



# Using Technology to Improve Assessments

Cynthia G. Parshall, PhD  
*Principal Consultant*  
**Touchstone Consulting**



# Inventory of Teacher Technology Skills (ITTS)



# ITTS Examples



Harmes, J.C., Parshall, C.G., Rendina-Gobioff, G., Jones, P.K., Githens, M.P., & Dennard, A. (2004, November). *Integrating Usability Methods into the CBT Development Process: Case Study of a Technology Literacy Assessment*. Paper presented at the annual meeting of FERA, Tampa, November 17-19.

# Example 1 - File Management Prototype

LOGO - TITLE AREA Task setup – overview/description Instructions- Complete the task by following each of the steps in order in the left column below	
STEPS: <ol style="list-style-type: none"><li>1. Create a folder named PROJECTS on the desktop</li><li>2. Rename the file PEGGY (located on the desktop) and call it ANDREW</li><li>3. Move the file named ANDREW into the folder named PROJECTS</li><li>4. Rename the folder PROJECTS and call it PEOPLE</li></ol>	Tasks
Omit this step (underneath scrollbar for Steps)	Submit task

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Harmes, J.C., Parshall, C.G., Rendina-Gobioff, G., Jones, P.K., Githens, M.P., & Dennard, A. (2004, November). *Integrating Usability Methods into the CBT Development Process: Case Study of a Technology Literacy Assessment*. Paper presented at the annual meeting of FERA, Tampa, November 17-19.

# Revised File Management Prototype

Florida Technology Literacy

67% Complete

For this task, you will start and use an application.

- Create a folder named PROJECTS on the desktop
- Rename the file PEGGY (located on the desktop) and call it ANDREW
- Move the file named ANDREW into the folder named PROJECTS
- Rename the folder PROJECTS and call it PEOPLE

Complete Current Step for Me

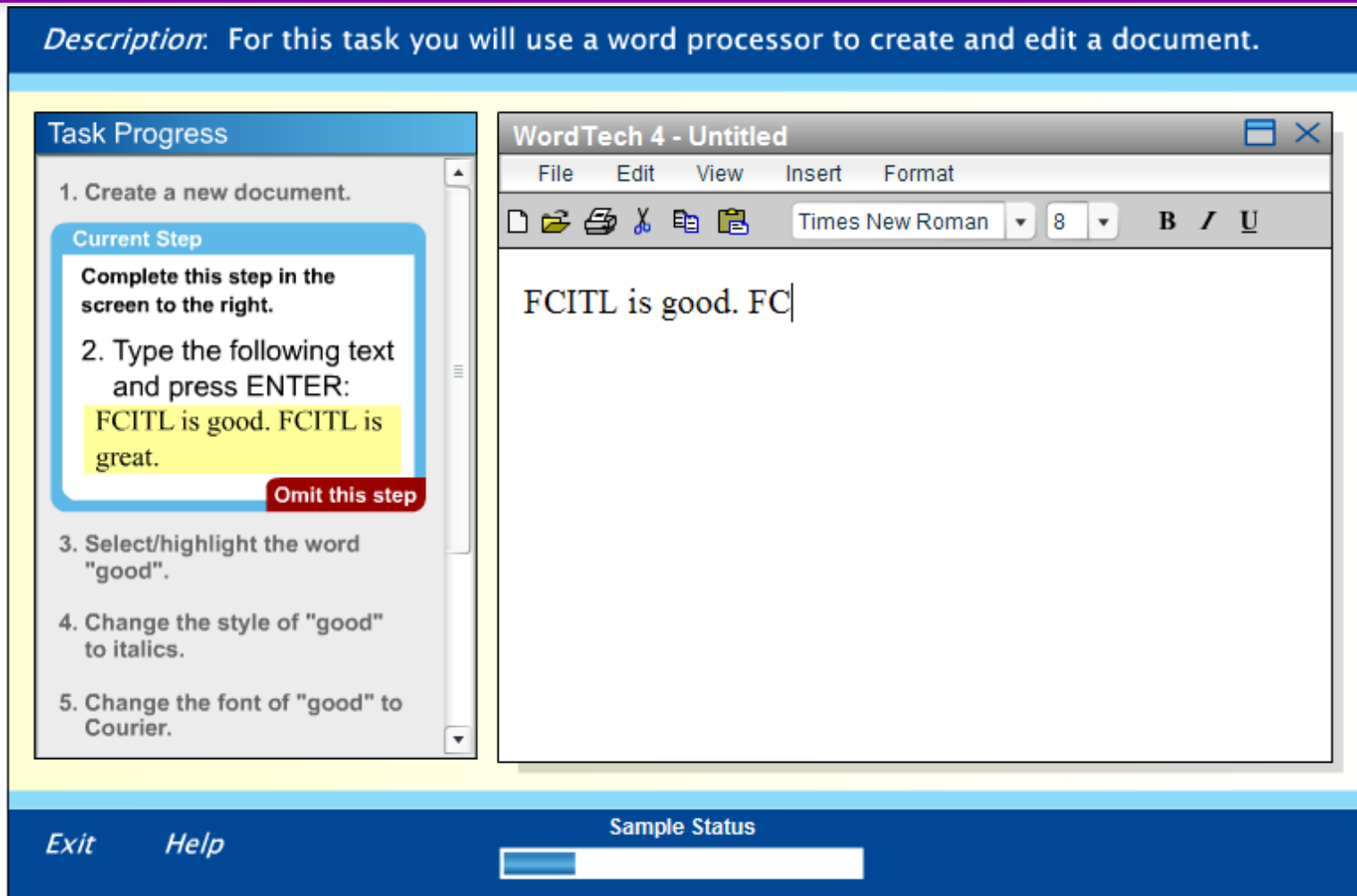
Exit

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Harmes, J.C., Parshall, C.G., Rendina-Gobioff, G., Jones, P.K., Githens, M.P., & Dennard, A. (2004, November). *Integrating Usability Methods into the CBT Development Process: Case Study of a Technology Literacy Assessment*. Paper presented at the annual meeting of FERA, Tampa, November 17-19.

# Final Design - Word Processor

*Description:* For this task you will use a word processor to create and edit a document.



The screenshot displays a word processor interface. On the left, a 'Task Progress' panel lists five steps. The first step, '1. Create a new document.', is highlighted with a blue border and contains a 'Current Step' box with the instruction: 'Complete this step in the screen to the right.' Below this, step 2 is highlighted in yellow and reads: '2. Type the following text and press ENTER: FCITL is good. FCITL is great.' A red button labeled 'Omit this step' is positioned to the right of step 2. Steps 3 through 5 are listed below: '3. Select/highlight the word "good".', '4. Change the style of "good" to italics.', and '5. Change the font of "good" to Courier.' The main document window, titled 'WordTech 4 - Untitled', shows a menu bar with 'File', 'Edit', 'View', 'Insert', and 'Format'. The toolbar includes icons for file operations and text formatting, with the font set to 'Times New Roman', size '8', and bold, italic, and underline options. The document text reads 'FCITL is good. FC|'. At the bottom, there are 'Exit' and 'Help' buttons, a 'Sample Status' indicator, and a progress bar.

Task Progress

1. Create a new document.  
**Current Step**  
Complete this step in the screen to the right.
2. Type the following text and press ENTER:  
FCITL is good. FCITL is great.  
**Omit this step**
3. Select/highlight the word "good".
4. Change the style of "good" to italics.
5. Change the font of "good" to Courier.

WordTech 4 - Untitled

File Edit View Insert Format

Times New Roman 8 B I U

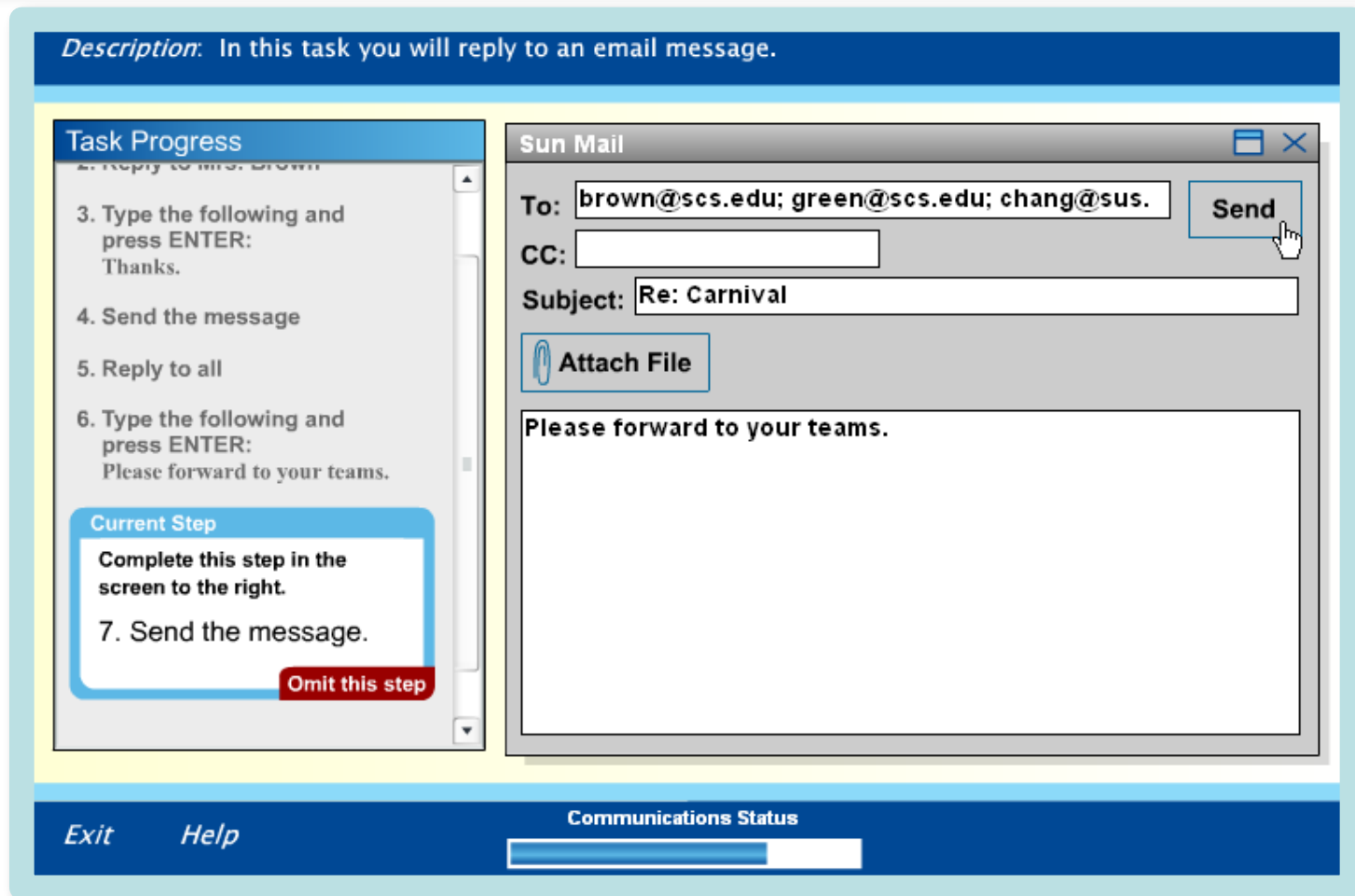
FCITL is good. FC|

Exit Help Sample Status

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Harmes, J.C., Parshall, C.G., Rendina-Gobioff, G., Jones, P.K., Githens, M.P., & Dennard, A. (2004, November). *Integrating Usability Methods into the CBT Development Process: Case Study of a Technology Literacy Assessment*. Paper presented at the annual meeting of FERA, Tampa, November 17-19.

# Final Design - Email Application



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# Driver Certificate of Professional Competence (CPC)



# CPC Example 1 - Case



Kayser, M., & Parshall, C.G. (2008, March). *Building a Global Innovative Test*. Presented at the annual meeting of the Association of Test Publishers, Dallas, TX.

# CPC Case - Multiple Choice Question

Select for Review (R) Section Time Remaining (10)

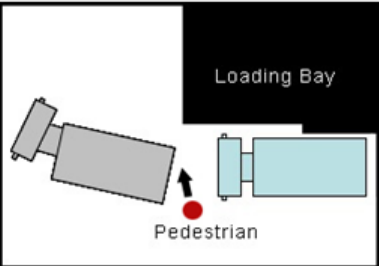
**CASE 1**

The loading bays for this warehouse can only be accessed by reversing.

Late one evening an office worker began to cross the yard as a driver, Martin, was reversing his vehicle.

Martin failed to see the pedestrian until the last moment. At this point he was distracted and hit a parked vehicle.

The driver of the parked vehicle, Bill, began an argument with Martin. Bill claimed Martin often did not take enough rest. He also claimed that Martin regularly exceeded his driving hours.



2.

What procedures could have been adopted to avoid the incident?

*(Select the BEST option below.)*

- Ask a colleague to help
- Rely on the use of mirrors
- Lean out of the cab window to assist view
- Shout a warning before reversing

Previous (P) Next (N) Help (H) (Scored) Item  
End Exam (E)

Kayser, M., & Parshall, C.G. (2008, March). *Building a Global Innovative Test*. Presented at the annual meeting of the Association of Test Publishers, Dallas, TX.

# CPC Case - Audio Question

Select for Review (R) Section Time Remaining (10)

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**CASE 1**

The loading bays for this warehouse can only be accessed by reversing.

Late one evening an office worker began to cross the yard as a driver, Martin, was reversing his vehicle.

Martin failed to see the pedestrian until the last moment. At this point he was distracted and hit a parked vehicle.

The driver of the parked vehicle, Bill, began an argument with Martin. Bill claimed Martin often did not take enough rest. He also claimed that Martin regularly exceeded his driving hours.

The diagram shows a top-down view of a loading bay. A black rectangular area at the top is labeled 'Loading Bay'. Below it, a grey rectangular area represents a vehicle, with an arrow pointing towards a red dot labeled 'Pedestrian'. A light blue rectangular area represents another vehicle parked nearby.

**3.**

Martin and Bill have an argument.

*(Make sure you have your headphones on, then press the **Play** button.)*

Which of the following is a well known side-effect of the substance Martin took?

*(Select the **BEST** option below.)*

- Thirst
- Drowsiness
- Tunnel vision
- Ringing in the ears

(Scored) Item

Previous (P) Next (N) Help (H) End Exam (E)

Kayser, M., & Parshall, C.G. (2008, March). *Building a Global Innovative Test*. Presented at the annual meeting of the Association of Test Publishers, Dallas, TX.

# CPC Case - Graphic Response Options

Select for Review (R) Section Time Remaining (10)

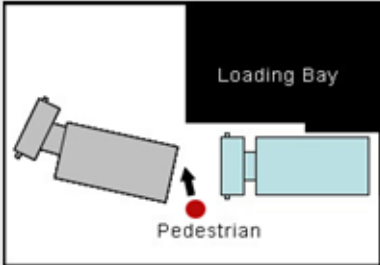
**CASE 1**

The loading bays for this warehouse can only be accessed by reversing.

Late one evening an office worker began to cross the yard as a driver, Martin, was reversing his vehicle.

Martin failed to see the pedestrian until the last moment. At this point he was distracted and hit a parked vehicle.

The driver of the parked vehicle, Bill, began an argument with Martin. Bill claimed Martin often did not take enough rest. He also claimed that Martin regularly exceeded his driving hours.





The diagram shows a top-down view of a loading bay. A grey truck is positioned at the bay, which is labeled 'Loading Bay'. A red dot representing a pedestrian is located near the truck. An arrow points from the pedestrian towards the truck.


**4.**


Which of the following devices ensured that the load on the parked truck stayed secure during the incident?

*(Select the BEST option below.)*

A. 

B. 

C. 

D. 

Previous (P) Next (N) Help (H) (Scored) Item End Exam (E)

Kayser, M., & Parshall, C.G. (2008, March). *Building a Global Innovative Test*. Presented at the annual meeting of the Association of Test Publishers, Dallas, TX.

# CPC Case - Hotspot Question

Select for Review (R) Section Time Remaining (10)

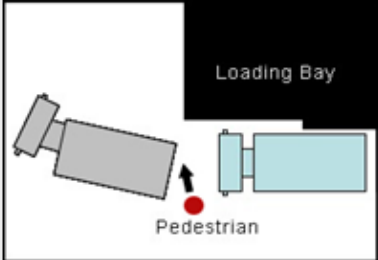
**CASE 1**

The loading bays for this warehouse can only be accessed by reversing.

Late one evening an office worker began to cross the yard as a driver, Martin, was reversing his vehicle.

Martin failed to see the pedestrian until the last moment. At this point he was distracted and hit a parked vehicle.

The driver of the parked vehicle, Bill, began an argument with Martin. Bill claimed Martin often did not take enough rest. He also claimed that Martin regularly exceeded his driving hours.




**5.**

The photo below shows the same loading site after a number of changes were made.

Indicate a safety feature of the improved site.

*Use your mouse to click directly on the image below.*



(Scored) Item

Previous (P) Next (N) Help (H) End Exam (E)

Kayser, M., & Parshall, C.G. (2008, March). *Building a Global Innovative Test*. Presented at the annual meeting of the Association of Test Publishers, Dallas, TX.

# CPC Example 2 - Audio Question



Kayser, M., & Parshall, C.G. (2008, March). *Building a Global Innovative Test*. Presented at the annual meeting of the Association of Test Publishers, Dallas, TX.

# Audio – Second Usability Round

The participants had several difficulties with the audio player.

The screenshot shows a software interface with a blue title bar containing the text "[000-000]". Below the title bar is a yellow bar with a checkbox and the text "Select for Review [R]". The main content area is divided into two columns. The left column contains two paragraphs of text: "The loading bays for the warehouse can only be accessed by reversing. Late one evening an office worker began to cross the yard as a driver, Martin, was reversing his vehicle. Martin failed to see the pedestrian until the last moment. At this point he was distracted and hit a parked vehicle." and "The driver of the parked vehicle, Bill, began an argument with Martin. Bill claimed Martin often did not take enough rest. He also claimed that Martin regularly exceeded his driving hours." Below the text is a diagram showing a grey truck reversing into a black rectangular area labeled "Loading Bay". A red dot labeled "Pedestrian" is positioned in the path of the truck. The right column contains an audio player with a play button, a progress bar, and a "Loop" checkbox. Below the audio player is a question: "Which of the following is a well known side-effect of the substance Martin took?" followed by the instruction "Select the best option below." and four radio button options: "A. Thirst", "B. Ringing in the ears", "C. Drowsiness", and "D. Tunnel vision". At the bottom of the interface is a yellow bar with the text "Select the best response." and four buttons: "Previous [P]", "Next [N]", "Exhibit [X]", and "End Exam [E]". The bottom right corner of the window shows the system tray with the date and time "11:36".

Kayser, M., & Parshall, C.G. (2008, March). *Building a Global Innovative Test*. Presented at the annual meeting of the Association of Test Publishers, Dallas, TX.



# Audio – Third Usability Round

Some participants still found the instructions insufficiently clear.

[000-000]


**PRACTICE CASE STUDY**

This is a practice case.

In this left side of the screen you will usually read a case. The case may include text and/or a picture. On the right side of the screen you will see the questions.

There are **four practice questions**.

After the practice questions, **then you will take the real test**.



**Question 3**

What type of bus does the passenger ride?

Make sure that you have your headphones on, then press the **Play** button.

The **Play** button is the **first button** in the grey box to the right.

Select the best option below.

- A. trolley
- B. shuttle
- C. charter
- D. double-decker

Now select **Next**.

Previous (P)    Next (N)

100882.4 (Unscored)    End Exam (E)    13:32

Kayser, M., & Parshall, C.G. (2008, March). *Building a Global Innovative Test*. Presented at the annual meeting of the Association of Test Publishers, Dallas, TX.

# Audio – Final Usability Round

The orange  
font color,  
along with a  
simplified audio  
player, were  
successful.


## PRACTICE CASE STUDY

This is a practice case.

In this left side of the screen you will see a case. The case may include text and/or a picture. On the right side of the screen you will see the questions.

There are **four practice questions**.

After you answer the practice questions, **then you will take the real test.**




### Question 3

What type of bus does the passenger ride?

**Listen to the audio.**

Make sure that you have your headphones on, then **press the Play button.**

The **Play** button is the **first button** in the grey box to the right.



Select the best option below.

- trolley
- shuttle
- charter
- double-decker

Now select **Next**.

Previous (P)      Next (N)      Help (H)      End Exam (E)

Kayser, M., & Parshall, C.G. (2008, March). *Building a Global Innovative Test*. Presented at the annual meeting of the Association of Test Publishers, Dallas, TX.

# Council of Landscape Architectural Registration Boards (CLARB)



# CLARB Example 1

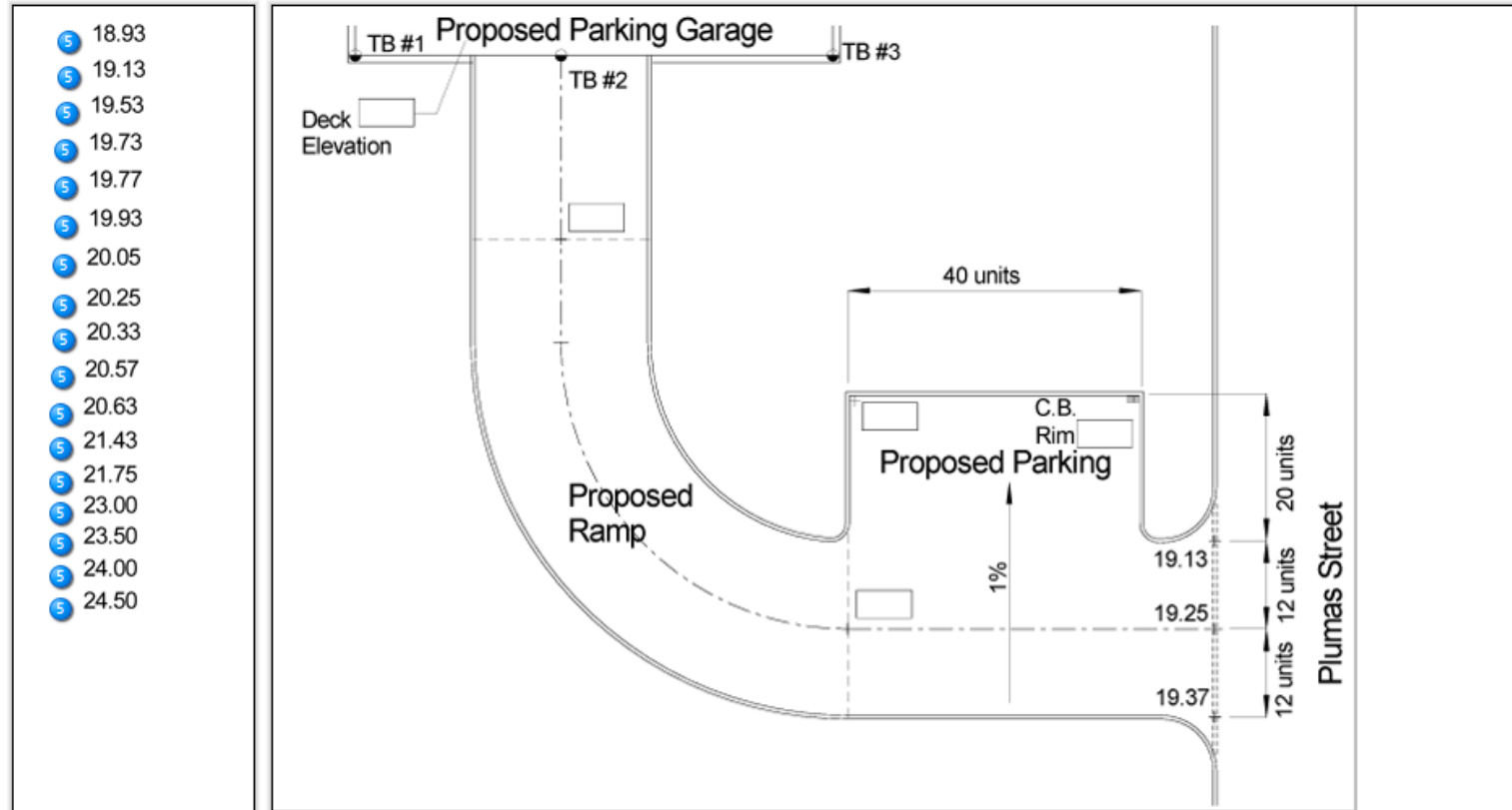


Cadle, A., Parshall, C.G., & Baker, J. (2013, February). *Development of a New Item Type: The Drag and Place Item*. Presented at the annual meeting of ATP, Ft. Lauderdale, FL, February 3-6.

# Spot Elevation - Early Round

Show Exhibit

Place the appropriate spot elevation(s) in the boxes provided. Parking garage deck elevation must be a minimum

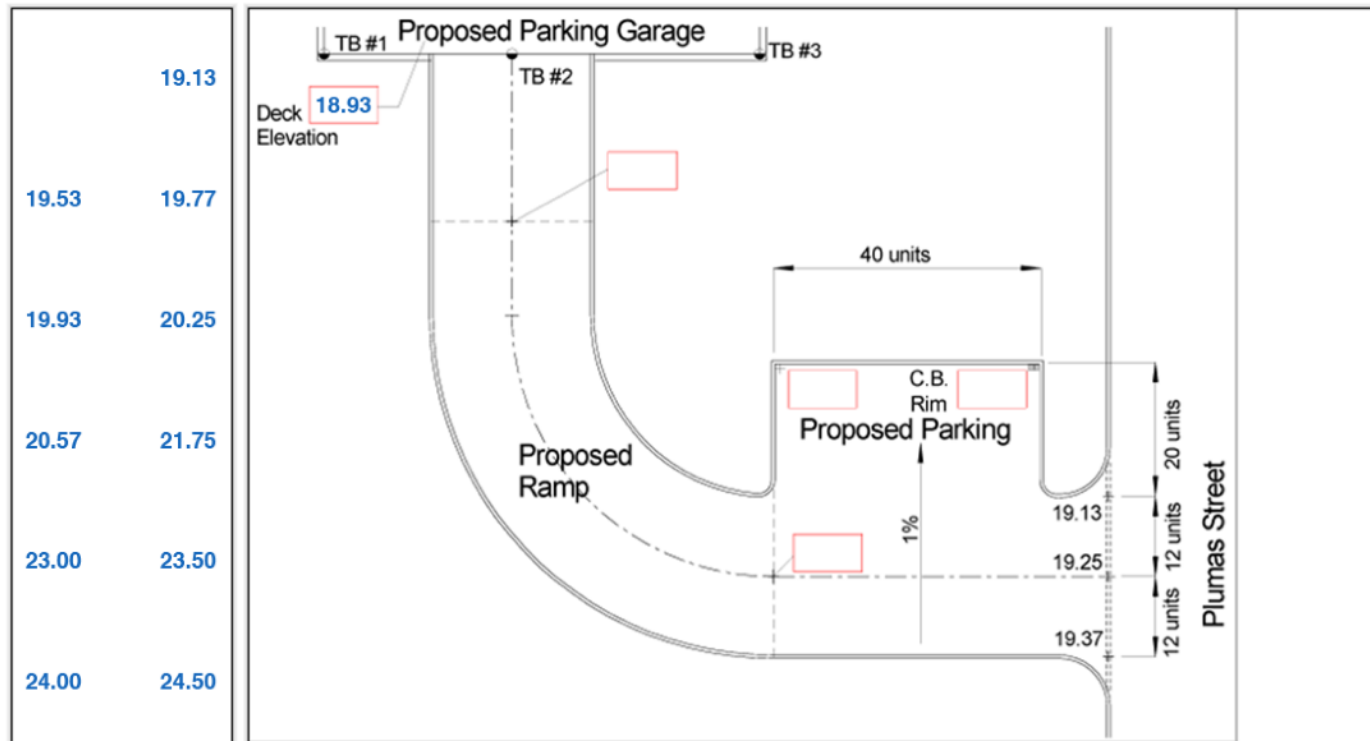


Cadle, A., Parshall, C.G., & Baker, J. (2013, February). *Development of a New Item Type: The Drag and Place Item*. Presented at the annual meeting of ATP, Ft. Lauderdale, FL, February 3-6.

# Spot Elevation - Later Round

Show Exhibit

Refer to the exhibit(s). Place the appropriate spot elevation(s) in the boxes provided. Parking garage deck elevation must be a minimum of 4 units above bedrock.



Cadle, A., Parshall, C.G., & Baker, J. (2013, February). *Development of a New Item Type: The Drag and Place Item*. Presented at the annual meeting of ATP, Ft. Lauderdale, FL, February 3-6.

# Exhibit - Fail

Usability Study - Candidate Name

PreVUE Controls

Stop Pause Adjust Time

Show Exhibit

Refer to the exhibit(s) / Place the appropriate spot elevation(s) in the boxes provided. Parking garage deck elevation must be a minimum of 4 units above bedrock.

18.03  
19.13  
19.53  
19.77  
19.93  
20.25  
20.57  
21.75  
23.00  
23.50  
24.00  
24.50

Proposed Parking Garage

Deck Elevation

TB #1 TB #2 TB #3

Proposed Ramp

40 units

C.B. Room

Proposed Parking

1%

19.13  
19.25  
19.37

12 units 12 units 20 units

Plumas Street

Help Previous Next

Usability Study - Candidate Name

PreVUE Controls

Stop Pause Adjust Time

Show Exhibit

Soil Borings Ramp Profile

Refer to the exhibit(s) / Place the appropriate spot elevation(s) in the boxes provided. Parking garage deck elevation must be a minimum of 4 units above bedrock.

TYPICAL PARKING GARAGE RAMP CENTERLINE PROFILE

Parking Garage Deck

Ramp Centerline

25 units @ 2% 75 units @ 2% - 5% 50 units @ 2%

Existing Road

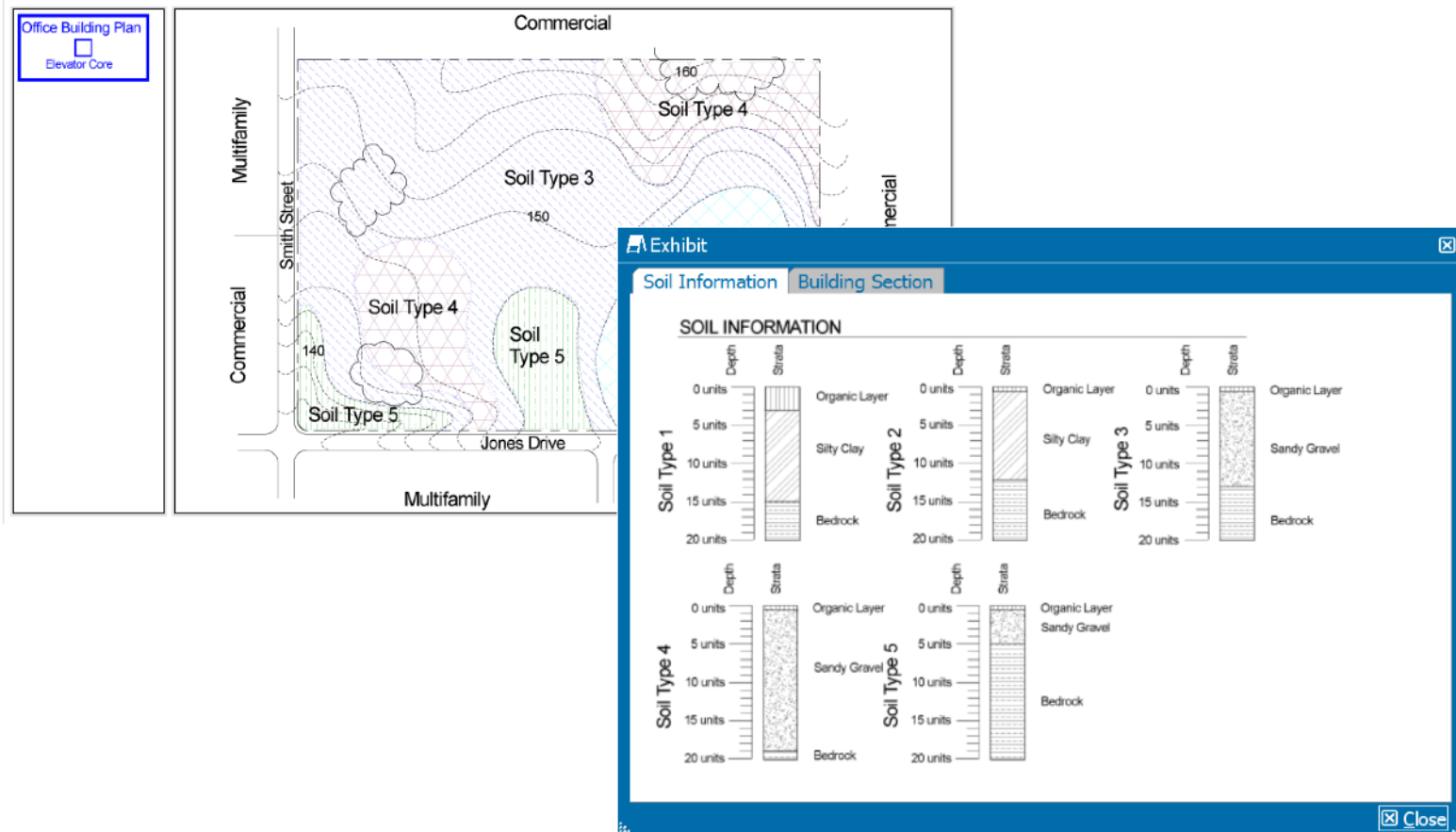
Help Previous Next

Cadle, A., Parshall, C.G., & Baker, J. (2013, February). *Development of a New Item Type: The Drag and Place Item*. Presented at the annual meeting of ATP, Ft. Lauderdale, FL, February 3-6.

# Exhibit - Win

Show Exhibit

Refer to the exhibit(s). Place the building on the site to minimize environmental impact.




Cadle, A., Parshall, C.G., & Baker, J. (2013, February). *Development of a New Item Type: The Drag and Place Item*. Presented at the annual meeting of ATP, Ft. Lauderdale, FL, February 3-6.



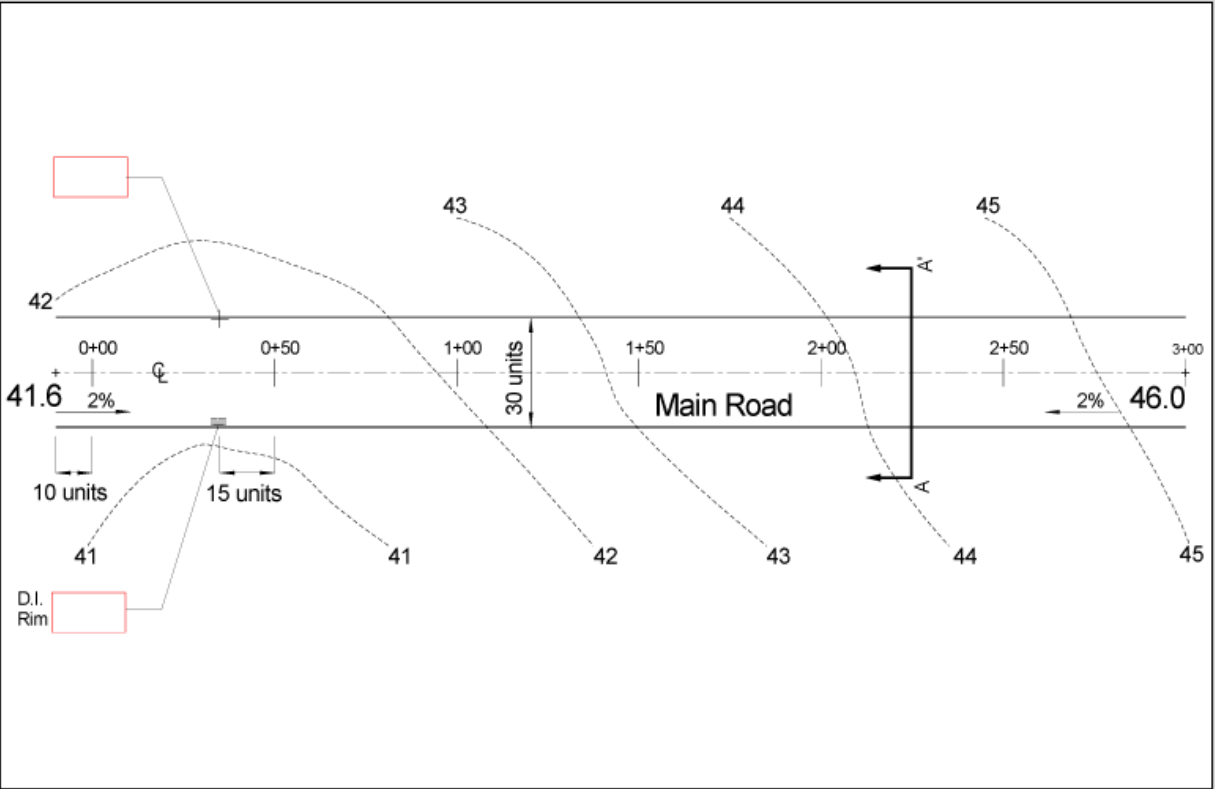
# CLARB Example 2



# Item Interface - Unexpected Win

 Show Exhibit

Refer to the exhibit(s). Grade Main Road starting at the existing elevation given of 46.0 units. *Place* the appropriate provided.



40.4    40.7

41.0    41.3

41.6

42

43

44

45

0+00    0+50    1+00    1+50    2+00    2+50    3+00

41.6    2%    30 units    Main Road    2%    46.0

10 units    15 units

41    41    42    43    44    45

D.I. Rim

Cadle, A., Parshall, C.G., & Baker, J. (2013, February). *Development of a New Item Type: The Drag and Place Item*. Presented at the annual meeting of ATP, Ft. Lauderdale, FL, February 3-6.

The image features a dark, almost black background. Scattered throughout this background are numerous question marks of various colors, including red, orange, yellow, green, blue, and white. The question marks vary in size and brightness, some appearing as sharp, glowing points while others are more faint and blurry. The overall effect is one of mystery and inquiry.

**Questions?**

# Thank you!

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Cynthia G. Parshall, PhD  
*Principal Consultant*  
**Touchstone Consulting**

[CParshall@Touchstone.Consulting](mailto:CParshall@Touchstone.Consulting)  
[https://www.linkedin.com/in/cynthia-  
parshall-16530286](https://www.linkedin.com/in/cynthia-parshall-16530286)