We thank the reviewers and the editor for the valuable insights and useful comments, which have undoubtedly contributed to the refinement of our manuscript. Please find our responses to the comments below in green fonts in this round, and please find our revisions in this round in the manuscript in green fonts. Please note that the revision in the last round is in blue fonts.

Reviewer #1: The reviewer would like to emphasize that reviewers possess the right to apprise the handling editor of the necessity to assess whether the manuscript aligns with the journal's established "Aim and Scope," guided by their understanding of the journal's objectives. Simultaneously, the reviewer has furnished comprehensive feedback addressing aspects of the article's quality. Therefore, the reviewer deems the author's apprehensions in this regard to be unfounded.

We appreciate the reviewer’s diligence in highlighting the prerogative to assess the manuscript's alignment with the journal's Aim and Scope. We acknowledge your comprehensive feedback, which we find invaluable for enhancing the quality of our article. In our responses that follow, we have made specific revisions to address your concerns and ensure that our manuscript aligns seamlessly with the established standards of the journal.

While most of the revisions made by the author to the manuscript are deemed satisfactory, the reviewer's remaining comments mainly focus on the "Background" section. In the Introduction, the author highlights the deficiencies in the data and methods utilized in existing research for assessing the accessibility and reliability of public transit networks. However, in the Background section, the author only introduces essential concepts related to the study without offering a detailed explanation of the commonly employed data and methods in existing research and their constraints. Furthermore, the assertion made at the end of the Background section, stating "very few papers focus on the impacts on accessibility and reliability (of public transit)," lacks persuasiveness. In fact, pertinent articles have been published in journals such as Transportation Research Part A/D, Transportmetrica A/B, Transportation Research Record, and others. The reviewer recommends that the author conduct a more comprehensive literature review. Specifically, in the "Background" section, the author should expound on the deficiencies in the data and methods used for measuring accessibility and reliability of public transit network in existing research, thereby establishing a more solid foundation for the methodological contribution emphasized in this manuscript.  
  
Thank you for your thorough review of my manuscript and for providing valuable feedback. In response to this feedback, we have significantly revised and expanded the relevant portions of the Background section to provide a more comprehensive overview of the existing literature.

First, we added detailed explanation of the commonly employed data and methods in existing research and their constraints. Please find our revision in section 2.2 (from pp 3, line 42 to pp 4 line 20). We discussed the lack of public transit reliability studies and the limitations of traditional transportation reliability studies. We discussed two limitations: 1) traditional reliability studies, which is based on vulnerability analysis and road links, cannot properly reflect the time-dependent and schedule-based nature of public transit systems; 2) because there is a lack of empirical and high-fidelity data, prior studies did not address real-world scenarios but are based on simulations.

Furthermore, we have integrated your suggestion to highlight recent progress in data curation and collection techniques, showcasing the transformative development that enables the measurement of accessibility reliability patterns with higher frequency and fidelity. The inclusion of new datasets such as General Transit Feed Specification real-time (GTFS-RT) and Automatic Vehicle Location (AVL) data is now more prominently featured, aligning with the manuscript's focus on exploring real-time accessibility and accessibility reliability concepts. Furthermore, we discussed the concept of retrospective real-time accessibility, which can also overestimate people’s ability to access opportunities by transit. We finally introduce the recent process on realizable accessibility, which addressed both the traditional, vulnerability analysis-based reliability analysis and retrospective real-time data-based reliability analysis. We hope these revisions address your concerns and enhance the overall clarity and strength of the manuscript.

Meanwhile, we also agree that “very few papers focus on the impacts on accessibility and reliability of public transit” can be a bold claim, which can lead to misunderstanding. We changed the sentence to “Despite many existing discussions on disruptions’ impacts on public transit and its accessibility, very few papers offered a holistic and high-fidelity analysis on public transit accessibility and reliability”, which we believe is much more suitable and cautious. We thank you for your useful suggestion.

Reviewer #2: I appreciate the author(s) addressed the comments and made good improvements. However, I would like to mention some minor comments regarding the revised manuscript.

Thank you for the comments. Please find our detailed responses to each comment below.

#1. I think reviewer #1 made a very valid point regarding its implications for larger audiences of JTG. Although I acknowledge that the authors added some policy implications in the revised manuscript, I think the manuscript could be more compelling if the authors considered expanding this discussion. For instance, recall one of my comments that this study can provide some meaningful transit policy implications for many "college towns" and cities in the United States that host football and other big sports games. Of course, as a case study, this study cannot provide universal policy implications for all cities that are different in their geographic contexts. However, I believe the findings still have important added value to the literature and transit policy management. For many other cities in the world that do not host "football" games, the findings of this study can still provide important implications related to the unreliability of transit services affected by major events. Please consider expanding the discussion on policy implications more thoroughly.

Thank you so much for the great suggestion. We agree with the reviewer that more discussion on football games in different scenarios can be helpful for transit planning and operation purposes. Please find the added text in pp 18, from line 26 to 38. We expanded the discussion on the implications of the study for other college towns and cities, and we also discussed the implications of the paper for other social events besides football games. Thank you for the advice!

#2. [Comment #7] Thank you for addressing this comment and mentioning that "We collected the weather data, including temperature and precipitation, and found no significant anomalies in the record." I think this is an important piece of information that will be very helpful for future readers to address their questions. I encourage the authors to include them in the Appendix.

Thanks for the suggestion. We added the requested data table in the appendix (shown below and in the Table 2 in the appendix of the manuscript), which includes the date and time of each game days, average temperature, total precipitation, and temperature and precipitation at each game start. We collected the information from Wunderground.com at John Glenn Columbus International Airport Weather Station.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Date | Game Start Time | Average Temperature (°C) | Total Precipitation (cm) | Game Start Temperature (°C) | Game Start Precipitation (cm) |
| 2018-09-01 | 12:00 PM | 24.2 | 0.0 | 29.4 | 0.0 |
| 2018-09-08 | 3:30 PM | 18.3 | 1.2 | 18.3 | 0.1 |
| 2018-09-22 | 3:30 PM | 16.6 | 0.3 | 17.2 | 0.0 |
| 2018-10-06 | 4:00 PM | 24.4 | 0.0 | 30.6 | 0.0 |
| 2018-10-13 | 12:00 PM | 7.2 | 0.2 | 7.8 | 0.0 |
| 2018-11-03 | 12:00 PM | 6.4 | 0.2 | 10.0 | 0.0 |
| 2018-11-24 | 12:00 PM | 8.1 | 1.6 | 8.9 | 0.0 |
| 2019-08-31 | 12:00 PM | 21.0 | 0.0 | 22.8 | 0.0 |
| 2019-09-07 | 12:00 PM | 20.9 | 0.0 | 22.8 | 0.0 |
| 2019-09-21 | 3:30 PM | 23.6 | 0.1 | 28.3 | 0.0 |
| 2019-10-05 | 7:30 PM | 15.4 | 0.0 | 19.4 | 0.0 |
| 2019-10-26 | 12:00 PM | 12.2 | 0.0 | 11.7 | 0.2 |
| 2019-11-09 | 12:00 PM | 0.2 | 0.0 | 1.7 | 0.0 |
| 2019-11-23 | 12:00 PM | 1.9 | 0.0 | 5.0 | 0.0 |

#3. (Minor Comment) [Comment #14] Thank you for discussing this potential methodological issue (MAUP). However, I found the incorrect paper was discussed in the revised manuscript. Please fix this issue.

We apologize for the mistake. The citation error has been fixed. Please check pp 19, line 14.

Reviewer #3: The authors have addressed all my comments and the paper has been improved.  
  
Thank you again for the comments!