

# July 28, 2020 Neighborhood Meeting Princeton University Soccer Stadium and Construction Update

## Summary of Questions and Answers

Responses posted on August 18, 2020

- 1. This facility is built along the lines of "Princeton's long term commitment to carbon reduction and overall sustainability". As a professor of astrophysics, I have been monitoring light pollution at Princeton -- an important component of sustainability. The light pollution project was funded by the "Campus as a Lab Funding Initiative". Princeton is strongly committed to reduce light pollution, and to save the night time environment, including the starry sky, while of course maintaining security.**

**I wish to learn more of the light pollution of these proposed facilities, including the design. The target is ZERO light going above horizon. The stadium lights should be designed along these guidelines. Archway lights, upward oriented lights should be completely avoided.**

**I wish to be more included in the lighting design part.**

The Soccer Stadium and Practice field will utilize the latest technology in LED field lighting fixtures that are much more focused and with improved light control compared to the field lighting systems used on other University athletic fields. The lights at the soccer stadium will have minimal spill beyond the edge of the field. They are also extremely low glare fixtures.

Faculty and students who are interested in participating in the "Campus as Lab" initiatives should contact the Office of Sustainability as they oversee the "Campus as Lab" research opportunities.

- 2. Can you comment on management of light pollution from the stadium lights? Will there be night games?**

There will be night games in the Soccer Stadium. When there are night games it is anticipated that the lights would be turned off between 10:00 – 11:00 pm. On a practice day, the lights would be off around 7:30 pm, unless club teams are using the fields after the varsity players are finished

The University will integrate light controls for the Soccer Stadium into the Athletic Department's Automatic Logic web-based building management software system. Lights will be operable at the site through either keys or card keys issued to approved users that include coaches, certain administrators and facility personnel. Lights will be operable only within certain "windows", and only with approved keys or card keys within these windows. Each night the software will perform a sweep shutting off any lights still on at a predetermined hour and will prevent lights from being used until the next day. We do not use set schedules to turn lights on automatically, and instead require a secondary switch on using a card key at the field. This approach has been very successful in preventing lights from being on when not needed.

3. **Renderings show tall light poles for soccer stadium. Football stadium often has lights on even when nothing is going on. Will there be this kind of light pollution emanating from soccer stadium?**

The football stadium lighting does not use the same technology that will be installed at the soccer stadium. The illustration below from the presentation on July 28, 2020 shows how the soccer lights will be focused within the perimeter of the field with minimal light spillage.

Fixture Shielding and Glare Control  
Athletic Facilities Lighting Impact Study



4. **Are there any renderings of the stadium lit at night from nearby places, such as the intersection of Western Way and Fitzrandolph?**

No, we don't have renderings of those perspectives, but we are using low glare light fixtures to prevent light spillage. From Ivy Lane and Western Way, the field surface and stadium structures will be partially obscured by Upper Strubing Field.

5. **There are some very old trees next to FitzRandolph. One, in particular, is special, with low hanging branches. Is this kept?**

We will be preserving 5 of the existing trees in what we call the Grove in the southeast corner of the stadium. The specific tree mentioned with the low hanging branches will not be preserved.

6. **Could you hint on the total cost of this construction?**

We generally do not disclose the costs of University capital projects.

7. **On the renderings, I see that the soccer field fence is surrounded by rich vegetation, wild flowers, "meadow-style". That would be lovely, but I am wondering, whether it will be just plain grass + pesticide, like at almost everywhere else on the campus. (Sorry for the cynical remark, I am saying this with a positive tone, hoping there is a change!)**

The final landscape will look similar to what is shown in the renderings included in the presentation on July 28, 2020. The project seeks to install attractive landscaping that complements the stadium but that is consistent with sustainable landscape practices that are used on the campus.

**8. What are you doing to address the increased traffic on FitzRandolph - both the vehicular traffic (from the stadium and garage!) and the pedestrian traffic?**

Vehicular traffic impacts are discussed in the traffic impact study for the East Campus Parking Garage which is posted online [here](#). The traffic impacts will be minimal, primarily because 500 parking spaces in the existing lots on Ivy Lane / Western Way will be removed and relocated to the proposed parking garage. This will remove traffic from Ivy Lane / Western Way and allows for improved event parking management when parking is located in one location/structure rather than in disbursed lots

**9. With all the different levels, what's your strategy on curbing skate board damage?**

We very aware of damage to property that can be caused by skateboarders. Plans to discourage skateboarding are still being developed, but the plan may include installation of bumpers on benches or use of textured pavers that limit the ability to jump on the various surfaces. We will be developing a robust strategy to deter skateboarders, consistent with ongoing efforts in other parts of the campus.

**10. Will there be any soccer games happening at the same time as football games?**

While it is possible that there would be a soccer game at the same time as a football game, the Athletics Department endeavors to not schedule concurrent athletic events whenever possible and will manage parking for larger attendance events on the East Campus very carefully.

**11. How will the new garage parking need and capacity vary when soccer, football, swimming, basketball, track and field, and other events all happen at around the same time?**

Transportation and Parking Services (TPS) utilizes an outside vendor to assist with the management of parking and traffic for events. TPS will be able to adjust ingress and egress from the garage to facilitate larger volumes of vehicles when events are taking place. This process of controlling ingress and egress is done now, but will be easier and more effective in the future as parking will be consolidated in one location.

**12. How many neighbors are observing this presentation?**

Approximately 25 neighbors participated in the July 28, 2020 zoom meeting.

**13. There are many utility lines (PSE&G, NJ American Water, Verizon, Comcast) running under FitzRandolph Road and its sidewalks: fiber, TV-internet cable, water, sewer, electric, gas. These are all fairly close to the surface. What measures will be taken to ensure the integrity of these installations during the many weeks of blasting? Do you have plans for continuous monitoring for deterioration of underground fiber, cable, and electrical continuity; water/sewer pipes and couplings; and gas lines (especially the latter) as they are exposed to many dozens of seismic shocks on FitzRandolph and other streets?**

PSE&G gas is an underground utility that will be monitored by PSE&G after each blast. PSE&G electric is an overhead utility that will be visually inspected by the project team after each blast. Verizon, Comcast and any other communication lines that are overhead utilities will be visually inspected by the project team after each blast. NJAW is an underground utility in the road and will be visually inspected by the project team for any waterline breaks.

There is no sanitary sewer that serves the local community within 500 feet of the blast area.

**14. Will there be any public presentations or discussion regarding this blasting project or subsequent geo exchange blasting projects? If so, will these discussions take place before you issue the final blasting plan?**

*[N.B. this question was posed prior to the July 28 meeting but is included here for tracking and awareness]* An update on construction and the planned blasting was included as part of the presentation at the neighbor zoom meeting on July 28, 2020. We will continue to communicate and meet with neighbors as the blasting plan is finalized and implemented.

**15. Will blasting be limited to the geo exchange “bore hole location”, or will additional blasting be necessary for the large “water tank” location?**

The upcoming blasting is limited to an area on the site of the former Lot 21, the area to the west of FitzRandolph Road. At this time the project team has not confirmed if any blasting will be needed at the water tank location.

**16. If blasting is necessary for the tank location too, what is the size and scope of that project? My below questions would apply to the potential “tank location” blasting project too.**

The project team has not confirmed if any blasting will be needed at the water tank location. Typically test pits will be dug to determine the quality of the rock at a particular location. Following those test pits, the project team will be able to determine if blasting is necessary. No dates have been set for conducting those test pits. When the analysis is complete, neighborhood residents will be updated with our findings.

**17. It has been indicated that the “bore hole location” blasting project will last 8 weeks. Do you know how many explosions there will be during the 8-week period?**

After the test blast is completed the project team will develop a comprehensive plan and we will be able to let neighbors know the exact times of the blasts that will be taking place over the 8-week period. The results of the test blast and the schedule for the remainder of the excavation will be available in mid-August.

**18. Is there an understanding on how large these blasts will be?**

These are limited blasting operations that follow US Bureau of Mine standards that limit size and frequency of the blasts. The test blast will be a good indication of the type of blasts that will take place.

**19. How loud will these blasts be, both the explosion and warning sirens.? (Decibels)**

We don't have a specific decibel reading for the blasts or warning horns. The warning horn is analogous to a car horn. Following the test blast, we'll have more specific information to share.

**20. Do you know how much explosive will be used for each blast, and how much explosive material will be transported and stored on site?**

We don't have information on the specific amount of explosives used, but we can confirm that explosives are not stored onsite. The amount needed is brought to the site each day by the contractor. There is one person responsible for the explosives and this is a carefully managed process.

**21. Are there projections on how large the vibration field will be at different distances from the blast site?**

The test blast will confirm that vibration field. The site has been studied prior to the test blast, and the test blast will be based on those observations. Seismographs will be located at a 250 foot and 500 foot radius around the test blast.

**22. Is there data regarding the potential type of damage that occurs to the environment and homes located close to the blast site?**

The project team does not expect any damage to homes or to the environment as a result of the blasting. The University has done blasting on campus at other construction sites including Frick Chemistry, Icahn Laboratory and most recently at the site of the new residential colleges.

**23. If damage does occur due to the explosions and resulting vibrations, is the University prepared to provide remedies?**

If damage was to occur as a result of the blasts it would be the responsibility of the University to provide remedies. The University has offered to make a pre-blast inspection of nearby residences as we have done in the past when projects have required blasting and will continue to offer a survey in the area of nearby structures to document conditions prior to the blasting.

**24. Will seismographs be installed and readings taken in the heart of our residential neighborhood or just at the blast site?**

There will be seismographs installed at structures within an approximate 500 foot perimeter from the blast location. This 500 foot radius does not include any residential property. The project team has received permission from owners of nearby residential structures on Fitzrandolph and Faculty Road outside of the 500 foot radius to place seismographs. Readings will be taken and recorded after every blast.

**25. How many blasts are we going to have over 2 months? My research, meetings with students and my group, are constantly disrupted by drilling - I cannot even imagine it with the everyday**

**SHELLING! My kids jump multiple times a day as is. What is the university planning to do to attenuate the noise from these blasts on top of the drilling?**

We have been attentive to safety and noise sensitivity during the prior five campus construction projects that also required blasting. We will conduct a test blast, which will set the benchmark. Based on that result, we set our monitors to much less than the state's tolerable limit. The blast should be described as more of a shudder than a blast and not a shelling. We have done this before on campus, and typically it is organized around a specific time of day, consistently. This enables people to plan accordingly.

**26. Some of us are working this fall online, not only for PU. Does the blasting affect either neighbors' phones or wifi? Other than noise at the same time daily?**

We do not see any reason why phones or wifi would be interrupted. We have had no issues with this for the prior five projects that we've blasted for.

**27. Where will all the excavated soil and rock be taken?**

Some material will go to our soil recycling yard located at 300 Washington Road in West Windsor. We are also evaluating other locations for the material to be taken to post-excavation. The material will not be stored in the Municipality of Princeton.

**28. Is the university doing anything to make sure the blasts do not damage any nearby structures. Even if a single blast doesn't, what is the guarantee that there will be no effect to long-term structural integrity of our houses after many daily blasts? Are there state or federal limitations on such blasts or noise levels and how does your construction noise compare to those limits?**

There is a limitation on the vibration resulting from the test blast, and that is the primary factor that sets the blast tolerance. The vibration that we have discussed is more like a "shudder" and it is monitored and restricted. Noise levels are also dictated by regulations. The noise level has not caused problems in the past when blasting has occurred on campus and we do not think that it will be for this project.

**29. Can you clarify how deep the explosives will be placed in each bore hole and will that depth be consistent in all locations during the "fracturing" process.**

The depth of the explosives will vary in each hole. They would most likely be placed in the 8' – 10' range below grade. The depth will be dependent on the characteristics of the rock. The depth will be refined following the test blast.

**30. Will you also be monitoring the vibrations at nearby UNOW inside of their building?**

We will have seismographs placed near the UNOW structure. This is a University owned building.

**31. Will there be blasting when U-Now is operating with children on site?**

**32. What has been done to prepare UNOW for the impact of the construction on their community.**

Yes, there will be blasting when children will be on site. The project team has been coordinating with the leadership at UNOW to ensure they are aware of the blasting plans and schedule

**33. Was the UNOW board consulted about building the geothermal plant next to the nursery school and did they give their approval?**

We are in continued conversations with director of UNOW regarding construction activity in the area. Noise in the area has been a consideration and we will be working together to facilitate construction with the child care center schedules whenever possible.

**34. What will be the decibel level of the T.I.G.E.R. operation be at the U-Now site?**

Per the Acoustical Report dated March 13, 2020 (available via [this link](#) on the project website), the anticipated noise levels from the TIGER equipment are between 45-50 dBA. This is equal to the ambient noise levels that are already measured on site prior to construction.

**35. At the last meeting, there were many questions about managing noise from ongoing drilling activities. What new developments have there been on this front? Still quite noisy every day.**

A geo-exchange drill rig that used an “air hammer” process was particularly noisy and it’s use on the East Campus site has been discontinued. We have been receiving guidance from an acoustician regarding noise mitigation approaches, and sound attention blankets have proven to be effective. We will increase the height of the blankets as needed to mitigate sound. Once the excavation is completed, the drill rigs will operate below the ground level, and the drill noise will be buffered by the depth of the pit.

**36. What is the level of noise expected around Hartley street (in the Dean Mathey community) during and after the constructions are over and all the facilities mentioned are operating? (even qualitatively, not necessarily in dB levels)**

*(Note: the University refers to the road from Alexander Street to Harrison Street as Faculty Road, not Hartley Avenue. We follow this practice throughout this report.)*

The impact at these locations from the planned projects after construction will be minimal as the predominant noise is the normal “background noise” of the suburban neighborhood. Any sounds emanating from the new facilities would be compliant with state ordinances that limit noise at the property line.

**37. Is there a way to decrease the daily noise from trucks backing up—a constant sound that is very irritating.**

We will look at our logistics plan and will attempt to minimize the noise from vehicles backing up.

**38. In various European cities (eg, in the UK), single-tone reverse alarms have been banned: only white noise alarms are allowed (“swoosh sound”). It has proven to be safer for both construction workers and residents. Is Princeton considering similar measures? And, if not, why not?**

We will look into this. There are OSHA requirements that vehicles used at our project sites must adhere to.

**39. How many dump trucks/tractor trailers do you expect to travel on our local roads during the project? Soil removal, concrete delivery and precast concrete components delivery?**

**40. The number and noise of trucks travelling to Harrison is alarming, and incredibly noisy.**

We have determined that the newly reconstructed Alexander Street bridges can accommodate full trucks removing soil from site. Therefore, those trucks will travel to Route One from the East Campus site via Faculty Road to Alexander Street. Returning (empty) trucks will travel back to the East Campus site via Washington Road to Faculty Road. The Princeton Municipal Engineering Department has approved this change to the hauling route, effective immediately. Approximately 150-200 truckloads will travel this route per day, Monday to Friday, during the eight week excavation. This is similar to the number of vehicles that had traveled on Faculty Road to Route One via Harrison Street in recent months when excavation for the residential colleges took place. Deliveries during construction will be less, and their frequency will vary depending on the phase of work. Any change to the hauling plan will need to be approved by the municipal engineer.

**41. How will the 150 trucks per day get to US1? Via Harrison St. (along Hartley) or to Washington Road?**

*(Note: the University refers to the road from Alexander Street to Harrison Street as Faculty Road, not Hartley Avenue. We follow this practice throughout this report.)*

Please see response to question #40. Approved hauling requires that departing trucks travel to Route One from the East Campus site via Faculty Road to Alexander Street, returning (empty) trucks will use Washington Road to Faculty Road.

**42. How will they come back to campus when they're empty?**

The empty trucks will travel back to the East Campus site from Route One via Washington Road to Faculty Road.

**43. Why Faculty to Harrison, as opposed to Washington, which has fewer residences?**

**44. Please reconsider the Harrison route. Reconsider Washington.**

**45. But does the Washington Road bridge have the capacity to support the trucks?**

Please see response to question #40

**46. Bridge weight loads - When will PU please be reporting to us the current weight load capacity of the Harrison Street bridge, the Lake Carnegie (aka Washington Road) bridge, and the Alexander Road bridge. We greatly appreciated Princeton University's offer to research and report this.**

**47. Truck weight loads - We'd also like to understand what the maximum loaded weight of each of the 150 trucks that will be coming/going each day as now currently planned on Hartley Avenue for the next ~8 months.**

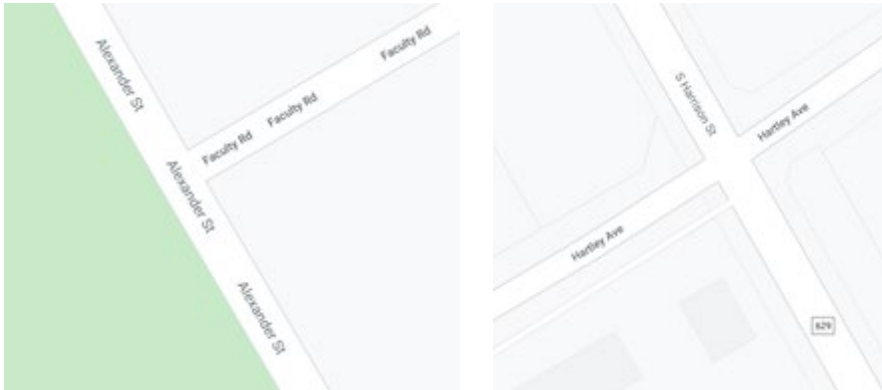
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The maximum loaded weight for the trucks is 35 tons (70,000 pounds).



48. **Alternative truck routing to US1 - Based on the new information provided at the Tuesday 7/28 Zoom meeting last night, it's important for us to please understand how a truck turning left from Faculty Road onto Alexander Street en route to US1 would be a problem if a truck turning right from more narrow Hartley Avenue to Harrison Street isn't.**

*(Note: the University refers to the road from Alexander Street to Harrison Street as Faculty Road, not Hartley Avenue. We follow this practice throughout this report.)*



**We understand that the new much higher capacity Alexander Road bridge wasn't reopened until Friday, May 15<sup>th</sup>. Naturally it couldn't have been used by heavy trucks beforehand. But what about now after the prerequisite required permits are requested and issued? We'd greatly appreciate that this needs to be carefully considered and reported back to our community.**



**49. Total volume and routing of all project trucks traveling on our streets**

**How many trucks are currently coming/going to campus daily along Hartley Avenue for the existing central campus construction projects? Will this volume of trucks continue for all or part of the East Campus drilling, garage construction, and geo-engineering projects? How many and for how long? The quantity of trucks will significantly reduce after the 8 weeks excavation work is complete.**

**To avoid traveling on residential streets could all of these trucks they be re-routed to Alexander Road or Washington Road (*possibly when empty*) instead? What is realistically feasible?**

*(Note: the University refers to the road from Alexander Street to Harrison Street as Faculty Road, not Hartley Avenue. We follow this practice throughout this report.)*

There may be material deliveries for the residential college project that coincide with east campus excavation activities. The construction managers for the various projects collaborate to ensure that construction related vehicle deliveries do not impede normal traffic flow.

**46. Why isn't the University monitoring the social distancing of the construction workers and the wearing of masks. They seem to do neither.**

The contractors at University construction sites have had training regarding mask requirements for construction sites. Note that masking requirements for when they are on the project site are different from masking requirements when they leave the project site. If you observe a situation that you want to report, please contact the facilities customer service center at 609-258-8023.

**47. There is a pond south of UNOW. Will there be extra pollution added to the creek.**

The "pond" to the south of UNOW is a designed stormwater basin. The soccer stadium and practice field will be managing stormwater on the project sites. After a large rain event it is possible that water may flow to the basin, but this would be consistent with the intended use of that basin for stormwater management. Temporary soil management measures are put in place to control runoff from the project sites during construction.