location of Ramp** – Select from the drop-down list where the end ramp is located.

   ![Diagram of Location of Ramp](image)

   Once the type is selected the data box are unshaded to record the measurement on the drawing or in the form.
b) **Ramp** – Record measurements for run slope “RS”, cross slope “CS”, and width “W” on the form.

c) **Grade Breaks** – Provide measurements where shown on the drawings.

⚠️ **Special Note:**

The diagram does not provide sufficient space for a data box so select the proper Grade Break in the measurement box and a large check will show up on the diagram showing that the measurement was completed.
Special Note:

If the form is being filled out in the field by hand first, record the measurement between the two surfaces so that the correct drop-down selection can be completed on the electronic form correctly.

### G. APS Button and Signals

#### 1. Forms to Record Data:
- APS Button-Signal

#### 2. Data Fields Explanation:

##### a) APS Pushbutton

Depending on the location, there may be up to three button locations that information is needed. Using the picture on the form, determine the pole number orientation.

1. **Button Support Pole**

   For each button, identify whether the button is located on a separate pole or co-located (shared) on a single pole.
A. **Pushbutton #1** – two options

<table>
<thead>
<tr>
<th>APS Pushbutton</th>
<th>APSButton #1</th>
<th>APSButton #2</th>
<th>APSButton #3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Button Support Pole</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Distance</th>
<th>Button to Curb</th>
<th>10 ft Max</th>
<th>Button-PassThru</th>
<th>2 ft Max</th>
<th>Button-Landing</th>
<th>2 ft Max</th>
</tr>
</thead>
</table>

If there is no button, select N/A, and the data cells are shaded and no further information is required.

Special Note:

Error messages will occur when combinations do not match:

A. Only one pushbutton provided:

<table>
<thead>
<tr>
<th>APS Pushbutton</th>
<th>APSButton #1</th>
<th>APSButton #2</th>
<th>APSButton #3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Button Support Pole</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Distance</th>
<th>Button to Curb</th>
<th>10 ft Max</th>
<th>Button-PassThru</th>
<th>2 ft Max</th>
</tr>
</thead>
</table>

_between Buttons 1 & 2 | If separated, 10 ft Min. |
I. In the case where there is only One pushbutton present, select “Separate” and select “N/A” for pushbuttons #2 and #3.

II. Make a note in the NOTES box that there is only one pushbutton.

B. Cannot have a Shared, with a Separate, and N/A. If the pushbutton is shared then both have to be “shared”.

C. Cannot have a Shared, with a Separate, and N/A. If the pushbutton is shared then both have to be “shared”.

(2) **Distance**

Using the pictures on the form, address the following:

A. **Button to Curb** – Record the distance from curb to button

B. **Button-PassThru** – If the button is located in a pass thru island, record the distance; otherwise leave blank.

C. **Button-Landing** - Distance from landing to button

D. **Button-Clr Space** - Distance from the button clear space to the button

E. **Between Buttons 1-2** - If the buttons are separated, record the distance.

F. **Between Buttons 2-3** - If the buttons are separated, record the distance.

G. **Between Buttons 3-1** - If the buttons are separated, record the distance.

(3) **Clear Space**

Record the following measurements:
Special Note:

There are additional diagrams for clear space to help with identifying the attribute. A diagram will appear when the mouse pointer is over the cell (or the cell with a red marker in the upper right corner is clicked).

A. APS Clr Space Size – Select from the drop-down list

B. Clr Space CS1 – Record the cross slope CS1

C. Clr Space CS2 – Record the cross slope CS2
D. **Obstruction btwn PAR & Clear Space** – Is there an obstruction between the PAR and the clear space that will hinder access? Select from drop-down.

Using the pictures on the form, address the following:

A. **Button Vertical Height** - Record the measured distance between the surface of the sidewalk to the center of the button.

B. **Button Diameter** – Record the diameter of the button

C. **Button Contrasts With Housing** – Select response from the drop-down list.

D. **Button – Vibrate** – Select response from the drop-down list

E. **Button – Audible** – Select response from the drop-down list
F. *Arrow Parallel to Crosswalk* – Select response from the drop-down list.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>pass</th>
<th>pass</th>
<th>pass</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Arrow Parallel to Crosswalk</strong></td>
<td>Yes</td>
<td></td>
<td></td>
<td><strong>Yes</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Button Arrow Contrast</strong></td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Button Arrow Tactile</strong></td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

G. *Button Arrow Contrast* – Select response from the drop-down list.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>pass</th>
<th>pass</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Button Arrow Contrast</strong></td>
<td>Yes</td>
<td></td>
<td><strong>Yes</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Button Arrow Tactile</strong></td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

H. *Button Arrow Tactile* – Select response from the drop-down list.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>pass</th>
<th>pass</th>
<th>pass</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Button Arrow Tactile</strong></td>
<td>Yes</td>
<td></td>
<td><strong>Yes</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Sign</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>Yes</strong></td>
<td></td>
</tr>
</tbody>
</table>

(5) **Sign**

The information in this section is **INFORMATIONAL ONLY**.

A. *Sign on Housing* – Select response from the drop-down list.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>pass</th>
<th>pass</th>
<th>pass</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Sign on Housing</strong></td>
<td>Yes</td>
<td></td>
<td></td>
<td><strong>Yes</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Sign - Street Name</strong></td>
<td>Yes</td>
<td></td>
<td></td>
<td><strong>Yes</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Sign - St Name Braille</strong></td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

B. *Sign - Street Name* - Select response from the drop-down list.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>pass</th>
<th>pass</th>
<th>pass</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Sign - Street Name</strong></td>
<td>Yes</td>
<td></td>
<td></td>
<td><strong>Yes</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Sign - St Name Braille</strong></td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
C. **Sign - St Name Braille** - Select response from the drop-down list.

<table>
<thead>
<tr>
<th>pass</th>
<th>Sign - St Name Braille</th>
<th>Yes</th>
</tr>
</thead>
</table>

D. **Sign - St Name Parallel to Crw** - Select response from the drop-down list.

<table>
<thead>
<tr>
<th>pass</th>
<th>Sign - St Name Parallel to Crw</th>
<th>Yes</th>
</tr>
</thead>
</table>

E. **Sign - St Name Audio** - Select response from the drop-down list.

<table>
<thead>
<tr>
<th>pass</th>
<th>Sign - St Name Audio</th>
<th>Yes</th>
</tr>
</thead>
</table>

F. **Arrow on Sign** - Select response from the drop-down list.

<table>
<thead>
<tr>
<th>pass</th>
<th>Arrow on Sign</th>
<th>Yes</th>
</tr>
</thead>
</table>

G. **Sign - St Name Vibro** – Is the street name vibrotactile? Select response from the drop-down list.

<table>
<thead>
<tr>
<th>pass</th>
<th>Sign - St Name Vibro</th>
<th>Yes</th>
</tr>
</thead>
</table>

b) **APS Display/Signal**

Depending on the location, there may be three signals that information is needed. Using the picture on the form, determine the pole number orientation.

(1) **Signal Support Pole**

For each signal, identify whether the signal is located on a separate pole or shared (co-located) on a single pole.
(a) In the case where there is only One display/signal present select “Separate” and select “N/A” for display/signals #2 and #3.

(b) Make a note in the NOTES box that there is only one display/signal.

(2) Distance

Using the pictures on the form, record the following measurements:

Special Note:

(a) If the signal is on the same pole “Shared”, then no measurement is needed. The measurement boxes are shaded.
(b) If the signal are on “Separate” poles, then measurements are required. Record the measurements.

![Image of APS Display/Signal form]

(3) **Display/Signal**

(a) **Signal Type** - Select from the drop-down list

![Image of Signal Type dropdown]

(b) **Signal Height** – Record the measurement from the sidewalk surface to the bottom of the display/signal box.

![Image of Signal Height measurement]

(c) **Signal Audible Walk** – Identify if the signal has an audible walk message. Select from the drop-down list

![Image of Signal Audible Walk selection]

---

*Information from ADA Measurement Forms Instructions For Contractor or Design-Build*
A. *Signal Audible Type* – Identify if the type of audible walk message. Select from the drop-down list

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>Yes</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signal Audible Walk</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Signal Audible Type</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tone</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Speech</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tone</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 1510.12(1) Accessibility Criteria for All-Pedestrian Pushbuttons (including APS)

**1510.12(1)(a) Location Requirements**

- See 1330.04(4) for pushbutton location requirements. These location requirements limit the potential locations for the pedestrian pushbutton clear space.

**1510.12(1)(b) Clear Space Requirements**

- Grade: 2% maximum running and cross slopes.
- Clear space dimensions:
  a. Standard: 48 inches in width by 60 inches in length, with the pushbutton located along one of the long sides of the clear space.
  b. Minimum: 48 inches minimum width by 48 inches minimum length. Although the ADA minimum required clear space for an operational control is 30 inches by 48 inches, the narrow dimension is increased to 48 inches to allow for maneuvering similar to a curb ramp landing (see Exhibit 1510-23). If the clear space is constrained on three sides, such that the clear space is set back 15 inches or more from the PAR, then the clear space shall be 48 inches minimum width by 60 inches minimum length, to allow for maneuvering within the constrained space. (see Exhibit 1510-23)

- Additional unobstructed or traversable space of 12 inches on either end of the clear space should be provided if possible, to allow for protruding equipment such as foot rests to extend beyond the clear space. This helps mobility assistance device users get their shoulder line closer to the pushbutton (see Exhibit 1510-23).
- Clear space is allowed to overlap other PAR elements (i.e., sidewalk/curb ramp landing) (see Exhibits 1510-24a and 1510-24b).
- Clear space must be connected to the crosswalk served by the pedestrian pushbutton with a PAR.
Typical pushbutton location

Widened ramp landing.

Adjacent traversable sidewalk (TYP.)

12" (TYP.)

Extended ramp landing.

Typical pushbutton location

Adjacent traversable space (if needed)

12"

48"

60"

Parallel Ramp Mid-Sidewalk Option: Widen Ramp Landing to 60"

Parallel Ramp End of Sidewalk Option: Extend Ramp Landing to 60"

Crosswalk Marking

Crosswalk Direction

Parallel-Ramp-Concurrent-Clear-Space-Examples
• 1510.12(1)(c) Reach-Range Requirements

Pushbuttons are in locations considered unobstructed, and follow the allowable unobstructed reach-distance requirements of the ADA accessibility requirements. This manual designs clear space for pushbuttons based on a parallel approach, due to difficulties in both accessibility and design when attempting to accommodate a forward reach.

• The provided clear space must be within reach range of the pedestrian pushbutton.

• The reach range is 10 inches maximum, as measured from the edge of the clear space to the center of the physical pushbutton (not just the housing).

• For new construction, the center of the physical pushbutton shall be no more than 9 inches from the edge of the clear space. It is preferable to locate the pushbutton as close to the edge of the clear space as possible.

• Different types of pushbuttons (front mount H-frame type versus side mount Accessible Pedestrian Signal type) will have different reach ranges on the same pole. Generally, designing for a side mount pushbutton will result in a front mount pushbutton also being within the required reach range. This is generally not true the other way around. (see Exhibit 1510-25)

• The center of the physical pushbutton shall be 42 inches above the surface of the clear space. Existing installations may remain if they are within a range of 36 inches minimum to 48 inches maximum above the surface of the clear space.

• The pushbutton shall be a minimum of 12 inches in from both ends of the clear space, and should be at least 24 inches in from both ends of the clear space. Ideally, the pushbutton should be centered along one side of the clear space. If the clear space is rectangular, the pushbutton shall be located along one of the long sides of the clear space.
NOTE: See Exhibit 1330-14a and 1330-14b for pole setback limits.
Reach Range for Pedestrian-Pushbuttons
Exhibit 1510-25
V. Transmitting Collected Data to the WSDOT Project Office

After completing the feature measurements, the Contractor shall transmit the completed electronic Excel “Passed” forms to the Project Engineer administering the contract.

Include the following information in the transmittal:

1. Contract Number
2. Date Measurements Completed
3. Name of Individual who completed the Measurement forms
4. A statement from the Prime Contractor certifying that the measurements in the electronic file are accurate and reflect ADA compliance.