**National Institute of Standards and Technology**

**National Construction Safety Team Investigation of the June 24, 2021**

**Champlain Towers South (CTS) Condominium Partial Collapse in Surfside, FL**

**INTERVIEW GUIDE COMPONENT 5: CTS COLLAPSE SITE PERSONNEL HANDLING CONCRETE**

**OMB Control #0693-0078**

**Expiration Date: 07/31/2025**

**[PENDING OMB APPROVAL]**

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Do you have any questions for us? May we proceed with the interview?

## INTERVIEWEE BACKGROUND AND SECTION ASSIGNMENT

*We’d like to begin the interview with a few quick questions to understand your experience with the collapse of Champlain Tower South.*

* + 1. Please tell us about your professional background.
    2. Please describe your role at the collapse site.
    3. What dates were you on the site (e.g., from month/day/year to month/day/year)?
    4. Please describe to the best of your ability the portions of the collapse pile you personally worked on at the site [*show the collapse pile visual here*].
    5. Did you have a chance to observe/participate in NIST’s physical evidence identification, tagging, and collection efforts at the CTS site?

***Use the table below for assigning sections to the CTS Collapse Site Personnel Handling Concrete***

|  |  |
| --- | --- |
| *Stakeholder Status* | *Relevant Sections* |
| Those who participated in NIST’s physical evidence collection | 1.2, 1.3, 1.4, 1.5 |
| Those who did not participate in NIST’s physical evidence collection | 1.2, 1.4, 1.5 |

## CTS BUILDING CONDITION (POST-COLLAPSE)

*Thank you for providing this information. Now, we will move into a more in-depth conversation about your observations at the CTS collapse site. Please keep in mind that we are here mainly to listen to you. Feel free to tell us what happened, without waiting for us to ask questions. We encourage to report everything, even if it seems irrelevant. We understand that it may be difficult to remember some of the specifics we may ask you about, but we will be working together to help you recall them. If you cannot remember specifics, that is fine too. You can let us know that “you don’t recall” or “you are not sure.”*

* + 1. Please try to put yourself back in the same frame of mind as when you saw the collapse site. Take your time and think about your surroundings. Think about your initial thoughts of seeing Champlain Towers South…. Think about any later thoughts….Now tell us in as much detail as possible everything you remember about your experience of being at the collapse site.
    2. Please tell us about what you think is important for us to know about the collapsed section of the building.
    3. How about the still standing (alpha) section? What do you think is important for us to know about that section of the building?
    4. Please tell us about what stood out to you as surprising, unusual or that did not look right about either the collapsed or the still standing (alpha) section of the building.
    5. Was there any piece of evidence that stood out to you as notable while working at the collapse site?

*If YES, continue.*

*If NO, skip to Question 1.2.6.*

* + - 1. Please tell us more about this piece of evidence.
      2. Let’s mark the location of this piece of evidence [*the interviewer shows the relevant map*].

*Next, we would like to hear about what you observed in terms of the condition of the building and the quality of concrete.*

* + 1. While working at the collapse site, did you notice anything unusual about the condition of the building?

*If YES, continue.*

*If NO, skip to Question 1.2.7.*

* + - 1. Please tell us what you noticed in as much detail as possible.
    1. Did you notice anything unusual about the construction of the building?

*If YES, continue.*

*If NO, skip to Question 1.2.8.*

* + - 1. Please tell us what you noticed in as much detail as possible.
    1. While at the collapse site, what were your observations with respect to concrete quality? Please explain in as much detail as possible.
    2. Were there places where the concrete composition and strength seemed normal to you and other places where it might have been weak, friable, or damaged?

*If YES, continue.*

*If NO, skip to Question 1.2.10.*

* + - 1. Let’s start with your first observation. Please be as specific as possible as you describe what you observed in terms of the concrete composition and strength.
      2. What type of element (beam, column, slab, etc.) did you make this observation on?
      3. Please tell us what you remember about the location of your observation at the collapse site [*the interviewer uses the relevant visual here and asks the interviewee to refer to column grid lines*]?
      4. Where in the depth of the collapse pile was the structural element for which you made this observation (e.g., floor level of the tower)?
      5. If this element had collapse pile on top of it, please describe the pile on top of it.
      6. If this element was excavated prior to your observation, please tell us what you remember about the excavation.
      7. Do you recall any blue specimen number marking on the element?

*If YES, continue.*

*If NO, skip to Question 1.2.9.8.*

* + - * 1. Did you make any notes or take photos or videos on your observations?

*If YES, tell the interviewee that “We would appreciate if you could share those notes, photos, or videos with us.”*

*If NO, continue.*

* + - 1. Can you please elaborate more on your observation? What aspects of your observation led you to that impression of the condition of the concrete (e.g., the visual condition of the concrete, holding or attempting to crush the concrete in hand, coring, sawing, lifting or moving a specimen)?
      2. Please tell us what you were doing when you made this observation (e.g., personally coring, sawing, lifting or moving the specimen or watching someone else do these activities).
      3. Please tell us if you or anyone else was using an equipment while handling this particular specimen [*the interviewer asks about the type of equipment if this was the case*].

***The interviewer moves on to the next observation, if any, after finishing discussing the first observation and repeats questions 1.2.9.1-1.2.9.10 for each observation on concrete quality***

* + 1. What were others’ overall impressions of the condition of the concrete at the collapse site?
    2. What were the similarities and differences you observed in terms of the quality of concrete at the CTS collapse site versus other building sites you worked at?
    3. Is there anything else you think we should know about the construction of CTS building?

*If YES, continue.*

*If NO, skip to Question 1.2.13.*

* + - 1. Please elaborate on what you think we should know about.

*We will now talk about what you observed in the pool deck area and the basement/foundation.*

* + 1. Please share what you observed in terms of failures in the pool deck area.
    2. Did you have a chance to observe structural elements in the basement of CTS (columns, beams, slabs)?

*If YES, continue.*

*If NO, skip to Question 1.2.15.*

* + - 1. Please describe the condition of structural elements in the basement.
    1. Did you observe any specific locations of the basement slabs at the basement columns?

*If YES, continue.*

*If NO, skip to Question 1.2.16.*

* + - 1. Please share your observations in as much detail as possible.
      2. Did you notice any signs of failure of the basement slabs immediately around the bottoms of the basement columns?

*If YES, continue.*

*If NO, skip to Question 1.2.16.*

* + - * 1. Please share your observations in as much detail as possible.

*Next, we would like to ask about loads added to the structure in-place at various parts of the building (what are referred to as “superimposed dead loads”) at the time of collapse.*

* + 1. Please share your observations on loads added to the structure at the plaza/pool deck slab.
       1. Did you observe the make-up of any waterproofing, sand or concrete fill, or pavers at various places the plaza/pool deck structure?

*If YES, continue.*

*If NO, skip to Question 1.2.16.2.*

* + - * 1. Please tell us about your observations in as much detail as possible.
        2. Let’s mark the location of your observation here [*the interviewer uses the relevant visuals here*].
        3. What materials did you see, in layers from bottom to the top?
        4. Did you make measurements or take photographs of the thickness of the various layers?

*If YES, ask the interviewee to share those measurements and/or photographs with us.*

*If NO, skip to Question 1.2.16.1.5.*

* + - * 1. Can you estimate the thicknesses of the various layers*?*
        2. Did you make any other similar observations at the plaza/pool deck?

*If YES, repeat Questions 1.2.16.1.1-1.2.16.1.5 for each observation mentioned.*

*If NO, continue.*

* + - 1. Please share your observations on the planters on the top of the plaza slab.
    1. Can you provide any details of the walls, interior slabs and fill, and interface with toppings?
    2. What were your observations of loads added to the roof (e.g., insulation, roof membrane, gravel, mechanical equipment, etc.)?
    3. What were your observations of interior finishes?
       1. What were the interior finishes used at the CTS building?
       2. Did you observe any multi-layer interior finishes (e.g., tile on top of tile on top of linoleum)?
    4. What were your general observations on the following?
* The main floor of the common area on the first floor
* In-unit interior floors (What was more common? What were the exceptions?)
* Balconies
* Drives and first level parking areas.

*Next, we would like to talk about how the building failure might have initiated and spread into the building.*

* + 1. Do you recall your conversations with others at the site about how the collapse initiated and spread into the building?

*IF YES, continue.*

*If NO, skip to the next section.*

* + - 1. Please tell us about these conversations in as much detail as possible.
      2. Where did they think the collapse initiated?
      3. What were their impressions of how the collapse progressed?

## PHYSICAL EVIDENCE IDENTIFICATION, TAGGING AND COLLECTION EFFORTS

*We now would like to have a conversation about the physical evidence collection processes at the site.*

* + 1. Please share your overall reflections on working with NIST on evidence identification, tagging, and collection efforts.
       1. What aspects of evidence identification, tagging, and collecting evidence worked well?
       2. What were the main challenges faced in identifying, tagging and collecting evidence?
       3. What would be your recommendations for enhancing physical evidence identification, tagging, and collection efforts in building collapse sites?
    2. Were you at the collapse site during the demolition of the still standing section of the building?

*If YES, continue.*

*If NO, skip to Question 1.3.3.*

* + - 1. In what ways, if any, do you think the demolition of the still standing section impacted the evidence identification, tagging, and collection efforts?
      2. Was the tarp/cover effective in protecting evidence during the demolition of the still standing section?
      3. What were the measures taken to prevent mis-categorization of alpha specimens as collapse-side specimens or vice versa?
      4. Do you think despite these measures, some specimens from the still standing section were miscategorized as collapse-side specimens? Please explain.
    1. Please let us know if you have any suggestions on how NIST can improve its interactions with those who were at the collapse site while identifying, tagging and collecting evidence.

## STAKEHOLDER FEEDBACK ON THE GOVERNMENT’S RESPONSE TO THE COLLAPSE

*We now would like to hear from you on the government’s role in responding to and preventing calamities like the collapse of the CTS building.*

* + 1. We would love to hear your perspectives on the government’s response to the collapse of the CTS building.
       1. What aspects of the government’s response to the collapse of the CTS building worked well?
       2. What were the main challenges collapse site personnel faced during the response to the collapse of the CTS building?
       3. How did collapse site personnel deal with these challenges?
       4. What might be helpful in terms of addressing the challenges faced during response to a building failure of a similar nature?

***Depending on the interviewee’s background/experience, ask about different aspects of response such as evacuation, search and rescue.***

* + 1. What are your recommendations for federal, state and local governments on how to respond to events of this nature in the future?
    2. In your opinion, how can the government (at federal, state and local levels) help prevent future calamities such as the one witnessed in Surfside?
    3. Is there anything else that you think we should study further? Or any other questions we should be focusing on?

## WRAP UP & FUTURE STEPS

* + 1. Is there anything we have not yet discussed but is important for us to know about?
    2. We welcome submissions of data including photos, video and other documentation associated with the collapse of CTS. Do you have any additional photos, videos, or other information (e.g., field notes) that you would like to share with us?
    3. Do you have \_\_\_\_\_\_\_\_\_\_\_about the following [*the interviewer may ask about specific materials*]?

*If YES, continue.*

*If NO, wrap up the interview.*

* + - 1. Would you be able to share these with us? Y/N

*Those are all the questions we have. The valuable information you provided will help our engineers and scientists improve building safety. Thank you so much for taking the time to talk with us.*

*After the formal interview ends, you may remember new details or notice new things about the issues we discussed today. Please feel free to reach out back to us to share that information. We are eager to continue this conversation with you.*