IN THE UNITED STATES DISTRICT COURT
DISTRICT OF NEW JERSEY

NATIONAL ASSOCIATION OF THEATRE OWNERS; NATIONAL ASSOCIATION OF THEATRE OWNERS OF NEW JERSEY; AMERICAN MULTI-CINEMAS, INC.; CINEMARK USA, INC.; REGAL CINEMAS, INC.; BJK ENTERTAINMENT, INC.; BOW TIE CINEMAS, LLC; and COMMUNITY THEATERS LLC, Plaintiffs, - against - PHILIP D. MURPHY, in his official capacity as Governor of New Jersey; and JUDITH PERSICHILLI, in her official capacity as Acting Commissioner of Health, Defendants.	Case No.3:30-cv-0828-BRM-TJB ECF Case **DECLARATION OF DAVID F. GOLDSMITH, MSPH, PHD, IN SUPPORT OF PLAINTIFFS' MOTION FOR PRELIMINARY INJUNCTION**

I, DAVID F. GOLDSMITH, MSPH, PHD, hereby declare as follows:

1. I am an expert witness on behalf of Plaintiffs. I submit this declaration in support of Plaintiffs National Association of Theatre Owners (NATO), National Association of Theatre Owners of New Jersey (NATO/NJ), American Multi-Cinemas, Inc., Cinemark USA, Inc., Regal Cinemas, Inc., BJK Entertainment, Inc., Bow Tie Cinemas, LLC, and Community Theaters LLC's (together, "Plaintiffs") motion for a preliminary injunction. I have personal knowledge of the matters set forth herein. If called upon, I could and would testify competently to the facts stated herein.

2. I hold a doctorate degree in Epidemiology from the University of North Carolina at Chapel Hill. For 21 years I have been a member of the faculty of the Department of Environmental and Occupational Health, Milken Institute of Public Health at George Washington University (GWU) in Washington, DC. I have held the academic rank of Associate Research Professor and

Professorial Lecturer. I am an occupational and environmental epidemiologist, having earned my MSPH and PhD degrees in Epidemiology from the University of North Carolina in 1977 and 1983, respectively. In addition to my faculty position at GWU, I also hold an adjunct Associate Professor rank at Georgetown University in the Department of Human Science. In 2014 I was Fulbright Visiting Research Chair in Science, Technology, Engineering or Math (STEM) at the University of Manitoba, School of Medicine in Winnipeg, Canada. In 2017 I was a Fulbright Specialist collaborating with the Department of Environmental Sciences at Ateneo de Manila University in the Philippines. I currently serve as the Principal Epidemiologist for the Railroad Union Health Study at the Association for Occupational and Environmental Clinics (AOEC) in Washington DC. I have extensive research and teaching experience in the area of occupational and environmental health, cancer epidemiology, workplace infectious diseases, and the application of epidemiology to medical-legal disputes, including the history of the science of causation. For the past 10 years, I have taught a graduate level class on veterans' health and military exposures, including lectures on battlefield infections (including COVID-19 this year) from military service. I was a member of the science panel of the Institute of Medicine (IOM) [now called the National Academy of Medicine] examining the evidence of health of veterans serving in the Gulf War.

3. My specialty within environmental epidemiology is and has been for over 25 years lung cancer, tuberculosis (an infectious respiratory disease like COVID-19), and other health effects related to exposure to a variety of toxins.

4. I have been qualified as a health expert in proceedings before Federal courts and State courts. I have served as an expert in many legal/medical cases throughout the U.S. related to exposures as varied as pesticides, foundry dusts, asbestos, silica dust, firefighting, cryogenic medical devices, hormone replacement therapy and other drugs, gynecological mesh, diesel exhaust,

Agent Orange exposures, World Trade Center exposures, and solvents. I have acted in a professional capacity as an advisor to many Federal, State, and international agencies. Those agencies include the U.S. and California Environmental Protection Agency (EPA); National Institutes of Health; National Institute for Occupational Safety and Health (NIOSH)—Centers for Disease Control and Prevention (CDC); Consumer Products Safety Commission (CPSC); and the federal Occupational Safety and Health Administration (OSHA). I have provided expert opinions on toxic hazards in Canada, Japan, France, Israel, and Uzbekistan. I was a member of the World Health Organization (WHO), International Agency for Research on Cancer (IARC) panel assessing the carcinogenicity of crystalline silica in 1986.

5. I have acted as a peer-reviewer for many professional journals in environmental medicine and public health. I have been a member of the Board of Editors for the American Journal of Industrial Medicine and for the Journal of Toxicology and Environmental Health. I recently finished my role as Associate Editor for the Archives of Environmental and Occupational Health. I have been a member of many grant review panels for the National Institutes of Health (NIH), EPA, National Cancer Institute (NCI), National Institute of Environmental Health Sciences (NIEHS), Agency for International Development (USAID), and National Institute for Occupational Safety and Health (NIOSH).

6. COVID-19 is a respiratory disease. In my career, I have examined many issues related to respiratory health including studies of tuberculosis (TB) and pulmonary disease risks from the inhalation of asbestos and silica dusts, and lung cancer hazards from a combination of smoking and other inhaled toxins. Over the length of my academic career I have studied the health effects of inhaled exposures to pesticides. I was, from 2006 to 2008 and from 2012 and 2017, a Study Section member for Centers for Disease Control and Prevention-NIOSH Agricultural Health and Safety

Centers, where I reviewed research proposals focusing on agricultural infectious diseases. I have been a member of the National Institutes of Health (NIH) Study Section—Infectious Disease, Reproductive Health, Asthma, and Pulmonary Epidemiology (IRAP)—examining grant proposals linking environmental and drug exposures to pulmonary and reproductive health effects. When I was seconded to the Veterans Administration from 2009 to 2011, I had responsibility to review scientific evidence related to lung disease, including asthma and other health effects from military exposures to Agent Orange, to combustion hazards from burn pits, and to hazardous oil field exposures from the Gulf War.

7. Early in my career, I was the first scientist to recognize that silica dust exposure was linked to cancer. By inference, I argued that silica was a multi-potential toxin and was a cause of TB and many auto-immune diseases, kidney ailments, nonsilicosis respiratory diseases, and that risk assessment methods could be used to determine safe levels of ambient silica exposure. This association was built on three foundations showing increased lung cancer after occupational silica dust exposure, elevated lung cancer risk after diagnosis of silicosis, and pulmonary cancers found in inhalation studies of laboratory animals. I was member of International Agency for Research on Cancer (IARC) Working Group for the Monograph (Vol 42) on Silica and Other Nonfibrous Particulates, held in Lyon, France in 1986. Later assessments by authoritative agencies confirmed that I was correct about silica's toxicity. Crystalline silica dust has been recognized since 1996 as a known human carcinogen by the IARC; later assessments by the National Institute for Occupational Safety and Health, the National Toxicology Program, and the Occupational Safety and Health Administration confirmed that change in paradigm. Ambient silica dust has since been regulated by the States of Massachusetts, Texas, and California.

8. An additional area of scientific contribution includes a long-standing concern about causation issues in epidemiology and its applications in the law. In part, this arose from my having worked at the National Academy of Sciences (NAS) early in my career examining the carcinogenicity of saccharin, and later being a member of the Working Group for the International Agency for Research on Cancer (IARC) on the Evaluation of the Carcinogenic Risk of Chemicals to Humans-Silica and Some Silicates (Volume 42). I was an expert member of the Institute of Medicine (IOM) Committee examining the evidence of health effects of veterans serving in the Gulf War and their exposure to solvents and pesticides (NAS, 2003). These assignments led me to consider carefully the processes and methods we use in public health to derive scientific consensus about environmental and occupational hazard causation (Goldsmith and Rose, 2001).

9. Over the past five months I have acted as a consultant for a variety of clients focusing on interpreting current epidemiology research on COVID-19. As an example, an international financial firm sought my assessment of the epidemiology spread of the novel coronavirus in the U.S.; an investment firm wanted to understand the differing epidemiology models for the spread of COVID-19 in the European Union and the U.S.; and another client wanted to know about the importance of the personal protective equipment (PPE) market in keeping healthcare workers and police and firefighters (all of whom must have contact with the public) from contracting the virus. As President of Workplace Health Without Borders-US branch, our organization has been advising workers and managers of international businesses on steps needed to reopen during and after COVID-19 pandemic. My expert advice has focused on PPE and other health and safety requirements.

10. I have attached as Exhibit A hereto a true and correct copy of my curriculum vitae, summarizing my qualifications to express the opinions discussed herein.

11. The novel coronavirus we are now battling originated in the city of Wuhan, China late in 2019. It has been designated by the World Health Organization (WHO) as COVID-19 in order to distinguish it from other viruses. There are many types of human coronaviruses including some that commonly cause mild upper-respiratory tract illnesses. COVID-19 is a new disease, caused by a coronavirus that has not previously been seen in humans, and for which people do not appear to have immunity. The virus that causes COVID-19 is thought to spread mainly from person to person, mainly through respiratory droplets produced when an infected person coughs, sneezes, talks, or sings. These droplets can land in the mouths or noses of people who are nearby or possibly be inhaled into the lungs. Community spread means people have been infected with the virus in an area, including some who are not sure how or where they became infected. Person-to-person spread is more likely when people are in close contact with one another (within about 6 feet) [CDC, https://www.cdc.gov/coronavirus/2019-ncov/faq.html, 2020]. Earliest evidence of COVID-19's transmission appeared when visitors to and from Wuhan traveled within China and then when travelers flew to other parts of Asia, Europe, and then the rest of the world. The first apparent U.S. case was confirmed in area of Seattle, WA in February, 2020 in a man who had recently been in China. The biggest outbreaks of the virus were detected in several European and middle eastern countries, with Italy, Spain, and later Iran seeing the most COVID-19 illness. We know that people with underlying health conditions such as lung and heart diseases, diabetes, and auto-immune diseases are at higher risk for hospitalizations and death from COVID-19. Elevated risks appear to be among citizens aged 65 and older compared to younger people. People with COVID-19 have reported a wide range of symptoms – from mild symptoms to severe illness. Symptoms may appear 2-14 days after exposure to the virus. In the current medical climate, if one has a fever, cough, or other flu-like symptoms, one may have COVID-19.

12. In the epidemiology research discussions below, I will use some terms related to comparative risk. Any risk related positively to virus exposure such as in places of worship or eating establishments will produce a risk measure that is greater than 1.0; any virus risk where exposure is less, such as professional offices, a reduced risk is expected and will produce a measure that is less than 1.0. Where the risk of exposure and chances of disease are equal, that produces a risk level of 1.0. The risk measures discussed below will include relative risk (RR) or odds ratio (OR), which is the measure from a case-control study. In all of the reported risks, there will be a measure of spread around the risk level called the 95% confidence interval (95% CI). If the lower 95% CI is equal or greater than 1.0, that means the risk is statistically significant, (*See* Gordis (2009)) for more on the methods used for this discussion.).

13. Defendants in this case, Governor Philip D. Murphy and Acting Commissioner of Health Judith Persichilli, through a series of Executive Orders and related guidance, have allowed certain places of public assembly in the State of New Jersey to remain open or reopen and have not allowed others to resume business operations. Among those establishments allowed to remain open or reopen are places of worship, and shopping malls. Among those not allowed to reopen are indoor movie theatres.

14. Hayward, et al. (2020) examined the risk of transmission of flu by comparing the locations and business establishments visited seven days prior to a diagnosis of viral condition among 626 British patients diagnosed at Flu Watch clinics and then calculating an adjusted odds ratio (AOR) [adjusted for season of the year]. The authors reported the AOR for having contact with anyone with cold or virus in the past week was 2.02 (95% CI 1.52, 2.71). Because the lower 95% CI was greater than 1.0, this was statistically significant. Although these authors have not

provided risks related to exposure to COVID-19, they have provided an epidemiology model for how virus risk should be assessed for different types of businesses or personal activities.

15. Places of worship (i.e. churches, synagogues, mosques, temples, etc.) present particular risks from the standpoint of the potential for the spread of COVID-19. Persons attending religious services tend to arrive at or near the same time, leave at or near the same time, sit in relatively close proximity for long periods of time, sit, stand, kneel frequently, touch, hold hands, clap, speak, sing, share food, share prayerbooks and other materials. There is evidence in the medical literature linking churches and religious gatherings to spread of COVID-19 (Yong et al., 2020; James et al., 2020). When Hayward, et al. (2020) examined whether patients had been to a place of worship in the prior 7 days, they reported an AOR of 1.81 (95%CI 1.08, 3.04). This was statistically significant.

16. Shopping malls also present particular risks from the standpoint of the potential for the spread of COVID-19. Customers of shopping malls tend to be present for relatively lengthy periods of time in proximity to others, eat, share food, touch many items, try on clothing and shoes, speak, and socialize with friends. We know from the published literature that shopping activities can be a source of coronavirus clusters (Yang, et al., 2020; Cai, et al., 2020). When Hayward, et al. assessed the virus risk among those who went to shops in the past seven days that produced a statistically significant AOR of 1.90 (95% CI 1.26, 2.85).

17. Defendants have imposed the following conditions on the reopening of churches and other places of worship, according to New Jersey Executive Orders Nos. 152 and 156:

- The number of individuals at indoor gatherings shall be limited to 25% of the capacity of the room in which it takes place, but regardless of the capacity of the room, such limit shall never be larger than 100 persons or smaller than 10 persons.

- All attendees at the gathering must wear face coverings at all times except where doing so would inhibit the individual's health or where the individual is under two years of age.
- If there are individuals organizing or maintaining the gathering, those individuals must wear face coverings whenever feasible, and must wear face coverings whenever they are within six feet of another individual, except where doing so would inhibit the individual's health.
- All attendees at the gathering are required to be six feet apart from other attendees at all times, excluding immediate family members, caretakers, household members, or romantic partners, as well as excluding a limited number of individuals organizing or maintaining the gathering.
- There may be no contact between attendees, excluding immediate family members, caretakers, household members, or romantic partners, and excluding a limited number of individuals organizing or maintaining the gathering.
- Where the number of individuals at the gathering is 10 persons or fewer, the gathering is not required to comply the above-listed restrictions, but all individuals at the gathering should wear face coverings at all times, except where doing so would inhibit the individual's health or where the individual is under two years of age.
- If there are individuals organizing or maintaining the gathering, they should, where applicable, demarcate six feet of spacing in the area of the gathering to demonstrate appropriate spacing for social distancing, such as through the placement of cones, flags, or other markings.
- Any physical items, including equipment, may not be shared by multiple attendees of the same gathering except for immediate family members, caretakers, household members, or romantic partners, unless such physical items are sanitized before and after use by different individuals.

- To the degree the gathering requires pre-payment, or seeks donations of any kind, contactless options for pre-payment or donation, such as online or by telephone, must be offered wherever feasible.

18. Defendants have imposed the following conditions on the reopening of shopping malls, according to New Jersey Executive Order No. 157:

- Limit occupancy of any indoor premises to 50% of the stated maximum store capacity, if applicable, at one time, excluding the retail establishment's employees.
- Limit total capacity of any outdoor area to a number that ensures that all individuals can remain six feet apart.
- Establish hours of operation, wherever possible, that reserve a designated period of access solely to high-risk individuals, as defined by the CDC.
- Install a physical barrier, such as a shield guard, between customers and cashiers/baggers wherever feasible or otherwise ensure six feet of distance between those individuals, except at the moment of payment and/or exchange of goods.
- Require infection control practices, such as regular hand washing, coughing and sneezing etiquette, and proper tissue usage and disposal.
- Provide employees break time for repeated handwashing throughout the workday.
- Arrange for contactless pay options, pickup, and/or delivery of goods wherever feasible. Such policies shall, wherever possible, consider populations that do not have access to internet service.
- Provide sanitization materials, such as hand sanitizer and sanitizing wipes, to staff and customers.

- Require frequent sanitization of high-touch areas like restrooms, credit card machines, keypads, counters, and shopping carts.
- Place conspicuous signage at entrances and throughout the store, if applicable, alerting staff and customers to the required six feet of physical distance.
- Demarcate six feet of spacing in check-out lines to demonstrate appropriate spacing for social distancing.
- Require workers and customers to wear cloth face coverings while in the indoor portion of the premises, except where doing so would inhibit that individual's health or where the individual is under two years of age, and require workers to wear gloves when in contact with customers or goods. Businesses must provide, at their expense, such face coverings and gloves for their employees. If a customer refuses to wear a cloth face covering for non-medical reasons and if such covering cannot be provided to the individual by the business at the point of entry, then the business must decline the individual entry into the indoor premises. If the business is providing medication, medical supplies, or food, the business policy should provide alternate methods of pickup and/or delivery of such goods for such individual. Nothing in the stated policy should prevent workers or customers from wearing a surgical-grade mask or other more protective face covering if the individual is already in possession of such equipment, or if the business is otherwise required to provide such worker with more protective equipment due to the nature of the work involved. Where an individual declines to wear a face covering in the indoor premises due to a medical condition that inhibits such usage, neither the essential retail business nor its staff shall require the individual to produce medical documentation verifying the stated condition.

19. Indoor movie theatres present certain risks from the standpoint of the potential for the spread of COVID-19. Audiences sit in an auditorium with other members of the public for a period of time, but all facing towards the screen and not facing each other. Audience members may or may not be allowed to purchase food and drink, and may or may not choose to purchase food or drink. However, audience members generally do not stand during performances, talk, sing, share books or other materials, touch objects other than the chairs they sit in, or touch persons other than those they came to the theatre with. Furthermore, movie theatres have adequate staffing to disinfect and clean surfaces, to establish and enforce social distancing and face masking policies. Some locales have imposed limits on the numbers of customers to be permitted in each theater auditorium to reduce the likelihood of virus transmission, and that serves as a means to limit or prevent COVID-19 transmission. Haywood and colleagues calculated the viral risk from going to the theatre, cinema, or sports event and found an AOR of 1.41 (95% CI 0.82, 2.42). This is not statistically significant.

20. Defendants have not published any guidelines for the reopening of indoor movie theatres in New Jersey. Furthermore, Defendants have not provided or identified any scientific or medical literature demonstrating that indoor movie theaters present a greater risk than places of worship or shopping malls. Movie theatres have been allowed to reopen in certain U.S. states and countries around the world. Defendants have not identified any known cases of COVID-19 transmission at movie theatres. In contrast, there are numerous known examples of COVID-19 being transmitted in places of worship. I have not identified any empirical evidence published in the medical literature that establishes that movie theatres have a greater risk of spreading COVID-19 than places of worship, indoor dining, or shopping malls. Thus, in this context, I currently know of no scientific reason why indoor movie theaters should be treated or assumed to be more risky

than other places of public assembly like places of worship or indoor dining. From a public health perspective, the absence of any supporting epidemiological evidence that indoor movie theaters increase the risk of transmission of COVID-19 compared to other commercial or social activities means that theaters are simply assumed by Defendants to create a greater risk to the public than attending church services or shopping. What does appear to be rational is that if places of worship or shopping malls are permitted to open or operate subject to virus prevention rules, the same regulations should apply to movie theaters. The current New Jersey regulations treat movie theaters differently than other social or business activities and that - is not supported by any published public health data.

21. Plaintiffs NATO and NATO NJ have formulated proposed protocols for the reopening of indoor movie theatres in New Jersey, which were presented to the New Jersey Governor's office. Plaintiffs' proposed protocols that were presented to the Governor's office are attached hereto as Exhibit B. I am informed and believe that such protocols would be implemented by movie theatres in New Jersey when they are permitted to open. The protocols proposed by NATO and NATO NJ for the reopening of movie theatres in New Jersey include:

<u>As to Employees:</u>

- Each employee to sign a document or otherwise certify each day upon the beginning of the shift that the employee does not have any symptoms associated with COVID-19 and that the employee does not have a fever;
- Masks and gloves required for all employees;
- Each employee will be monitored regularly during the period the theatre is open, and any employee who becomes ill will immediately be sent home;
- Employees will be required to maintain social distancing in the workplace;

- All public spaces, restrooms, and food preparation areas will be cleaned, sanitized, and disinfected, in accordance with state and municipal department of health guidelines, NATO reopening operations resources, CDC COVID-19 reopening guidance, FDA Food Safety and the Coronavirus Disease 2019 (COVID-19), and OSHA Publication 3990, Guidance on Preparing Workplaces for COVID-19;
- Relevant areas and surfaces will receive continual cleaning during the hours the theatre is open and after closing;
- Employee break times will be staggered, and staff will maintain social distancing during breaks;
- Any hiring will be conditioned on applicants signing a written certification that the potential employee has been symptom-free for 14 days prior to start date;
- Training will be provided to all employees on all COVID-19 policies prior to re-opening and again when changes are to be implemented or when New Jersey health officials issue updated employee guidelines reflecting the state of medical knowledge;

As to Patrons:

- All patrons must wear masks;
- Seating patterns will be established to achieve social distancing;
- Ticketing, concessions, restroom, auditorium entrance, and other lines will maintain social distancing;
- Signs will be posted to indicate the social distancing and other safety rules;

As to Ticket Sales:

- Ticket sales will be limited to comply with any state guidance limiting the occupancy of any auditorium or theatre venue;
- Touchless purchasing technology will be employed to the extent possible;
- For theatres lacking touchless capability, tickets will be purchased at designated locations where the employee and the patron will not have any physical contact and will maintain proper social distance;
- Plexiglas partitions will be employed at all customer service areas;
- Lines will be marked with measured six-foot increments, to maintain proper social distancing, and patrons will be required to adhere to that spacing while waiting to conduct any transactions;

As to Concessions Sales:

- Queue lines will maintain physical distancing standards, patrons and employees will wear masks, and food service workers will wear gloves;
- Where possible, “apps” enabling pre-purchase of concessions will be employed and purchases will be delivered to patrons’ seats, thus avoiding queue lines;
- Plexiglas contact partitions will be employed at all concessions areas;
- Staff will maintain standards of sanitization at all self-service and courtesy areas and other contact points;

As to Seating:

- Seating patterns will be arranged to maintain social distancing between households on all sides;

- Reserved seating ticketing systems will be updated to require empty seats on either side of a household's ticket purchase;
- If a theatre does not have a reserved seating policy, an usher or theatre manager will direct compliance with seating rules and monitor guests at routine intervals in order to maintain proper social distancing;
- Auditoriums will be cleaned between shows;

As to Security:

- Seating patterns will be arranged to maintain social distancing between households;
- Reserved seating ticketing systems will be updated, as described;
- Auditoriums will be cleaned between shows;

As to Training:

- All employees will be properly trained on safety and sanitizing procedures;
- Signs and placards will be placed in appropriate public areas reminding staff and patrons to adhere to safety policies, and proper markings on floors will be installed to assist in maintaining mandated physical distance levels;
- Signs will be posted outlining the policies and warning that. if not followed, the patron will be asked to leave the theatre;
- All safety policies will be posted on the theatre's website;

Other Health Precautions:

- Showtimes will be staggered to ensure capacity is controlled and sufficient time is allotted for entry and exit as well as cleaning the theatres;

- Additional hand sanitizer stations will be located throughout movie theater facilities;
- Facility HVAC system air exchangers will be calibrated to maximize replacement of indoor air with fresh air;
- Independent theatres with smaller lobby areas and other limited space and limited technology will make every effort to adhere to the guidelines outlined above; and
- Theatres and patrons will be required to follow all CDC Coronavirus Prevention Guidelines, New Jersey Department of Health requirements, and all social distancing requirements established by the Governor in the delivery of these services.

22. I have analyzed Plaintiffs' proposed protocols. They are a comprehensive and detailed plan that would effectively mitigate the risk of spreading COVID-19. They are consistent with guidelines developed by OSHA, the National Institute for Occupational Safety and Health (NIOSH), and WHO. They address all facets of movie theatre operations, including employees, patrons, ticket sales, concession sales, seating, security, training, and other elements of health and safety. These protocols are designed to reduce the risk of COVID-19 transmission for both patrons and employees.

23. I am informed and believe that the Plaintiffs' protocols are comparable to or more extensive than those adopted by other states that have allowed movie theatres to reopen, including, for example, those in Georgia (https://www.georgia.org/sites/default/files/2020-06/georgia_facilities_working_group_re-opening_guide.pdf) and Oklahoma (https://www.okcommerce.gov/wp-content/uploads/Entertainment-and-Sporting-Venue-Guidance.pdf).

24. The Plaintiffs' protocols are significantly more effective in preventing the spread of COVID-19 than the guidelines Defendants have promulgated for the reopening of other places of public assembly, including places of worship and shopping malls. The protocols Plaintiffs propose are more comprehensive than the guidelines Defendants have established for the operation/reopening of places of worship and shopping malls in that the Plaintiffs' movie theatre protocols also require, among the many unique items identified above, masks and gloves for all employees, daily employee wellness certifications, assigned seating patterns to ensure social distancing, detailed employee training programs, and Plexiglas partitions at customer service locations.

25. In my expert opinion, Plaintiffs' protocols provide for a safe and effective set of standards for the reopening of movie theatres in the State of New Jersey.

26. In my expert opinion, the Defendants have not demonstrated that theaters present a greater or even equal risk for transmission of COVID-19 than might arise by shoppers going to a shopping mall or a member of a religious congregation attending a faith service. Because there are no scientific or medical data supporting an elevated virus risk for theater patrons, they should be treated in a like manner and there is no scientific, data-supported reason otherwise. Plaintiffs have presented a comprehensive set of guidelines that will be effective in preventing the transmission of COVID-19 to both moviegoers as well as theater employees and managers.

27. In my expert opinion, for the reasons set forth in this declaration, movie theaters generally present a lower risk for transmission of COVID-19 than places of worship and indoor dining. Moreover, when movie theatre audience members consume food or drink in an auditorium during a movie, they are facing toward the screen, are not talking or shouting over other ambient sounds, and are not facing each other. Thus, in my expert opinion, there would be less risk of

transmission of COVID-19 from indoor theaters than would be present for indoor dining or for houses of worship.

28. In preparing this declaration, among others, I consulted the following references and research:

- National Academy of Science (NAS), Institute of Medicine, Gulf War and Health, Volume 2, Insecticides and Solvents. Washington DC, 2003.
- International Agency for Research on Cancer, Volume 42. IARC (1987) Monograph on the Evaluation of the Carcinogenic Risk of Chemicals to Humans-Silica and Some Silicates, Lyon, France, pp. 96-143.
- Goldsmith DF and Rose SG, "Establishing Causation with Epidemiology" Science on the Witness Stand, Guidotti YL and Rose SG (eds), OEM Ptress, Beverly Farms, MA, 2001.
- Gordis L, Epidemiology, Saunders, Philadelphia, 2009.
- Hayward AC, Beale S, Johnson AM, Fragaszy EB; Flu Watch Group. Public activities preceding the onset of acute respiratory infection syndromes in adults in England—implications for the use of social distancing to control pandemic respiratory infections. *Wellcome Open Res*. 2020; 5:54. Published 2020 Mar 30. doi:10.12688/wellcomeopenres.15795.1.
- Yong SEF, Anderson DE, Wei WE, et al. Connecting clusters of COVID-19: an epidemiological and serological investigation. *Lancet Infect Dis*. 2020;20(7):809-815. doi:10.1016/S1473-3099(20)30273-5.

- James A, Eagle L, Phillips C, et al. High COVID-19 Attack Rate Among Attendees at Events at a Church—Arkansas, March 2020. *MMWR Morb Mortal Wkly Rep*. 2020;69(20):632-635. Published 2020 May 22. doi:10.15585/mmwr.mm6920e2.
- Yang, H.Y., Xu, J., Li, Y., Liang, X., Jin, Y.F., Chen, S.Y., Zhang, R.G., Zhang, W.D., & Duan, G.C. (2020, May 10). [The preliminary analysis on the characteristics of the cluster for the COVID-19]. *Zhonghua liu xing bing xue za zhi = Zhonghua liuxingbingxue zazhi.*, *41*(5), 623-628. doi:10.3760/cma.j.cn112338-20200223-00153.
- Cai J, Sun W, Huang J, Gamber M, Wu J, He G. Indirect Virus Transmission in Cluster of COVID-19 Cases, Wenzhou, China, 2020. *Emerg Infect Dis*. 2020;26(6):1343-1345. doi:10.3201/eid2606.200412.
- OSHA (2020), Guidance on Preparing Workplaces for COVID-19, https://www.osha.gov/Publications/OSHA3990.pdf.
- FDA (2020); Food Safety and the Coronavirus Disease 2019 (COVID-19), https://www.fda.gov/food/food-safety-during-emergencies/food-safety-and-coronavirus-disease-2019-covid-19.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct. Executed on July 31, 2020, at Silver Spring, Maryland.

David F. Goldsmith MSPH, PhD

David F. Goldsmith, MSPH, PhD