Region One
Vegetation Classification, Mapping, Inventory and Analysis Report

$\bar{x} = \frac{\sum x}{n}$

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R1 CSE/IM QC Scoresheet Instructions

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Overview

The R1 IDIQ CSE/IM Scoring Spreadsheet is used to score Common Stand Exam and Inventory and Monitoring field data collection inspections, unless otherwise specified in the individual Task Order (see Contract Documents, Exhibits or Attachments Section, Attachment 11 of the parent contract IDIQ).

The R1 IDIQ CSE/IM Scoring Spreadsheet:

- Identifies required attributes, automatic Pass/Fail items, and provides automated scoring calculations.
- Includes inspection forms containing individual Data Items for all attributes described in the *Region 1 Common Stand Exam and Inventory and Monitoring Field Guide (R1 CSE/IM Field Guide)*, as well as additional Data Items related to monumentation of inventory and monitoring plots that are remeasured over time.
- Includes both locked and unlocked cells. Only fields designed to be edited and utilized by the inspector are unlocked; all other cells are locked and should not be altered to ensure that the functionality and automated calculations in the scoresheet are not compromised. If the form does need to be altered see Setting Up the Form section of this document.
- Contains fields in the Workbook that are color coded to identify their function. See the Scoring Spreadsheet Cell Color Coding Definitions Table for more information.
- Provides flexibility. The inspector can inspect all required attributes during an inspection, or they may inspect a subset of the required attributes as needed.
    - All data collected is required to meet accuracy standards. Acceptable tolerance levels for each individual measurement are shown in *Appendix T* of the *R1 CSE/IM Field Guide,* or the appropriate protocol as specified in each individual Task Order. Tolerance levels in the protocol supercede those found in *Appendix T.*
    - Scoring is based on the percentage points received out of the total points possible from the data items inspected, as well as no fail data items.
    - A single form may be used to inspect multiple settings or a single setting.

Scoring Spreadsheet

The scoring spreadsheet is comprised of the individual worksheets, referred to as inspection forms in this document. Required inspection forms will vary depending on the protocol and Task Order. At a minimum, the inspection forms denoted with an asterisk below are required for all Task Orders. Individual inspection forms are explained in detail in this document.

- *Inspection Summary Form
- *Setting Inspection Form
- *Sample Design Inspection Form

- Monument Data Inspection Form
- *Plot Data Inspection Form
- Tree Data – Large Trees Inspection Form
- Tree Data – Small Trees Inspection Form
- Vegetation Composition Inspection Form
- Down Woody Material Inspection Form

Setting up CSE/IM Scoring Spreadsheet

It is the responsibility of the COR to identify inspection items, forms, and attributes required based on the Task Order and protocol, and to provide the Scoring Spreadsheet with the information filled-out either with the Task Order or at the pre-work meeting as specified in the Task Order so that the Contractor has a clear understanding of what they will be inspected on. This also helps ensure that the COR and inspector(s) are on the same page for inspections.

Required attributes will vary depending on the protocols on a Task Order basis. Refer to the project protocols for any additional attributes required by the Task Order. **The Attribute Required column on each form will be filled in by the COR/inspector for each Task Order. The R1 minimum required fields are identified in *Section 4.3. Data Collection Specifications* of the IDIQ parent contract, however any additional attributes specified based on project information needs will be clearly articulated in the Task Order.**

Throughout this document, information about the fields that need to be filled in and provided at the pre-work meeting or in the Task Order are shaded in pink. In the Scoring Spreadsheet, these attributes are highlighted in pink as well.

Using the CSE/IM Scoring Spreadsheet

All submitted data should meet accuracy standards. Acceptable tolerance levels for each attribute are shown in *Appendix T* of the *R1 CSE/IM Field Guide,* or the appropriate protocol, as specified in each individual Task Order. Tolerance levels in the protocol supercede those found in *Appendix T* of the *R1 CSE/IM Field Guide*.

A single Scoring Spreadsheet may be used for multiple settings or each setting can be inspected on an individual form for each submitted block. In the Scoring Spreadsheet, attributes to be completed during inspection are also highlighted in yellow.

The inspector can inspect all required attributes during an inspection, or they may inspect a subset of the required attributes based on observed trends, attribute importance, or time limitations. Some data items can be inspected in the office, for example “All forms completed and on time”, but others must be inspected in the field.

A printed Data Report from ExamsPC of the data being inspected, see *R1 Supplement to Chapter 5* of the *R1 CSE/IM Field Guide,* provides an easily readable format for inspection. Inspectors will also need field gear, the applicable data collection protocols, habitat type guides, and plant identification field guides.

Scoring Spreadsheet Cell Color Code Definitions

Table 1: Scoring Spreadsheet cell color definitions

Color	Definition
Yellow	Indicates field to be filled in by the inspector when scoring field collected data using the Inspection Workbook.
Pink	Field that may or may not be included on Task Order. COR enters "X" in these cells to identify inspection items, forms, and attributes required for a specific Task Order.
Gold	Field is auto-filled with the results of a pre-entered formula. This cell is locked and should not be modified.
Blue	Indicates No Error attribute. If # of Errors column value is greater than 0 on a No Error attribute, it will result in a failed form and block.
Grey	Only used on Monument Data Form. Indicates attribute is recorded on paper forms (when required).
Words or 123	Uncolored cells with numbers or words that are locked are not to be changed. If you feel these need to be changed, contact the R1 field protocols specialist to discuss forest or project specific options.

Inspection Summary Form

Scoring Spreadsheet Header Information

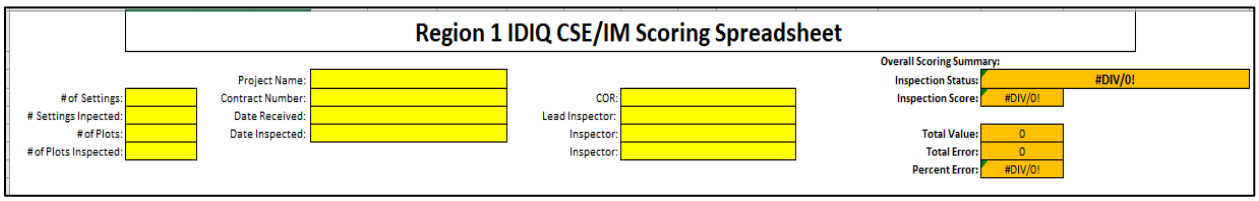

Figure 1: Inspection Summary Form Header

Setting up the Scoring Spreadsheet Header

The Header Section of the spreadsheet should be filled out upon receipt of each submitted block with information on the number of settings submitted in the block, the number of settings inspected, the total number of plots submitted, and the number of plots submitted, as well as information about the contract and inspector.

Overall Scoring Summary Section

Values in the **Overall Scoring Summary** are auto-populated based upon calculations on data entered into the individual inspection forms.

Inspection Status indicates whether the work is 'Satisfactory' or 'Unsatisfactory' based on the 85% total score threshold required to achieve a satisfactory rating, the pass/fail inspection items, and the number of unacceptable data items in the individual inspection forms. These values are calculated based on data entered into individual inspection forms. These *cells are locked and should not be altered.*

Overall Scoring Summary:	
Inspection Status:	#DIV/0!
Inspection Score:	#DIV/0!
Total Value:	0
Total Error:	#DIV/0!
Percent Error:	#DIV/0!

Figure 2: Inspection Summary Form Header Overall Scoring Summary

Pass/Fail Inspection Items

The Inspection Summary form contains a section with the Pass/Fail Inspection Items which are the automatic Pass/Fail Inspection Items identified with an **X** in the **Included in Task Order** column.

PASS/FAIL INSPECTION ITEMS	Acceptable	Unacceptable	Included in Task Order
All completed forms/data submitted in a timely manner:			
All forms legible and can be reproduced via copy machine:			
All electronic data can be read by Government computer software:			
No settings with BAF used resulting in < min. average # live trees specified:			
BAF/FRQ on setting sample design for Trees matches the BAF on Paper Setting Form/Narrative:			
All plot center locations within tolerance of theoretical and unbiased:			
Settings have prescribed number of sample plots examined:			
Accurate count and species of large live sample trees recorded:			
All reference points & plot center points relocatable and labeled to specs:			
All settings contain minimum number of GST trees (as specified):			
Settings submitted with complete information for all forms/data:			
All forms contain accurate setting locations and numbering information:			
All Government supplied data complete & accurately transcribed to forms:			
All plots are evenly distributed within each setting:			
No settings contain an 'Unacceptable' error in the Inspection Form:			
No sample plot centers fall outside of setting boundary:			
Any additional Task Order required items carried out as specified:			
For INVM/INT remeasurements or FMR, all trees successfully paired with previous measurement:			
All photos are clear and labeled correctly, and placards (if req.) are legible:			

Figure 3: Inspection Summary Form Pass/Fail Inspection Items

Setting up the Pass/Fail Inspection Items

It is the responsibility of the COR to indicate with an 'X' which Pass/Fail Inspection Items are included in the Task Order and save and lock the fields in the spreadsheet.

Using the Pass/Fail Inspection Items

Upon receipt of each submitted block in the Task Order, the COR/inspector is required to inspect the checked pass/fail items during the post- data collection review for each submitted setting in the block. Some of the Pass/Fail inspection items may require field verification and will only be reviewed on plots field visited for QA inspection. Upon inspection, the COR/ inspector will indicate with an **X** whether the data item on each row is **Acceptable** or **Unacceptable**. The Pass/Fail Inspection Items that are Included in the Task Order must receive an acceptable rating for every submitted setting in

the block, otherwise the entire block will automatically fail and must be returned to the contractor for re-work for the failed setting(s).

Inspection Status by Form Section

This table contains scoring summaries for each of the individual inspection forms. The inspection forms required for the Task Order are indicated by an **X** in the **Form Included on Task Order** column by the COR. Some forms may not be applicable to individual projects depending on the protocol.

The overall score from each inspection form will auto-populate into the **Score** column and populate either the **Satisfactory** or **Unsatisfactory** field based on the 85% threshold required for a satisfactory rating.

Do not change any of the formulas in the red, orange, or yellow boxes in this section.

INSPECTION STATUS BY FORM

	Form Included on Task Order	Satisfactory/ Unsatisfactory	Score	Sat	Unsat	Unacceptable Data Item
Setting Form:	X	85	#DIV/0!	#DIV/0!	#DIV/0!	None
Sample Design Form:	X	85	#DIV/0!	#DIV/0!	#DIV/0!	None
Plot Monument Form:		85	#DIV/0!	#DIV/0!	#DIV/0!	None
Plot Form:	X	85	#DIV/0!	#DIV/0!	#DIV/0!	None
Large Tree Form:		85	#DIV/0!	#DIV/0!	#DIV/0!	None
Small Tree Form:		85	#DIV/0!	#DIV/0!	#DIV/0!	None
Veg Composition Form:		85	#DIV/0!	#DIV/0!	#DIV/0!	None
Down Woody Material Form:		85	#DIV/0!	#DIV/0!	#DIV/0!	None

Figure 4: Inspection Summary Form Inspection Status by Form Section

Setting up the Inspection Status by Form Section

It is the responsibility of the COR to indicate with an 'X' which Forms are included in the Task Order. Those CSE/IM forms that are always required should be indicated with an X in this column. Note that the setting, sample design and plot forms are always required regardless of protocol. In most cases, protocols will include the Large and Small tree forms. This information needs to be included with the Task Order or at the pre-work meeting as specified in the individual Task Order.

Plots Inspected

Up to 7 settings can be inspected using one Scoring Spreadsheet. Within each setting, one or more individual plots can be inspected. Scores for each data item will be totaled across all the settings/plots inspected.

PLOTS INSPECTED	
SETTING	PLOT NUMBERS

Figure 5: Inspection Summary Form Plots Inspected section

Using the Plots Inspected Section

The inspector enters the number of settings and individual plots inspected in this section of the form.

Inspection Comments & Follow-Up Actions

INSPECTION COMMENTS & FOLLOW-UP ACTIONS

Figure 6:Inspection Summary Form Inspection Comments and Follow-up Actions

Using the Inspection Comments and Follow-up Actions Section

This section is for general comments, specific issues, note of trends, intended actions, including any issues identified on any of the other inspection forms. This section may also contain notes about short term plot monumentation for CSE plots. Comments in this section help the crew understand and address data collection errors and provides references to where they can find more information in FSVeg CSE/IM Field Guide or specific protocols.

Individual Form Overview

Except for the Inspection Summary Form, every form will contain the following columns associated with each Data Item:

Table 2: Columns associated with each Data Item

Data Item	Attribute Required	Item Value	# of Errors	Total Error	Total Items Checked	Total Value
Field Name *	Contracting Officer's Representative denotes with 'X' if required in Task Order	Weighted value of each individual data item collected *	Total number of individual data items out of tolerance; entered by inspector	Function calculates via multiplication of 'Item Value' X '# of Errors' *	Total number of 'Data Item's checked; entered by inspector	Function calculates via multiplication of 'Item Value' x 'Total Items Checked' *

**indicates that cells are locked and should not be altered*

The Inspection Status by Form section In the Inspection Summary indicates which Forms were collected according to the Task Order or protocols. Individual projects may not collect information on certain forms such as vegetation composition, surface cover, and down-woody material. When data is not collected for a specific form, the **Attribute Required** column will be null for all attributes.

Data Item Column

The **Data Item** column contains the name of the attribute in the R1 CSE/IM Field Guide and Exams Software. Each **Data Item** has been given a weighted value in the **Item Value** column based on importance and difficulty to collect. **Data Items** with a null Item Value indicate attributes that trigger an automatic fail if they are recorded erroneously (see *No Error Data Items* section). These items have blue fill. Errors on *No Error Data Items* will result in a **FAIL** score in the Unacceptable Data Item column, resulting in a failed form and block. If this occurs, the scoring

spreadsheet and block should be returned to the contractor for re-work to fix the deficiencies noted during inspection.

Attribute Required Column

The **Data Items** that are required for an individual project will be indicated by an **X** in the **Attribute Required** column on each applicable score sheet form by the COR.

Item Value Column

The **Item Value** column displays the point value associated with each attribute. The cells in this column are pre-populated and are locked. Values in this column should not be changed for individual projects and should remain consistent across Region 1. Attributes that result in automatic form failure are not assigned a point value in the **Item Value** column. These are "No Error" data items and any error in these fields will result in a **FAIL** score in the Unacceptable Data Item column, resulting in a failed form and block.

of Errors Column

The **# of Errors** column is filled in during inspection and indicates the number of errors observed by the inspector for each attribute checked. The inspector enters the number of errors observed for each data item that has a check in the **Attribute Required** field and is being inspected.

Total Error Column

The **Total Error** column auto-populates with a value calculated by multiplying the **# of Errors** by the **Item Value** column for attributes that are not considered "No error" data items. For "No error" data items, the **Total Error** column auto-populates with **FAIL** when at least 1 error is recorded in the **# of Errors** column. The cells in this column are locked and the calculated values should not be changed.

The score is calculated as a percentage of the number of points deducted compared to the total number of points possible based on the attributes inspected.

Total Items Checked Column

The **Items Checked** column is filled in by the inspector with the total number of records that have been checked.

Total Value Column

The **Total Value** column auto-populates with the value calculated by multiplying the number in the Item Value column by the number in the **Items Checked** column. The cells in this column are locked and the calculated values should not be changed. The **Total Value** column is used to calculate the **Percent Error** for the form.

No Error Data Item

Certain data attributes are critical to ensuring data quality and any errors will cause an automatic fail for the applicable form and block indicated on the **Inspection Summary** sheet.

"No error" data items are denoted with blue fill in the **Data Item** and the **# of Errors** columns. "No

error" data items do not carry point values when collected correctly, however any number > 0 entered into the **# of Errors** column for these items will result in **FAIL** auto-populating in the **Total Error** column for the data item and in the **Unacceptable Data Item** cell in the **Inspection Status by Form** section for the corresponding form. **FAIL** will also auto-populate on the **Inspection Summary** sheet in the **Unacceptable Data Item** cell for the corresponding form.

Setting Inspection Form

Data Item	Attribute Required	Item Value	# of Errors	Total Error	Total Items Checked	Total Value
Project Name	X					0
Proclaimed Region	X					0
Proclaimed Forest	X					0
District	X					0
Location	X					0
Stand Number	X					0
Ownership	X					0
State	X					0
County	X		1	FAIL		0
Administrative Forest	X					0

Score:	#DIV/0!
Unacceptable Data Item:	FAIL
Status:	#DIV/0!
Total Value:	0
Total Error:	0
Percent Error:	#DIV/0!

Figure 7: Example of Fail for No Error Data Item

INSPECTION STATUS BY FORM

	Form Included on Task Order	Satisfactory/ Unsatisfactory	Score	Sat	Unsat	Unacceptable Data Item
Setting Form:	X	85	#DIV/0!	#DIV/0!	#DIV/0!	None
Sample Design Form:	X	85	#DIV/0!	#DIV/0!	#DIV/0!	None
Plot Monument Form:		85	#DIV/0!	#DIV/0!	#DIV/0!	None
Plot Form:	X	85	#DIV/0!	#DIV/0!	#DIV/0!	None
Large Tree Form:		85	#DIV/0!	#DIV/0!	#DIV/0!	None
Small Tree Form:		85	#DIV/0!	#DIV/0!	#DIV/0!	None
Veg Composition Form:		85	#DIV/0!	#DIV/0!	#DIV/0!	None
Down Woody Material Form:		85	#DIV/0!	#DIV/0!	#DIV/0!	None

Figure 8: Example of Fail based on Total Error column fail in inspection form

Using the Inspection Status by Form Section

If a **FAIL** occurs in the **Total Error** column in on an individual form as noted in Figure 8 for the Setting Inspection form in the **Unacceptable Data Item** cell, then this value will auto-populate in the row for the applicable form on the **Inspection Status by Form.** If this occurs, then the block should be returned to the contractor for re-work with a copy of the inspection report indicating the deficiencies found during inspection.

Scoring Summary Section

The scoring summary section is found in the upper-right corner of each form. The fields in the scoring summary section are auto-populated and calculated based on the QC scores entered into the score sheet. All cells in this section are locked and should not be altered.

- **Total Value** is the total raw number weighted value of all **Data Items** inspected on the individual sheet. It is calculated as the sum of the **Total Value** column for the form.
- **Total Error** is calculated as the sum of the entries in the **Total Error** column on the sheet.
- **Percent Error** is the percent error out of 100% which is calculated by dividing the entry in the summary **Total Error** cell by the entry in the summary **Total Value** cell.
- **Score** is the total score out of 100% for the inspection sheet which is calculated by subtracting the value in the **Percent Error** cell from 100.

- **Unacceptable Data Item** auto-populates with **None** if there are no **FAIL** entries of a "No error" data item in the **Total Error** column and with **FAIL** if the **Total Error** column contains a **FAIL** of a "No Error" data item in the **Total Error** column.
- Status auto-populates with **Satisfactory** if the value in the **Score** cell is at 85% or greater and there are no **FAIL** entries in the **Total Error** column for "no error" data items, or **Unsatisfactory** if the value in the **Score** cell is less than 85% or there is a **FAIL** entry in the **Total Error** column for a "no error" data item.

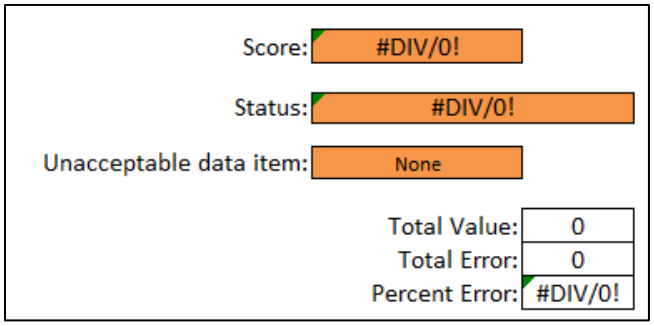

Figure 9: Scoring Summary Section on Inspection Form

"XXXX" Data Comments

Utilize the "**XXXX" Data Comments** box at the bottom of each inspection form for general comments, specific issues, note of trends, intended actions, etc. related to that inspection sheet. This section can also be used to provide references to more detailed information.

Setting up and Using each Form

General information about setting up the Inspection Forms

The scoring spreadsheet is password protected and can't be edited until the protection has been removed. To remove the protection from the scoring spreadsheet, or on an individual form, go to Review/Unprotect Workbook or Worksheet (Note: password = IDIQ). If you do make changes to your copy of the scoring spreadsheet continue to use IDIQ as the password. Protection for individual cell ranges will not be activated until the Inspection Form (worksheet) is protected.

If you use a different password and forget it, you will not be able to unlock the sheet. There is no way to retrieve a forgotten password for a locked spreadsheet in Excel.

If an Item Value is changed for an individual project, it must be documented and clearly articulated in the pre-work meeting to notify the data collector of the change.

Setting Inspection Form

The **Setting Inspection Form** includes all attributes available on the Setting Form in the *R1 CSE/IM Field Guide*. For detailed descriptions of the attributes on the **Setting Inspection Form** refer to *Section 2: Setting Form – Intensive/Extensive Exam Levels* of the *R1 CSE/IM Field Guide* and *Section 9: Setting Form Quick Plot Exam Level*. Most of the "No Error" items in this form are set as defaults in the Exams template file, based on the protocols. Other items (depending upon protocol) such as Forest, Location,

Stand Number, and/or County cause an incorrect setting id to be associated with the data, which would render the data useless.

Setting up the Setting Inspection Form

Put an 'X' in the Attribute Required cell for each attribute that needs to be collected, based on the protocols specified in the IDIQ and provide with the Task Order or at the pre-work meeting.

Using the Setting Inspection Form

For each setting that is being included within this Inspection Workbook, input the Number Of Errors for each attribute that has been inspected and the total number of Setting Forms Inspected in the Total Items Checked column. Only inspect attributes that have an 'X' in the Attribute Required cell; however, not all attributes that are required need to be inspected especially if error trends are noted during inspection.

Setting Inspection Form

Data Item	Attribute Required	Item Value	# of Errors	Total Error	Total Items Checked	Total Value
Project Name						0
Proclaimed Region						0
Proclaimed Forest						0
District						0
Location						0
Stand Number						0
Ownership						0
State						0
County						0
Administrative Forest			1	0		0
Date		2		0		0
Photo ID		0		0		0
Exam Level						0
Exam Purpose						0
Stratum		0		0		0
Existing Veg Reference						0
Existing Veg Composition Type		4		0		0
Potential Veg Reference						0
Potential Veg		10				0
Structure		2		0		0
Capable Growing Area		2		0		0
Fuel Model		4		0		0
Elevation		2		0		0
Aspect		2		0		0
Slope		2		0		0
Slope Position		1		0		0
Acres		1		0		0
Examiner		1		0		0
Precision Protocol		1		0		0
Radial Growth Interval						0
Height Growth Interval						0
Fuel Photo Reference						0
Setting User Code		5		0		0
Datum						0
Magnetic Declination						0
Measurement Number						0
Setting Remarks		7		0		0
Damage Category		4		0		0
Damage Agent		2		0		0
Damage Severity		2		0		0
Species of Mgmt. Interest		2		0		0
Setting Narrative/Sketch Map/Travel Notes		7		0		0

Figure 10: Setting Inspection Form

Sample Design Inspection Form

The Sample Design Inspection form consists largely of "No error" items (null Item Value) since these are clearly specified within the Task Order or protocol and are already defined correctly in the Sample Design Form in the Exams Software Template. Most of the "No error" items in this form should be set as defaults in the Exams template file, based on the protocol for the Task Order. Other attributes such as the Tree Sample Design Expansion Factors and Down-Woody Material Transect Lengths are important because any errors could affect the expansion factors associated with each attribute. Refer to the Individual Form Overview for more information on the columns in this form.

Setting up the Sample Design Inspection Form

The default sample design is in the Exams Template either provided in the Task Order or at the pre-work meeting. Put an 'X' in the Form Required cell for each sample design included in the Task Order on the Sample Design Inspection Form. Note that vegetation composition, ground surface cover, and down-woody material are optional forms.

Using the Sample Design Inspection Form

The Sample Design included in the Template file auto-fills into the Sample Design Form for each setting included in the Exams Datafile that is submitted. For some projects, the crew will need to enter a different BAF for one or more of the settings in the project. When the BAF is changed, it is critical that the BAF included in the Exams Sample Design Form matches the BAF used in the stand and recorded on the paper Setting Reference Form (https://usfs.box.com/v/CSESettingForm) provided for the stand.

Record the number of errors observed for each required sample design in the setting. Note that all data items on this form are "No error" data items so any errors on this form will cause the form and block to FAIL.

Sample Design Inspection Form						
Data Item	Form Required	Item Value	# of Errors	Total Error	Total Items Checked	Total Value
Sample Design - Tree Data Large Trees						0
Sample Design - Tree Data Small Trees						0
Sample Design - Vegetation Composition						0
Sample Design - Ground Surface Cover						0
Sample Design - Down Woody Material						0

Figure 11: Sample Design Inspection Form

Monument Data Inspection Form

The Plot Monumentation Form (https://usfs.box.com/v/CSESettingForm) may be used for Inventory and Monitoring projects, where plots are remeasured over time. Plot monumentation is used to relocate plots and can include reference point data, navigation information, and/or X and Y trees which are used to relocate plot centers. Plot monumentation may also include physical markings/hardware like tree

nails, tags, flagging and aluminum stakes to indicate the permanent locations of trees, transects, and plot centers.

Attributes with "(P)" behind the Attribute Name (see Figure 12) are those items that are collected on paper (when required). Monumentation information collected on paper may include vehicle latitude and longitude, reference point azimuth and distance to plot center, reference point species, reference point diameter, reference point latitude and longitude, and a hand drawn plot location map and travel description. All columns in this Form are described in the **Individual Form Scoring** section of this document. See *Section 4.20 Witness Tree/Navigation (IM)* Information in the *R1 CSE/IM Field Guide* for detailed information about witness tree and plot to plot navigation protocols.

Monument Data						
Vehicle Coordinates	**Attribute Required**	**Item Value**	**# of Errors**	**Item Error**	**Total Items Checked**	**Total Value**
Latitude (P)						0
Longitude (P)						0
Reference Point/Navigation Info	Attribute Required	Value	Error	Total Error	Total Item Checked	Total Value
Azimuth RP to Plot Center (P)						0
Slope Distance to Plot Center (P)						0
Remarks		1		0		0
Selection Criteria Met & RP Tagged (P)						0
RP Species		3		0		0
RP Diameter		2		0		0
Latitude		3		0		0
Longitude		3		0		0
Error		1		0		0
Plot Navigated From		3		0		0
Azimuth from Navigation Plot		3		0		0
Distance from Navigation Plot		3		0		0
X Witness Tree	Attribute Required	Value	Error	Total Error	Total Item Checked	Total Value
Selection Criteria Met & X Tagged		3		0		0
Azimuth		3		0		0
Slope Distance to Plot Center		3		0		0
Species		3		0		0
Diameter		2		0		0
Y Witness Tree	Attribute Required	Value	Error	Total Error	Total Item Checked	Total Value
Selection Criteria Met & Y Tagged		3		0		0
Azimuth		3		0		0
Slope Distance to Plot Center		3		0		0
Species		3		0		0
Diameter		2		0		0
Plot Center & Location Information	Attribute Required	Value	Error	Total Error	Total Item Checked	Total Value
Point of Departure		1		0		0
Plot center flagging present and legible		1		0		0
legible		1		0		0
Error		1		0		0
PC Stake Present (P)						0
Plot Narrative (P)		2		0		0
Plot Location Map (P)						0
Detailed road Travel Description (P)						0
Detailed hiking Travel Description (P)						0
Tree Nail Position		2		0		0

Figure 12: Monument Data Inspection Form

Setting up the Monument Data Inspection Form

Put an 'X' in the Attribute Required cell for each attribute that needs to be collected, based on the protocols specified in the IDIQ and provide with the Task Order or at the pre-work meeting.

Using the Monument Data Form

Only use this form when collecting data that will be remeasured over time e.g. inventory and monitoring data, intensified grid data etc.

Note that the **Tree Nail Position** is included on this scoring sheet. Be sure that the Total Items Checked in this row is the total number of trees that had nail position inspected, do not include inspected unnailed trees, like seedlings. All other attributes are based on the number of that attribute inspected on individual plots.

The Plot Monument Data Notes section can be used to indicate trends, discuss errors and provide other scoring and data related comments.

Plot Monument Data Notes

Figure 13: Plot Monument Data Notes Section of Monument Data Inspection Form

Plot Data Inspection Form

The **Plot Data** Inspection form contains all the attributes that can be collected on the Plot Form. Individual projects may not include some of the attributes listed in the scoring sheet. Only the attributes that are included in the Exams Template File Plot Form contain an **X** in the **Attribute Required** field on the **Plot Data** Inspection form.

All columns function as described in the **Individual Form Scoring** section of this document.

For a detailed description of the attributes in the Plot Data Form, see *Section 4: Plot Data Form – All Exam Levels* in the *R1 CSE/IM Field Guide.* See the screen shot below.

Plot Inspection Form

Data Item	Attribute Required	Item Value	# of Errors	Total Error	Total Items Checked	Total Value
Plot Number						
Plot Latitude		10		0		0
Plot Longitude		10		0		0
Plot Capable Growing Area		2		0		0
Plot Aspect		4		0		0
Plot Slope		4		0		0
Slope Position		2		0		0
Slope Horizontal Shape		2		0		0
Slope Vertical Shape		2		0		0
Plot Elevation		2		0		0
Plot Existing Veg Comp Type		5		0		0
Plot Potential Vegetation Code		10		#DIV/0!		#DIV/0!
Plot Fuel Model		4		0		0
Residual Descriptive Code		2		0		0
Distance to Seed Wall		2		0		0
Plot User Code		5		0		0
Plot History		2		0		0
Plot History Date		1		0		0
Plot Remarks		8		0		0
Plot Photos						

PLOT DATA COMMENTS

Figure 14: Plot Inspection Form

Setting up the Plot Data Form

Put an 'X' in the Attribute Required cell for each attribute that needs to be collected, based on the protocols specified in the IDIQ and provided with the Task Order or at the pre-work meeting.

Using the Plot Data Inspection Form

Record the number of errors observed for each required attribute that is inspected. Record the Total Number of Items Checked. Keep in mind that the total items checked may be the total number of plots inspected however, certain attributes may be inspected less than others so values in this column may change by attribute.

Habitat Type at the plot level will automatically fail if 25% or more of the plot habitat types inspected are found to be in error.

Tree Data – Large Trees Inspection Form

The **Tree Data – Large Trees** Inspection form contains all attributes available to collect on large trees in the CSE/IM protocols. Task Orders/specific protocols may not collect all attributes listed on the inspection form. All columns function as described in the Individual Form Scoring section.

For a detailed description of each attribute in the **Tree Data – Large Trees** Inspection form, refer to the Exam Level for the Tree Form (Item 2.13 on the Setting Form) and the appropriate section: *Section 5: Tree Data Form – Intensive Exam Level, 8: Tree Data Form – Extensive Exam Level,* or *Section 10: Tree Data Form – Quick Plot Exam Level* in the *R1 CSE/IM Field Guide.* Many of the fields on the tree form in Exams can be turned off in the template file if they are not measured.

TREE DATA - LARGE TREES

Data Item	Attribute Required	Item Value	# of Errors	Total Error	Total Items d	Total Value
Plot Number						
Tag ID Number				0		
Tree Status				0		
Tree Class		1		0		0
GST Tree		6		#DIV/0!		#DIV/0!
Tree Species						
Tree Count						
Number of Stems		1		0		0
DBH/DRC		6		0		0
Height		4		0		0
Height to Crown		2		0		0
Radial Growth		3		0		0
Height Growth		3		0		0
Tree Age		4		#DIV/0!		#DIV/0!
Tree Age OG		8		#DIV/0!		#DIV/0!
Crown Ratio		1		0		0
Crown Class		1		0		0
Crown Width		2		0		0
Wildlife Use		1		0		0
Snag Decay Class		2		0		0
Cone Serotiny		1		0		0
Tree Damage Category		2		0		0
Tree Damage Agent		1		0		0
Tree Damage Part		1		0		0
Tree Damage Severity		1		0		0
Tree Remarks		4		0		0
Tree User Code		6		0		0
Tree Treatment Option		1		0		0
Tree Distance		4		0		0
Tree Azimuth		4		0		0

TREE DATA COMMENTS

Figure 15: Large-Tree data Inspection Form

Setting up the Large Tree Form

Put an 'X' in the Attribute Required cell for each attribute that needs to be collected, based on the protocols specified in the IDIQ and provided with the Task Order or at the pre-work meeting. Only the attributes that are included on the Tree Form in Exams should be selected. Note: if the Task Order is for an Old Growth Exam, Tree Age OG should be marked as an Attribute Required instead of Tree Age.

Using the Large Tree Form

Record the number of measurements that are outside of indicated tolerance based on the exam level of your protocol for any required attribute that is inspected. Missed/extra trees will have one error for each attribute that should/should not be measured.

Record the Total Number of Items Checked. Keep in mind that the total items checked will vary by attribute and may depend on whether a tree is Live, Dead, or GST. Attributes, like "Damage Code" or "Tree Age" are only counted as items checked when the attribute is collected/observed on the tree. A tree without damages is not included in the Total Items Checked for Tree Damage Category row and a tree that was not bored/aged is not included in the Total Items Checked column for Tree Age.

For example, if 7 plots are inspected and the inspector records 12 GST trees across all plots, and the contractor only recorded 10, then the **Total Items Checked** would be 12 and the number of errors would be 2 in the **# of Errors** column in the **GST tree** row. Similarly, if 2 Heights are recorded out of tolerance out of 5 heights inspected on the 7 plots then 5 would be entered in the **Total Items Checked** and 2 would be entered into the **# of Errors** column in the **Height** row.
On the Tree Data Large Trees Form:

- GST Tree automatically fails if 25% or more of the GST trees are not flagged.
- Tree Age automatically fails if 20% or more of the tree ages are outside of tolerance
- Tree Age OG automatically fails if 10% or more of the tree ages are outside of tolerance

Tree Data – Small Trees Form

The **Tree Data – Small Trees** form contains all the attributes available to collect on small trees in the *R1 CSE/IM Field Guide*. Task Orders/specific protocols may not collect all attributes listed. All columns function as described in the Individual Form Scoring section.

For a detailed description of the attributes in the **Tree Data – Small Trees** Inspection Form, refer to the Exam Level for the Tree Form (Item 2.13 on the Setting Form) and the appropriate section: *Section 5: Tree Data Form – Intensive Exam Level, 8: Tree Data Form – Extensive Exam Level,* and *Section 10: Tree Data Form – Quick Plot Exam Level* in the *R1 CSE/IM Field Guide.*

TREE DATA - SMALL TREES

Data Item	Attribute Required	Item Value	# of Errors	Total Error	Total Items Checked	Total Value
Plot Number						
Tag ID Number		1		0		0
Tree Status		2		0		0
Tree Class		2		0		0
GST		3		0		0
Tree Species						
Tree Count (non-stocked plot)						
Intensive Tree Count (Trees ≤ 0.5' tall)		1		0		0
Intensive Tree Count (Trees > 0.5' tall and <0.5" dbh)		1		0		0
Intensive Tree Count (Trees > 0.5" dbh)		1		0		0
Extensive/Quick Tree Count (Trees ≤ 0.5' tall)		1		0		0
Extensive/Quick Tree Count (Trees > 0.5' tall and <0.5" dbh)		1		0		0
Extensive/Quick Tree Count (Trees > 0.5" dbh)		1		0		0
Number of Stems		1		0		0
DBH/DRC (tree <0.5")						
DBH/DRC (tree ≥ 0.5")		2		0		0
Height		2		0		0
Height to Crown		1		0		0
Radial Growth		1		0		0
Height Growth		3		0		0
Tree Age		2		0		0
Crown Ratio		1		0		0
Crown Class		1		0		0
Crown Width		1		0		0
Wildlife Use		1		0		0
Snag Decay Class		1		0		0
Cone Serotiny		1		0		0
Tree Damage Category		2		0		0
Tree Damage Agent		1		0		0
Tree Damage Part		1		0		0
Tree Damage Severity		1		0		0
Tree Remarks		2		0		0
Tree User Code		6		0		0
Tree Treatment Option		1		0		0
Tree Distance		4		0		0
Tree Azimuth		4		0		0

TREE DATA COMMENTS

Figure 16: Small-Tree data Inspection Form

Setting up the Small-Tree Form

Put an 'X' in the Attribute Required cell for each attribute that needs to be collected based on the protocols specified in the IDIQ and provided with the Task Order or at the pre-work meeting. Only the attributes that are included on the Tree Form in Exams should be selected.

Tolerances are different for seedling/small tree counts based on Tree Exam Level, height/diameter classes and number of trees counted. Indicate the attributes required with an "X" in the Attributes Required column based on the Tree Exam Level and size classes indicated in the project protocols.

Using the Small-Tree Form

Record the number of measurements that are outside of indicated tolerance based on the exam level and height/diameter class of the protocol for any Required Attribute that is inspected.

Record the Total Number of Items Checked. Keep in mind that the total items checked may be the total number of plots inspected however, certain attributes may be inspected less than others so values in this column may change by attribute.

On the Tree Data - Small Trees Form:

- Intensive Tree Count (Trees ≤ 0.5' tall) automatically fails if more than 2 trees are missed/added when the total # of trees ≤ 0.5' tall is 1 - 5.
- Intensive Tree Count (Trees ≤ 0.5' tall) automatically fails if more than 50% of the total number of trees are missed/added when the total # of trees ≤ 0.5' tall is ≥ 6.
- Intensive Tree Count (Trees ≥ 0.5' tall and <0.5" dbh) automatically fails if more than 1 tree is missed/added when the total # of trees ≥ 0.5' tall and <0.5" dbh is 1 - 5.
- Intensive Tree Count (Trees ≥ 0.5' tall and <0.5" dbh) automatically fails if more than 20% of the total number of trees are missed/added when the total # of trees ≥ 0.5' tall and <0.5" dbh is ≥ 6.
- Intensive Tree Count (Trees ≥ 0.5" dbh) automatically fails if more than 1 tree is missed/added when the total # of trees ≥ 0.5" dbh is 1 - 5.
- Intensive Tree Count (Trees ≥ 0.5" dbh) automatically fails if more than 10% of the total number of trees are missed/added when the total # of trees ≥ 0.5" dbh is ≥ 6.
- Extensive/Quick Tree Count (Trees ≤ 0.5' tall) automatically fails if more than 5 trees are missed/added when the total # of trees ≤ 0.5' tall is 1 - 10.
- Extensive/Quick Tree Count (Trees ≤ 0.5' tall) automatically fails if more than 50% of the total number of trees are missed/added when the total # of trees ≤ 0.5' tall is ≥ 11.
- Extensive/Quick Tree Count (Trees ≥ 0.5' tall and <0.5" dbh) automatically fails if more than 2 trees are missed/added when the total # of trees ≥ 0.5' tall and <0.5" dbh is 1 - 10.
- Extensive/Quick Tree Count (Trees ≥ 0.5' tall and <0.5" dbh) automatically fails if more than 20% of the total number of trees are missed/added when the total # of trees ≥ 0.5' tall and <0.5" dbh is ≥ 11.
- Extensive/Quick Tree Count (Trees ≥ 0.5" dbh) automatically fails if more than 2 trees are missed/added when the total # of trees ≥ 0.5" dbh is 1 - 10.
- Extensive/Quick Tree Count (Trees ≥ 0.5" dbh) automatically fails if more than 20% of the total number of trees are missed/added when the total # of trees ≥ 0.5" dbh is ≥ 11.

Vegetation Composition Data Inspection Form

The **Veg Comp Data** (Vegetation Composition) Inspection form contains all attributes available on the vegetation composition and surface cover forms in the *R1 CSE/IM Field Guide*.

For a detailed description of the attributes in the **Veg Comp Data** Inspection form, see *Section 5: Vegetation Composition and Ground Surface Cover Form.*

VEGETATION COMPOSITION & GROUND SURFACE COVER DATA							
	Data Item	Attribute Required	Item Value	# of Errors	Total Error	Total Items Checked	Total Value
Veg Comp	Lifeform		1		0		0
	Canopy Cover		4		0		0
	Layer						0
	Species						0
Ground Surface Cover	Transect Azimuth		1		0		0
	Cover Type Category						0
	Surface Cover %		4		0		0

Figure 17: Vegetation Composition and Ground Surface Cover form

Setting up the Vegetation Composition and/or Ground Surface Cover Form

Only fill out this Form if the Inspection Status by Form indicates that Vegetation Composition and/or Ground Surface Cover will be collected. Put an 'X' in the Attribute Required cell for each attribute that needs to be collected, based on the protocols specified in the IDIQ and provided with the Task Order or at the pre-work meeting. Only the attributes that are included on the Tree Form in Exams should be selected.

Using the Vegetation Composition and/or Ground Surface Cover Form

Only use this Form if the Inspection Status by Form indicates that Vegetation Composition and/or Ground Surface Cover will be collected

Record the number of measurements that are outside of indicated tolerance for any Required Attribute that is inspected.

Record the Total Number of Items Checked.

Down Woody Material (DWM) Data Form

The **DWM Data** form contains the attributes available to collect on the DWM form in the Exams software. Individual projects may not include DWM data collection, the exam level for DWM will determine whether the DWM form will open in Exams. Individual projects may not include some of the attributes listed in the scoring sheet. Only the attributes on the **DWM Data** score sheet that contain an **X** in the **Attribute Required** field will be inspected on the DWM form. All columns function as described in the Individual Form Scoring section of this document.

For a detailed description of the attributes in the Veg Comp Data Inspection form, see *Section 7: Down Woody Materials Form – All Exam Levels.*

DOWN WOODY MATERIAL						
Data Item	Attribute Required	Item Value	# of Errors	Total Error	Total Items Checked	Total Value
Plot Number						
Protocols for Transect layout are followed		4		0		0
First Duff		2		0		0
Second Duff		2		0		0
Fuel Depth		1		0		0
Twig 1 (1 Hour Fuels)		2		0		0
Twig 2 (10 Hour Fuels)		2		0		0
Twig 3 (100 Hour Fuels)		2		0		0
Piece Count		1		0		0
Log Decay Class		2		0		0
Diameter at Intersection		2		0		0
Piece Length		4		0		0
Diameter Large End		4		0		0
Diameter Small End		1		0		0

Figure 18: Down-woody Material Inspection Form

Setting up the Down Woody Material Form

Only use this Form if the Inspection Status by Form indicates that Down-woody material is collected. Put an 'X' in the Attribute Required cell for each attribute that needs to be collected, based on the protocols specified in the IDIQ and provided with the Task Order or at the pre-work meeting. Only the attributes that are included on the Down Woody Material Form in Exams should be selected.

Setting up the Down Woody Material Form

Only use this Form if the Exam Level in the protocol and the Inspection Status by Form indicates that Down-Woody material is collected.

Record the number of measurements that are outside of indicated tolerance for any Required Attribute that is inspected.

Record the Total Number of Items Checked.

Additional Considerations

In addition to the R1 IDIQ CSE/IM Scoring Spreadsheet the Contractor must also include the following for a submitted block:

- Contractor Setting Tracking Spreadsheet with all applicable columns completed for the settings in the payment item.
- Additional requirements for Quality Control and Quality Assurance Inspections may be specified in the individual Task Order.
- Pay special attention to **User Defined Codes** because these are project-specific attributes and are defined for each project in the protocols provided. These are high point value attributes when required for data collection.