



REPORT TO THE DEVELOPMENT PERMIT BOARD

Agenda Item: 3.2

Forwarded to: Development Permit Board on Recommendation of the
Director, Campus & Community Planning

Approved for Submission:

Director, Development Services, Campus and Community Planning

Date: May 3, 2022

Subject: File # DP 22011T: Temporary Basketball Court, Wesbrook Place
Lot 1 (future elementary school site)

RECOMMENDATION

That the Development Permit Board recommend that the Director, Campus and Community Planning issue a temporary Development Permit for a recreational basketball court on Lot 1 in Wesbrook Place generally as detailed in the attached drawings (Attachment A), subject to the following conditions:

- 1. That this permit be issued on a temporary basis until such time that the site is required for the development of a school as indicated in the Wesbrook Place Neighbourhood Plan;**
- 2. That signage be installed on site that identifies the hours that the court may be in use and encourages responsible play that respects neighbouring residents and park users;**
- 3. That the UNA monitor use and feedback from the community following the completion of the court and consider implementing further noise mitigation measures to ensure compliance with UNA noise by-law, if necessary, such as:**
 - a) Application of sound dampening surface treatment to the court;**
 - b) Perimeter fencing and gate.**

BACKGROUND

The land proposed for this project is identified in the Wesbrook Neighbourhood Plan as the site for a future elementary school. It is anticipated that a school is not expected to be built on this vacant parcel for at least 10 years. Temporary uses may be considered as long as they are not in conflict with policies in the Wesbrook Neighbourhood Plan. A Development Permit application to build a temporary basketball court next to Webber Lane on the future elementary school site south of Brockhouse Park



was first submitted to Campus and Community Planning by UBC Properties Trust on behalf of the University Neighbourhoods Association (UNA) on November 5, 2021. The desire to locate a temporary basketball court in the neighbourhood was identified by the UNA, made possible through funding that could be procured for the UNA through the Community Works Fund – a Metro Vancouver program.

Due to concerns raised by adjacent residents early in the process regarding the proximity of the court and noise impacts, the UNA withdrew the application later that month.

The UNA then struck a committee to conduct a site analysis to assess other potential sites in the Wesbrook Neighborhood for a temporary basketball court that would consider noise impacts and land use policies. Nine sites were considered, including the previously considered future elementary school site. Of these, eight were future development sites and one was currently used for community gardens and a playground. The site analysis is appended to this report (Attachment B).

The conclusion of the Committee was that the future elementary school site was the preferred location due to its long anticipated future development timeline for use as a school (10+ years) and its location next to other recreational activities (beach volleyball, Brockhouse Park and the children's splash park). Further, hard surface sport courts would be an anticipated permanent feature of the future school planned for the site.

Based on this analysis, the UNA requested that UBC Properties Trust submit a new revised application for the basketball court on the future elementary school site that responded to the concerns that were heard from residents regarding the original application. The new application was received by Campus and Community Planning on February 23, 2022 and featured the following changes:

- The court was moved an additional 30 meters from Webber Lane resulting in a 64 meter separation between the court and the nearest residential building (Webber House).
- Access to the court was relocated from Webber Lane to the north side next to the splash park
- Landscaped berms were added to the east and south sides of the court
- An acoustical consultant was contracted to conduct a noise assessment of the court in this new location

PROCESS

While the UNA has proceeded with a Development Permit Application to determine the technical viability of the proposal in the context of applicable policies and regulations, it was anticipated that the public engagement process would generate substantial feedback. If the proposal is approved, or approved with conditions, on technical merit, the proposal will still require final approval of the UNA Board prior to advancing to the Metro Vancouver Board for Community Works Fund approval.

LOCATION

The proposed location for the basketball court occupies the eastern section of Lot 1 south of Brockhouse Park. The temporary volleyball courts are immediately to the west. To the south and southeast are Lot 6 (future location of Wordsworth a 16 storey market residential tower and townhomes) and Mundell House (6 storey faculty staff building). Across Webber Lane to the east is Webber House (a 6 storey faculty/staff building).



Figure 1. Location Map for the Proposed Basketball Court on a portion of Lot 1 in the Wesbrook Place Neighbourhood

PROJECT DESCRIPTION

Project Proposal

The proposal would consist of one full size basketball court oriented in a north/south direction immediately east of the existing temporary volleyball courts. A seeded unprogrammed open space would separate it from Webber Lane. The court would contain two hoops on either end and have an asphalt surface. Access to the court would be from the north just west of the splash park. An existing berm would separate the new court from the existing volleyball courts to the west. Two new additional berms, seeded and treed, would be located on the east and south sides of the proposed basketball court. The proposed design does not currently include fencing. Nearby amenities in the adjacent Brockhouse Park will also serve the court and include a drinking fountain, trash receptacles, and bicycle racks. An additional trash receptacle would be located along the north access pathway as well as bench seating. A concrete surface is proposed for the connecting paths at the entry to the court. The court would not be lit. The layout plan and details for the court are illustrated in Attachment A.

Maintenance and Operations

The court would be managed and maintained by the University Neighbourhoods Association.

Noise Assessment

UBC Properties Trust contracted the services of BKL Acoustical Consultants to conduct a noise assessment that would estimate the anticipated noise levels from a court designed according to the attached plans and proposed location. The assessment is attached to this report (Attachment C).

The assessment was conducted based on readings from an existing basketball court at Totem residences and were used to inform a 3-D model that estimates the noise levels generated by basketball play that are expected to impact adjacent residential properties. The attached report describes the scope, methodology, and results of the noise model.

The UNA Noise Bylaw identifies the maximum noise levels that are permitted at the point of reception in UBC residential neighbourhoods. The noise bylaw states that no person shall cause continuous sound (defined as a sound that occurs for more than three minutes in a 15 minute period) of which:

Daytime (weekdays: 7am to 10pm) exceeds 55 dBA at a point of reception;



Night time (all other times) exceeds 45 dBA at a point of reception.

The modeling indicated that the typical noise level from basketball activities is not expected to exceed the daytime limit (55 dBA) at anytime. While predicted noise level could reach the night time limit of 45 dBA, the court will not be lit and night time use will not be permitted.

PUBLIC CONSULTATION and ADVISORY BODY REVIEW

Public Notification and Consultation

The details of the two on-line Public Open Houses were posted on-site on the Development Permit notification sign and the Campus and Community Planning website. An advertisement was posted online in the Ubyssy running from April 6 to 20, 2022. Notifications were emailed to the University Neighbourhood Association (UNA), the Alma Mater Society (AMS), and Graduate Student Society (GSS). Notification letters for residents within 30 m of the site were emailed to Village Gate Homes for distribution to residents of the neighbouring Mundell House and Webber House, as well as to Wesbrook Properties for Georgia Point.

Campus & Community Planning staff introduced the project and representatives from the University Neighbourhood Association, UBC Properties Trust, and the project landscape architecture consultant presented the project plans. Staff and the applicant team responded to questions about the project.

The meetings were accessible via a Zoom meeting link emailed out to registrants on the day of the events and also posted on the project website. Prior to the events, 38 registrants signed up using the online registration form for the morning/afternoon session and 38 for the evening session. The number of participants, in addition to staff and the applicant team, peaked at 17 as of 11:50 AM for the afternoon session and 18 as of 7:15 PM at the evening session.

Feedback Summary

Of a total of 203 written comments that were collected, 132 expressed non-support and 71 expressed support.

The primary reasons given for **non-support** of the proposal included the following:

- Noise impacts to neighbouring building residents will be unreasonable and that noise bylaw enforcement will become an issue;
- Loss of green open space;
- A regulation-sized basketball court is not suitable for the particular location and would support more aggressive competitive players;
- A basketball court is not the amenity that would be most appreciated by neighbourhood residents

The primary reasons given for **support** of the proposal include the following:

- A desire to see additional sporting amenities in Wesbrook Place;
- Basketball is an activity that appeals to a wide range of player groups and the proposed court would provide a place for community members to meet;
- There is a need for facilities available for older children and teenagers for be active.

In addition to online comment forms, 5 sets of email correspondence were received regarding the project. These emails expressed concerns whether the noise study correctly modelled



potential impacts and enquired about the development permit review process, the impetus of the project, and the function of the Development Permit Board and its membership. The correspondence also expressed concern regarding the consistency of the proposal with the Wesbrook Neighbourhood Plan's section on future parks and leisure facilities as well as the lack of policy regarding temporary uses within UBC planning documents. The respondents provided suggestions to further mitigate potential noise impact by moving the facility into the area of the adjacent volleyball courts, using a sound dampening surface treatment and fencing to limit night time access. A detailed consultation summary is provided in Attachment C.

Response to Public Consultation Comments:

- Noise impact: The impact of noise on adjacent residential buildings has been analysed through a professional noise assessment and modelling. The results of the study indicate that the sound generated by the use of the court would be well under the daytime noise by-law limit (55 dBA) and not exceed the night time noise by-law limit of (45 dBA). While the sound generated by the court will not likely rise substantially above ambient noise level of adjacent recreation uses. Staff have recommended that the court be signed with the hours that the court may be in use and encourage responsible play that respects neighbouring residents and park users.
- Loss of green open space: As a future development site, the site has been used to stage construction material and to provide parking. These are temporary uses which support the phased development the neighbourhood. Recently the gravel parking area on the future school site was covered with soil and seeded to better control dust and allow for temporary recreational use. The proposed court represents approximately 10% of the area recently grassed over parking area.
- Full-size court will support more aggressive competitive play: Community feedback includes support for amenities serving older children and teenagers and suggest basketball is an accessible sport that can bring community members together. A full-size court provides the flexibility for full court as well as half court play.
- Basketball is not the amenity most appreciated by the community: Wesbrook Village has an exceptional network of park spaces which serve toddlers and young children very well. The proposal will provide an amenity for older children, teenagers and adults. While the DPBoard will consider the technical viability of the proposal in the context of applicable policies and regulations, the proposal is an initiative of the UNA in response to interest and a funding opportunity, for which they will decide whether to proceed.

Development Review Committee (DRC)

The project was presented to the Development Review Committee (DRC) on April 14, 2022. The Committee supported the proposal subject to the following recommendations:

- That the applicant consider making the court more accessible for younger children.
- That the applicant consider planting some broad canopy trees to introduce shade and provide some comfort.
- That the UNA provide signage with rules around operating hours in relation to the UNA noise bylaw.

Campus and Community Planning will work with the applicant team to address these recommendations.



PROJECT EVALUATION

Compliance with Applicable Planning Policy Documents

Lot 1 is designated for School use in the Wesbrook Neighbourhood Plan. It is anticipated that a future elementary school will be built on this site no sooner than 10 years. The proposed basketball court would be approved as a temporary permit until such time that the site is required for the development of a school as indicated in the Wesbrook Place Neighbourhood Plan.

Campus and Community Planning conditionally supports this project as a temporary use on this lot in recognition of the positive contributions that this activity is expected to bring to the community promoting the goals of the Wesbrook Neighbourhood Plan related to encouraging community gathering and interaction, public recreation experiences and programmable spaces for active recreation (Sec. 1.4.2).

The noise assessment indicated that noise impacts on adjacent residents are expected to be well below the maximum acceptable daytime dBA levels (55 dBA). In response to the concerns raised by neighbouring residents, staff recommend that the UNA monitor use and feedback from the community following the completion of the courts and consider implementing further noise mitigation measures to ensure compliance with UNA noise by-law if necessary.

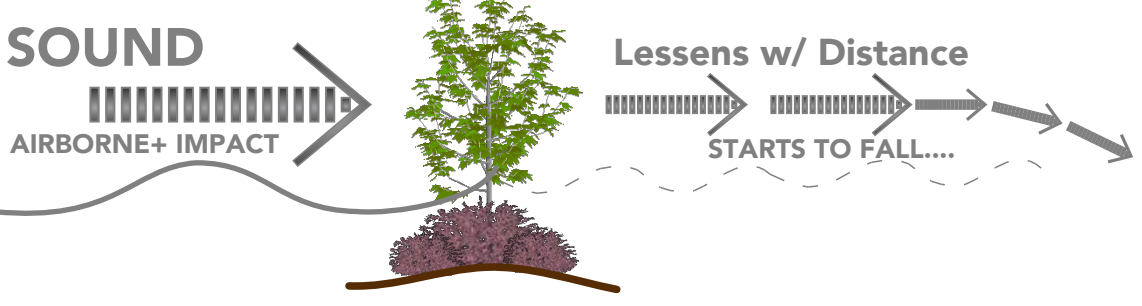
SUMMARY

Campus and Community Planning recommends that the Development Permit Board endorse the report and recommends that the Director of Planning be directed to issue the Development Permit in accordance with the conditions noted in the Recommendation on page one of this report.

ATTACHMENTS

- Attachment A: Proposal Plans
- Attachment B: Basketball Court Siting Analysis report
- Attachment C: Wesbrook Temporary Basketball Court Noise Assessment prepared by BKL Acoustical Consultants
- Attachment D: Public Consultation Summary

MITIGATING NOISE.....
SOME EFFORTS IN OUR DESIGN



- Sound lessens with distance, so maintain min. 50 yds.(±45m)-WE ARE ±70m to COURT CENTRE.
- Design Court such that main noise areas-goals/hoops-are oriented away from any adjacent neighbours-not always possible as Sun Angles takes precedence. PREFERRED SITING HAS BEEN ACCOMPLISHED.
- Choice of densely panelled fencing and/or dense vegetation as our sound "absorption" barrier. DUE TO CONFLICT WITH CPTED DESIGN-WE'LL USE SOME VEGETATION AND GENTLE BERMING.
- Consider use of an acoustical/sound absorptive surfacing. Has implications to budget and with ongoing maintenance. Not often utilized in exterior environs. HAS BEEN CONSIDERED BUT NOT YET IMPLEMENTED THIS SITE-WE HAVE DISTANCE HELPING US.

UNIVERSITY HILL/
UNA COMMUNITY FIELD

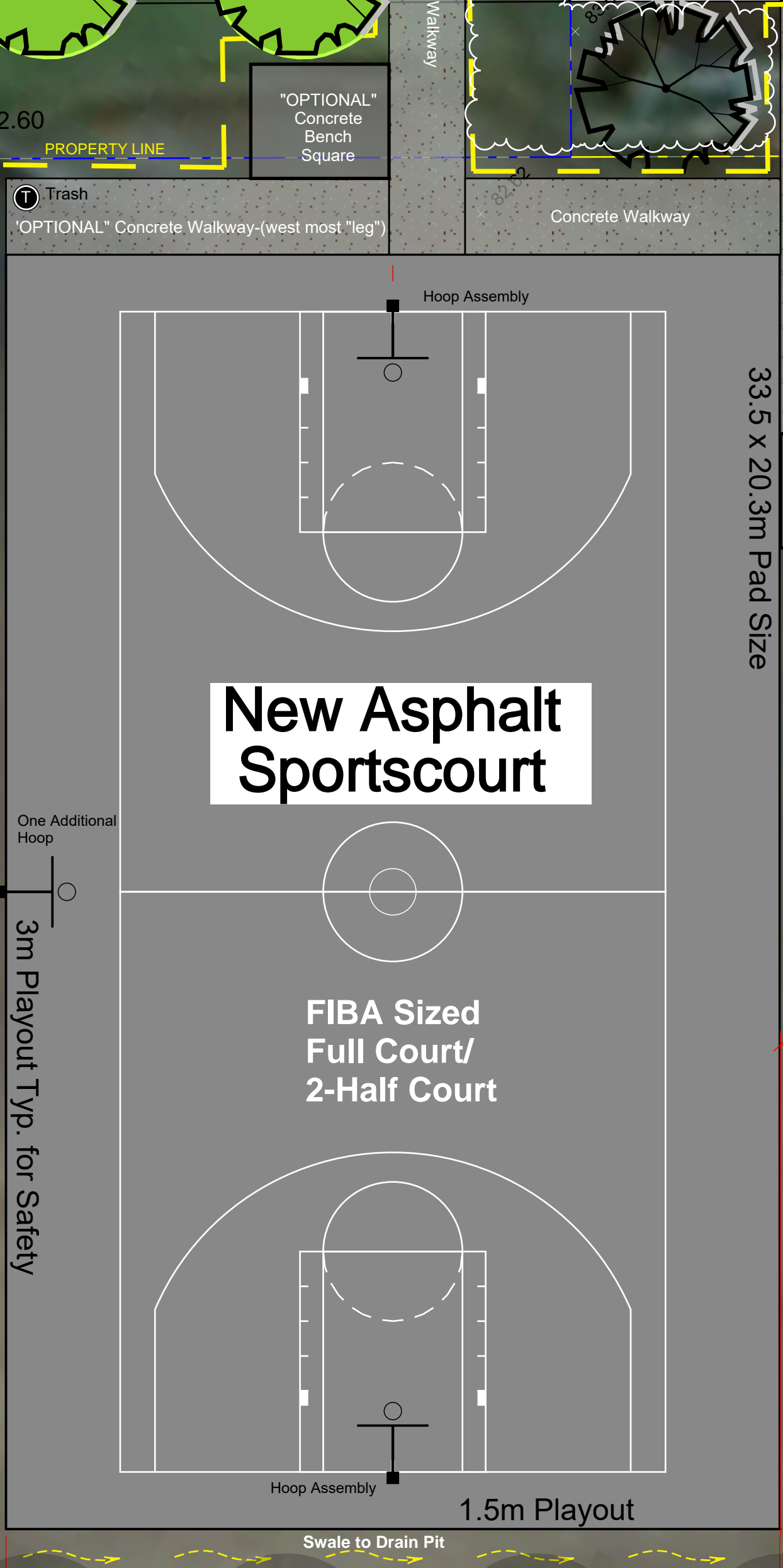
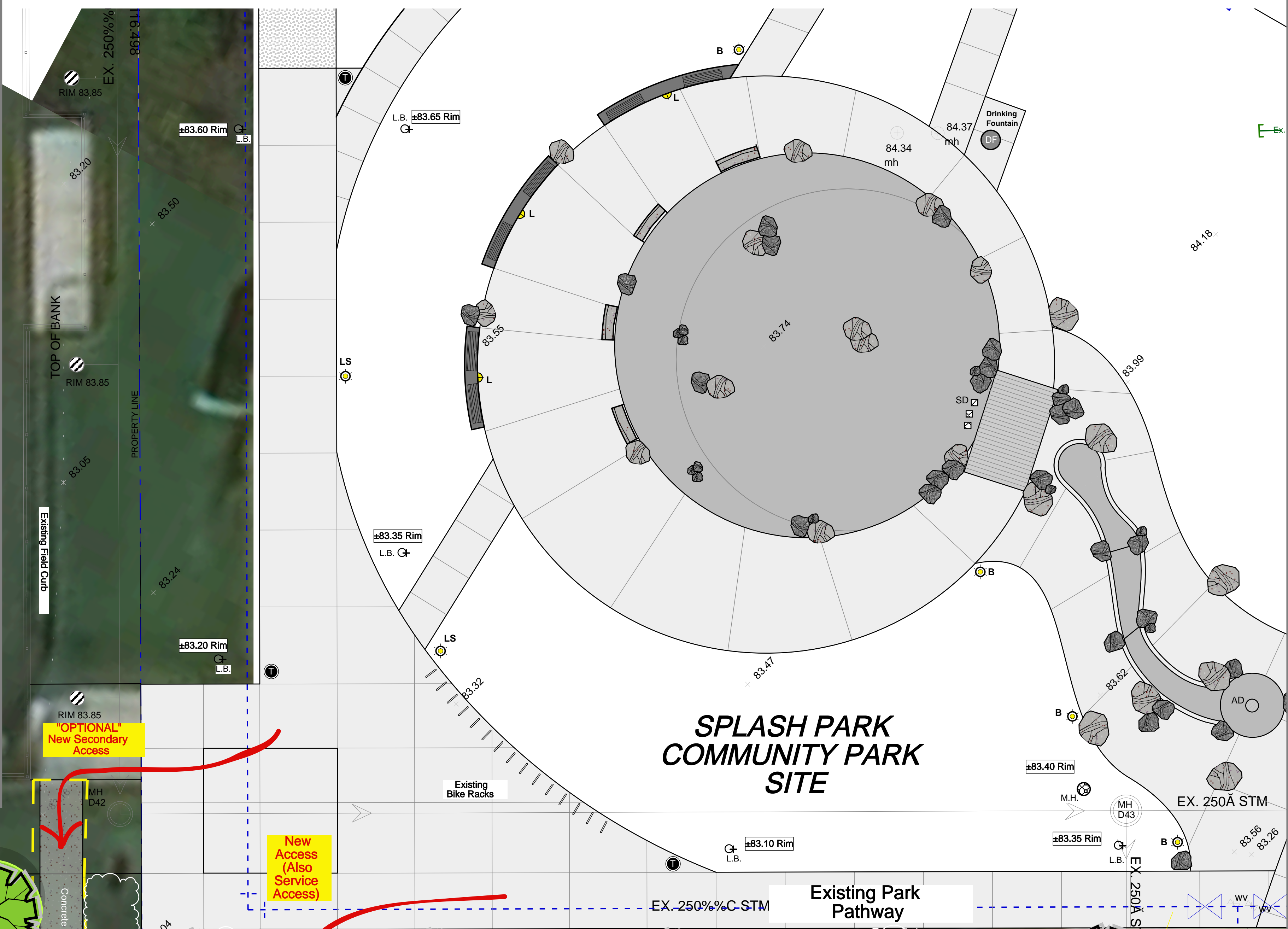
COMMUNITY BEACH
VOLLEYBALL COURTS
(and Berm)

Program Assumptions Remain:

- north south court orientation-siting is slightly "off" true north for playability reasons.
- no ball control fencing-setbacks are "good".
- asphalt court, max 1.5% cross slope to SE corner.
- ground recharge on site drainage.
- connectivity with Existing Park paths and infrastructure.
- additional site improvements and amenities:
 - drinking fountain is in Park-not added;
 - informal seating/off court gathering has been considered;
 - trash receptacles-add 1 at North access route;
 - bike racks-sufficient in the Park.
- additional Hoops-1 added-no additional lines.
- additional sports lines?(eg. Roller Hockey Box)-none.
- some kind of irrigation-Contractor Designed "for new Shrubs and Trees.
- NOTE: UNA TO DECIDE ON UPCHARGE OF \$15K FOR PLEXI-PAVE SPORTSCOURT SURFACING IS DESIRED. TBD at time of Tender.

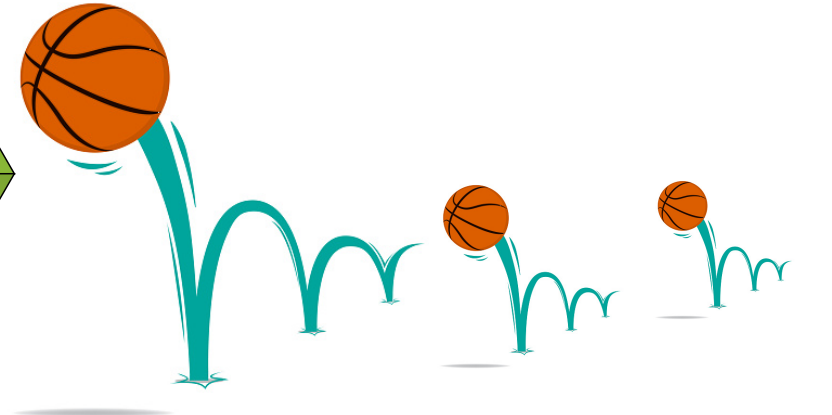
Note: All Site Services to be identified/ marked for UBC Engineering approval prior to construction.

AVOID ALL SERVICES WITH PROPOSED CONSTRUCTION. NO VISIBLE SERVICES TO BE BURIED ON TEMP. OR PERMANENT BASIS. (Most Services concentrated in Webber Lane Boulevard).



Note-New Siting requires slightly more "Earthworks"

OUR BEST PRACTICE



GOOD DESIGN SHOULD CONSIDER...

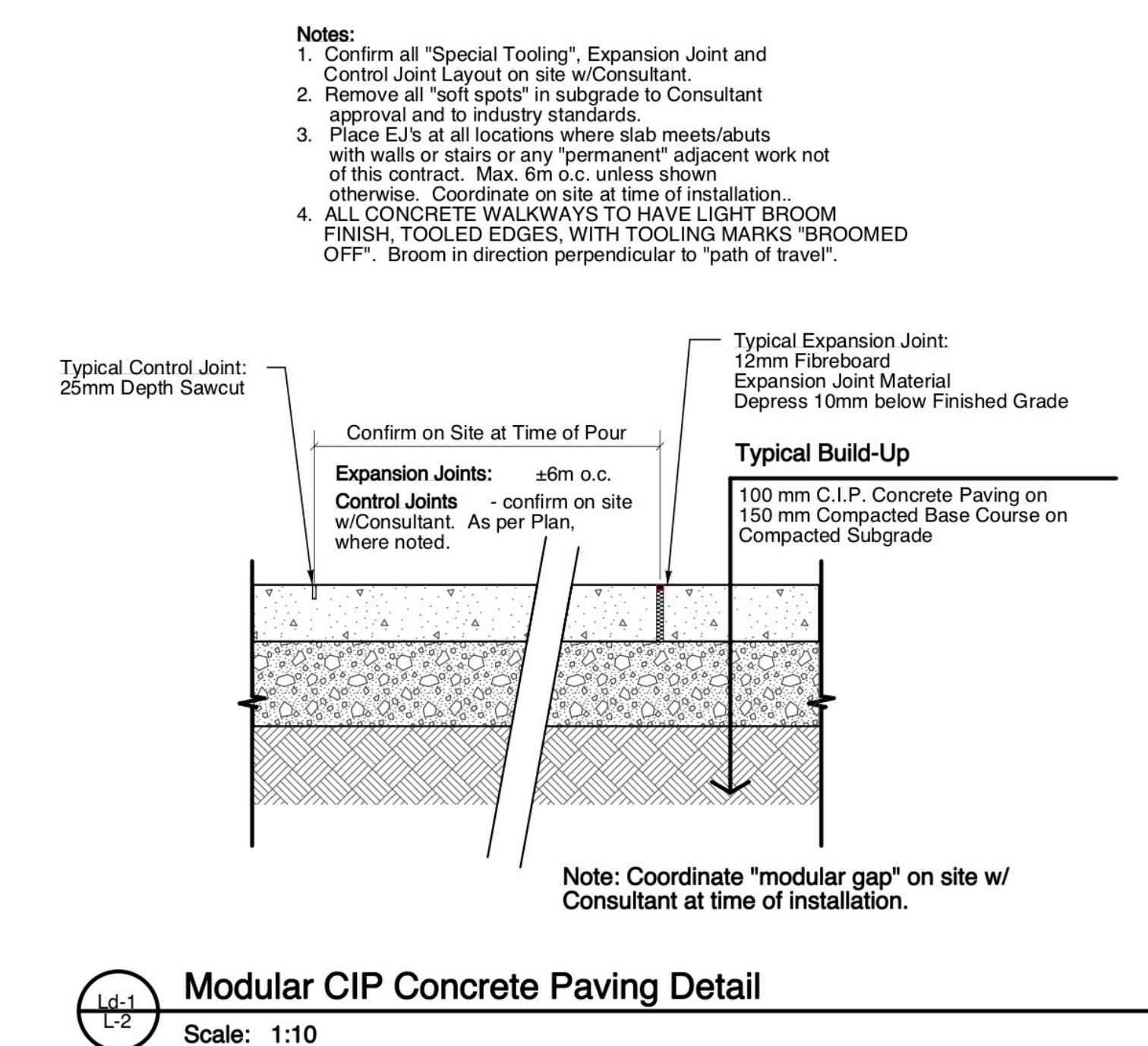
- COURT ORIENTATION/VISIBILITY**
 - Best orientation is N-S with a max. of 10-15° variation off "true North".
 - Best to be sited in clear open spaces with high visibility. CPTED Design Principles should apply.
 - Typically unlit, to discourage night time use and loitering.
 - Link or site adjacent to other park/community/recreational activities for ease of use, way finding AND "support" amenities.
- GROUND CONDITIONS**
 - Best to fully understand ground/site conditions-the "sub grade", ie No underground streams/services; select flat sites with good, bearing native underlying ground.
 - Full geotechnical assessment, as required.
- CLIMATIC CONDITIONS**
 - Best to consider protection from wind with berms or landscape buffering (Trees)...ensure distance to any Trees.
 - Protection from Sun on site margins-while resting. Use of Trees and/or Shelters.
- MULTI-USE OR NOT?**
 - Efficient use of "S Capital" in today's construction world mandates that good design should consider use for other hardcourt sport activities, if applicable. Often courts when not in use are excellent "flexible" and multi-use spaces used for any number of additional recreational and/or community opportunities.
- "PLAY-OUTS"/SURROUNDS**
 - The more space on margins the better. Ensure min. 2m clear OVERBUILD FOR SITE SAFETY. (Enhances multi-court use).
- SEATING/APPROACHES**
 - Always add seating and gathering space "off court of play".
 - Efficient approach paths to ensure connectivity and safe access.
- SERVICES/AMENITIES and Maintenance**
 - Think about ALL enhancements that improve functionality and use/enjoyment of the new hard court-bike racks; trash receptacles seating options; drinking fountain/bottle filling; hose-bibs/quick connections to ease maintenance.
 - PROXIMITY TO NEARBY WASHROOM FACILITIES.

Refer to Details on Drawing L-2

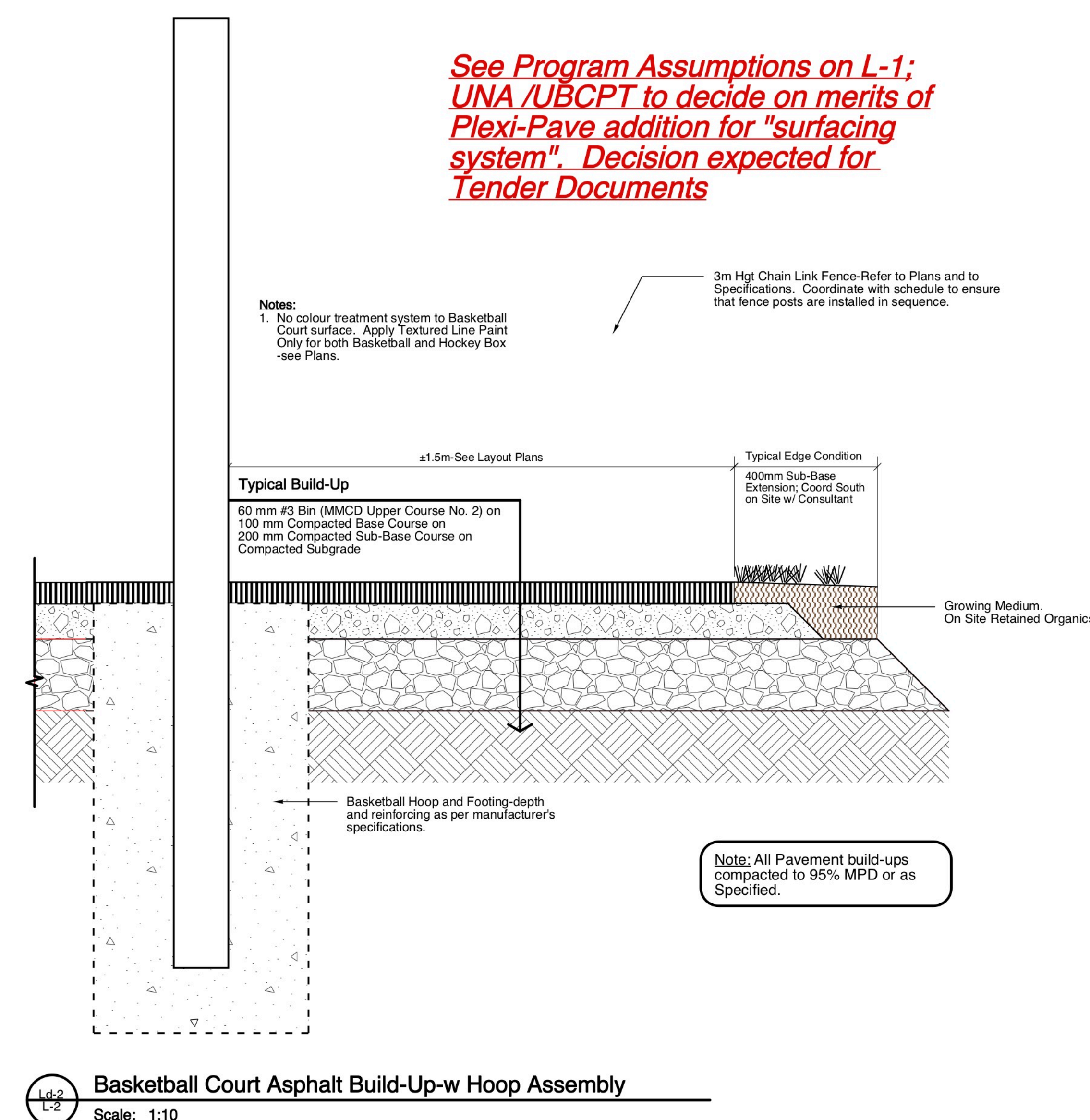


L-1-"R1"

Revised Sportcourt-Layout Plan
(School Site, Slightly Southwest of Park and Splashpad)



Reference Images-CIP Concrete with Light Broom Finish; in-keeping w/ UBC Standards and Tech. Guidelines and current Park Detailing



2 or more-suggested

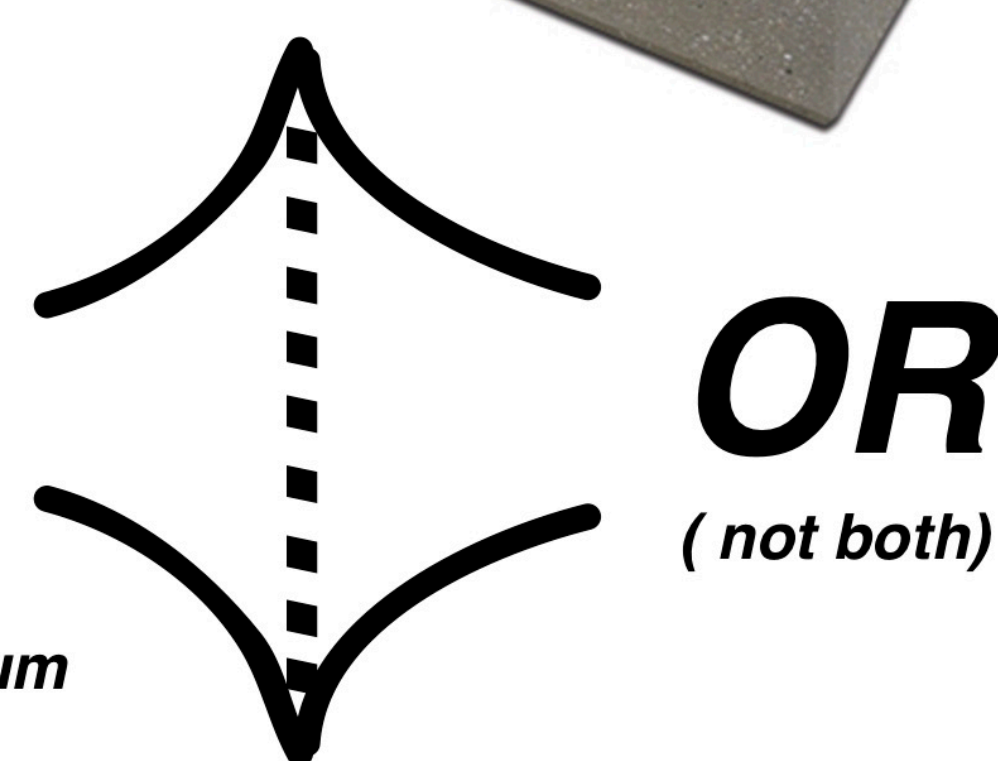
Reference Image-Precast or Site Cast "Cube" Benches



1-required



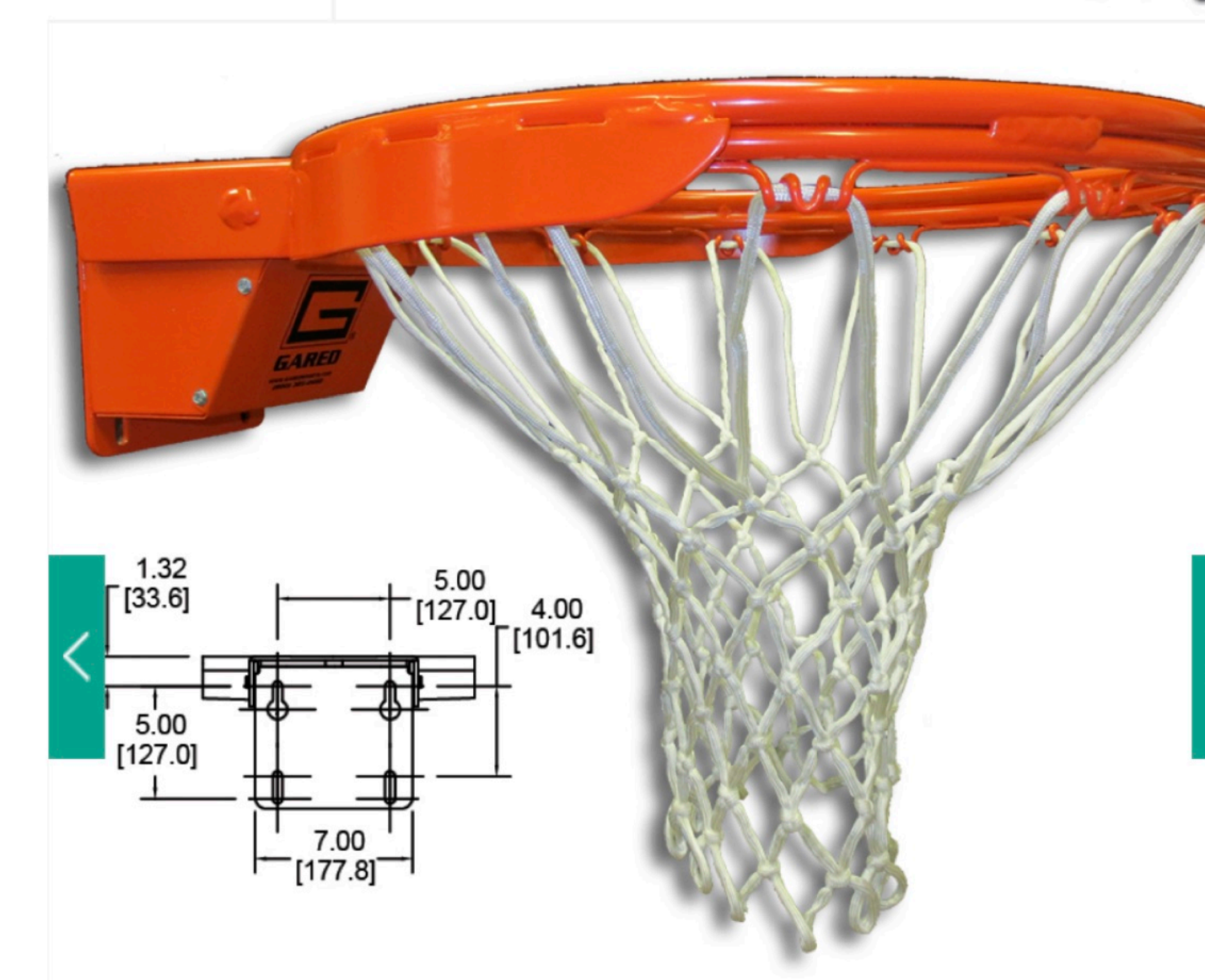
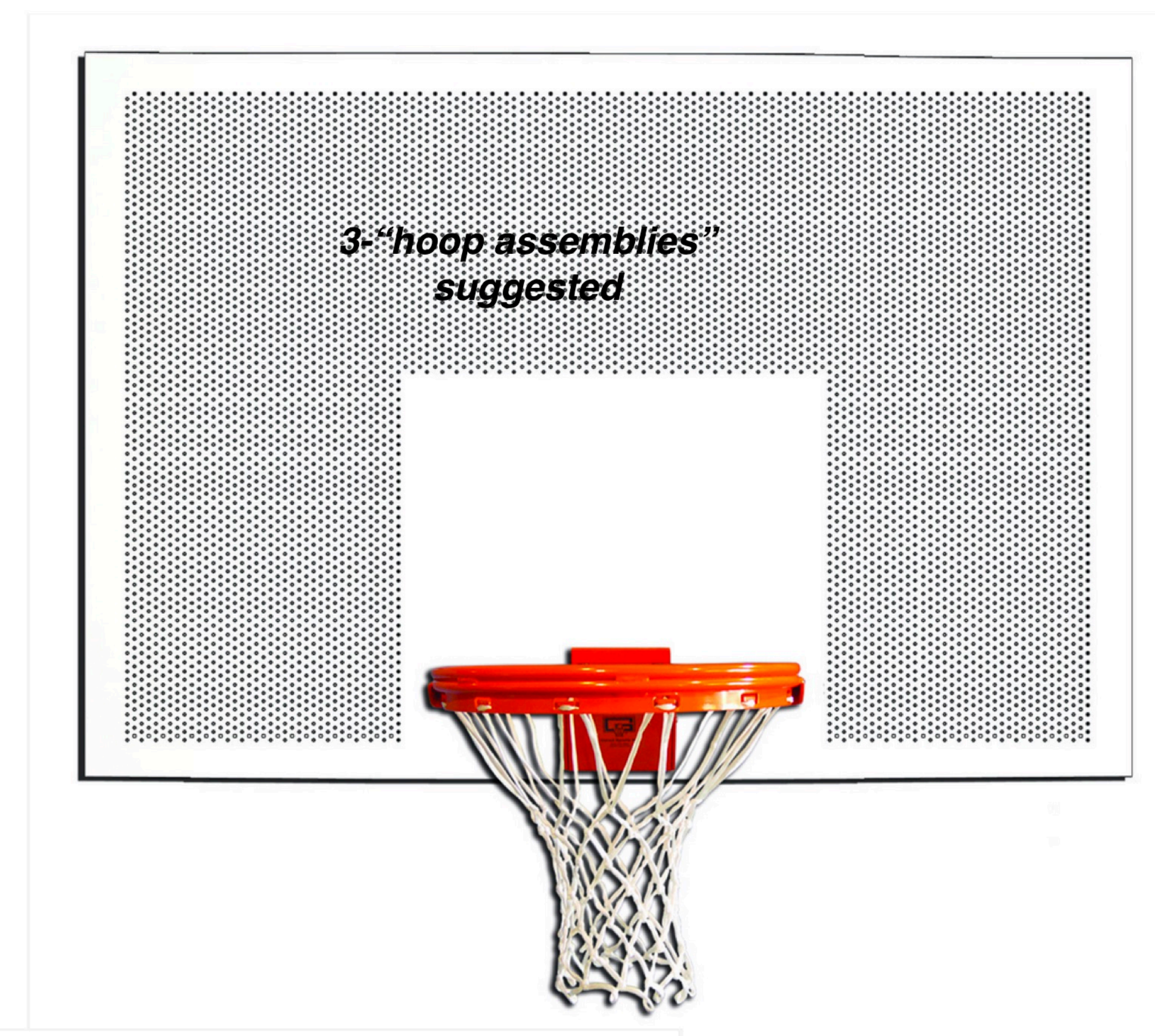
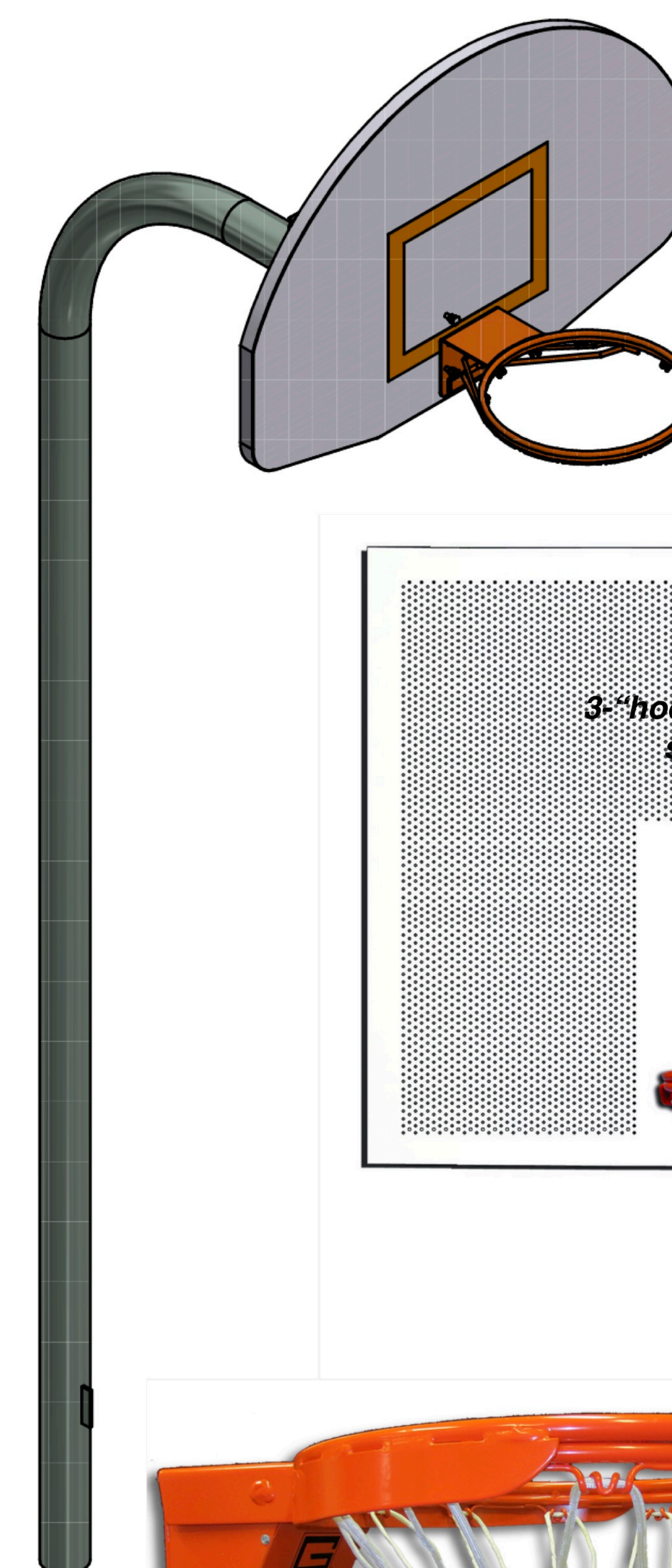
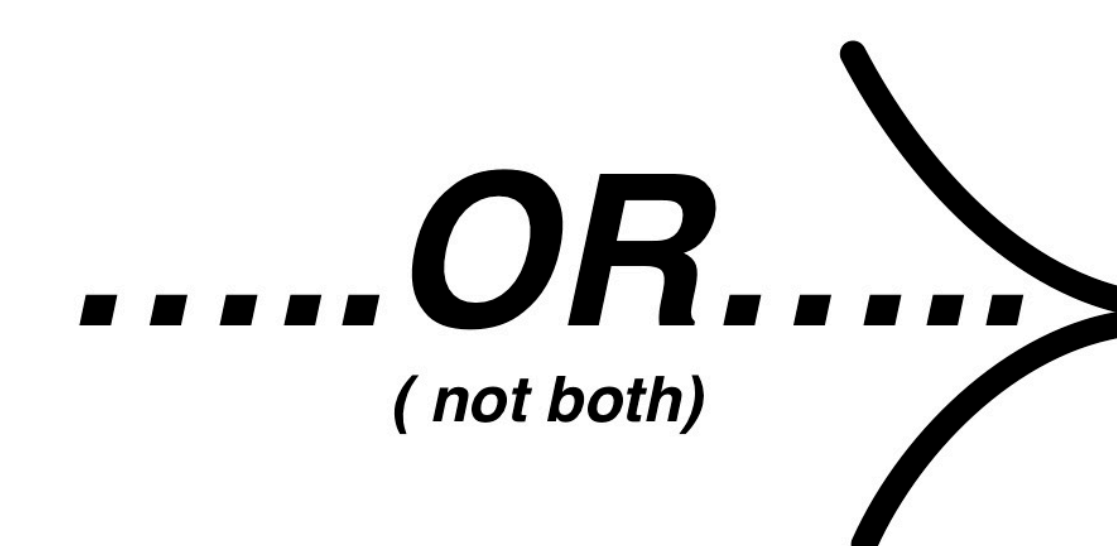
Reference Image-Trash Receptacle to "match" Park



Reference Images-"OPTIONAL" Stadium Style Stackable Box Seating



Reference Images-Stadium Style or Amphitheatre Style Log Rounds or Rock Seating at East Side of Sand Volleyball Berm



Refer to Plan L-1 for Location of Details

TO: University Neighbourhoods Association

FROM: UBC Campus and Community Planning

DATE: February 02, 2022

PROJECT: Proposed Basketball Court for Wesbrook Neighbourhood-Siting Analysis

Project Summary:

A temporary outdoor basketball court for Wesbrook Neighbourhood is being explored by the UNA as a potential project made possible through Metro Vancouver's Community Works Funding, offered to local governments across the region and used to support initiatives that benefit the local community. The UNA Board will determine whether to include this project for Metro Vancouver consideration as one of a suite of UNA initiatives being put forward under the Community Works Fund. Before this project can be considered for advancement, a development permit from the governing land use jurisdiction, which is UBC's Campus and Community Planning, is required.

The proposal has been discussed at the UNA Board, with numerous community members providing feedback (both formally as a delegation, or through written comments to the Board), highlighting a number of interests and concerns with regard to the proposal in terms of community benefits and risks.

To assist the UNA Board in its decision and in advance of re-submitting any development permit application, Campus and Community Planning has been working with the UNA to evaluate and help identify potential sites for the proposed basketball court that consider consistency with the existing neighbourhood plan's land use designations, co-location benefits with similar recreational uses, and impacts to neighbouring residential units. The UNA has also engaged the services of Richard Findlay, Landscape Architect to prepare a sport court design and layout plan that aligns with industry best practice for this type of recreational facility. A separate noise impact study has also been completed by the UNA, and attached for information (Attachment 4).

Should the UNA Board decide to proceed with a new development permit application, Campus and Community Planning would undertake the required community engagement and a final technical analysis as part of the development review process before a decision is made by the Development Permit Board.

Project Governance and Decision Making:

The UNA is leading the proposal and will determine whether or not it should advance to Metro Vancouver for funding (pending issuance of a development permit). Similar to any development initiative on UBC land, a development permit is required from UBC. The development permit process is managed by Campus and Community Planning with a decision made by the Development Permit Board, as part of UBC's land use governance per the UBC Development and Building Regulations. The UNA is the project proponent for this initiative and has engaged UBC Properties Trust, as developer and project manager, to act as the development permit applicant on their behalf.

As in a municipal context, advanced engagement by the project proponent is often suggested for redevelopment projects prior to the development permit application to ensure community needs and

interests are understood and considered by the project sponsor as well as the local land use jurisdiction. Although a formal engagement process has not been completed to date, the initial development permit application drew significant community attention, and the UNA Board has heard from community members on a range of benefits and risks with the initial project proposal, described in more detail later in this brief.

Upon receipt of the development application by Campus and Community Planning, the development review process begins and typically includes the following steps:

- Site signage erected at the proposed site with project details
- Two week online public engagement period, including:
 - Online engagement feedback form
 - Virtual public open house with project proponents present to answer questions
- CCP and UNA review of feedback from online engagement and open house
- Revisions to application, if necessary, in response to community feedback
- Development Permit Board meeting and deliberation
- Issuance of Development Permit
- [note: This project also requires a UNA decision to proceed to Metro Vancouver for funding of the project]

Project History:

A development application was submitted to Campus and Community Planning by UBC Properties Trust on behalf of the UNA in November 2021, for the proposed basketball court and was subsequently withdrawn by the UNA in response to community feedback highlighting concerns with the proposed court location. A high-level summary of resident concerns and interests that emerged based on community feedback to the UNA Board and early engagement from the development permit process (engagement was not fully completed) include:

- Noise impacts for residents who live across from the proposed basketball court
- Appropriateness of co-locating a basketball court next to a community splash pad
- Appropriateness of this type of facility for this neighbourhood
- General support for more recreation opportunities in the neighbourhood, although no strong consensus over what type of recreational facility
- Support for a basketball court in the Wesbrook neighbourhood

Based on this feedback, the UNA Board subsequently directed a sub-committee of the Board to work with Campus and Community Planning and the UNA's retained landscape architect to undertake a siting analysis and to review opportunities to mitigate noise and siting concerns for the previously identified Wesbrook Basketball Court location.

This analysis has been done in response to the request, and identifies a revised location, taking into consideration the interests and concerns raised through the process to date.

Siting Analysis:

This siting analysis is based on the proposed sport court design and layout provided by the landscape architect, and considers all available potential sites within Wesbrook Neighbourhood.

Location & Land Use

The basketball court has been proposed for Wesbrook Neighbourhood, zoned as a “Neighbourhood Housing Area” in the UBC Land Use Plan (Attachment 1). This neighbourhood includes several vacant sites that are slated for future development, which have been included in this siting analysis in addition to available open green space.

Siting Summary

Attachment 2 provides a summary of all sites that were considered for the proposed temporary basketball court facility, including all future development sites (8 total); plus 1 programmed open green space site. In consideration of these sites, the following criteria were applied to test viability, before proceeding with further technical analysis:

- Conformity with land use (all sites meet this criteria)
- Adequate space to accommodate the proposed design and layout
- Timeline of future anticipated development to maximize community benefit

SITE	EVALUATION SUMMARY
Site 1-Vancouver School Board Site	This site provides the longest potential lifespan for this temporary facility and would allow for 10 plus years of sport court use.
Site 2-SC5C	Future development site, planned for 2023. Not a viable option.
Site 3-Nobel Park	Site analysis focused on areas adjacent to softball field. Limited in size, currently used for community gardens and a playground. Not a viable option that can accommodate a basketball court.
Site 6-BCR7	Future development site, anticipated for 2025. Not a preferred option given its limited vacancy time. Would allow for approximately three years of sport court use.
Site 7-BCR5&6	Future development site, currently in Development Review stage. Not a viable option.
Site 8-BCR1	Future development site, anticipated for 2026. Not a preferred option given its limited vacancy time. Would allow for approximately four years of sport court use.
Site 9-BCR2	Future development site, anticipated for 2025. Not a preferred option given its limited vacancy time. Would allow for approximately three years of sport court use.
Site 10-BCR3	Future development site, anticipated for 2028. Not a preferred option given its limited vacancy time. Would allow for approximately six years of sport court use.
Site 11-BCR4	Future development site, anticipated for 2027. Not a preferred option given its limited vacancy time. Would allow for approximately five years of sport court use.

Based on this analysis, only one site has a >10-year development timeline, compared to all other sites that are planned for development within the next six years. Given the above development constraints, Site 1 (future Vancouver School Board site) was the only site advanced to further technical analysis, taking into consideration the noise impact concerns raised through early community feedback, and described in further detail below:

Distance between proposed sport court and nearest residential building:

Based on industry best practice recommendations from the UNA's retained landscape architect, a minimum 45m green space buffer should be provided between a sport court and adjacent residential buildings to minimize noise impacts. The proposed site is 64.05m away from the nearest residential building. Distance between the proposed sport court and the nearest future residential building was also measured, yielding a 57.1m green space buffer.

Noise Impact Assessment:

A noise impact study was conducted separately by the UNA to ensure conformity with UNA noise bylaw restrictions, and concludes that anticipated daytime noise impacts generated from the proposed sport court fall within the UNA noise bylaw restrictions (Attachment 4).

Sport Court Design Features:

The UNA's retained landscape architect has provided a revised sport court design that will be included in the development permit application. The revised design features include vegetation and gentle berming to help absorb sound.

Attachment 3 provides the proposed site layout, comparing the original proposed location with the proposed revised location. Based on this analysis, the revised location will be 64.05m away from the nearest residential building, increasing the originally proposed buffer by an additional 30 metres. The revised location will support primary pedestrian access to the facility via the community splash pad accessed from Webber Lane, and remains appropriately clustered with other outdoor recreational facilities including the sand volleyball courts and community splash pad. Clustering these types of facilities enables shared use of supporting amenities (garbage receptacles, pedestrian desire lines to access the site) and creates synergies between uses.

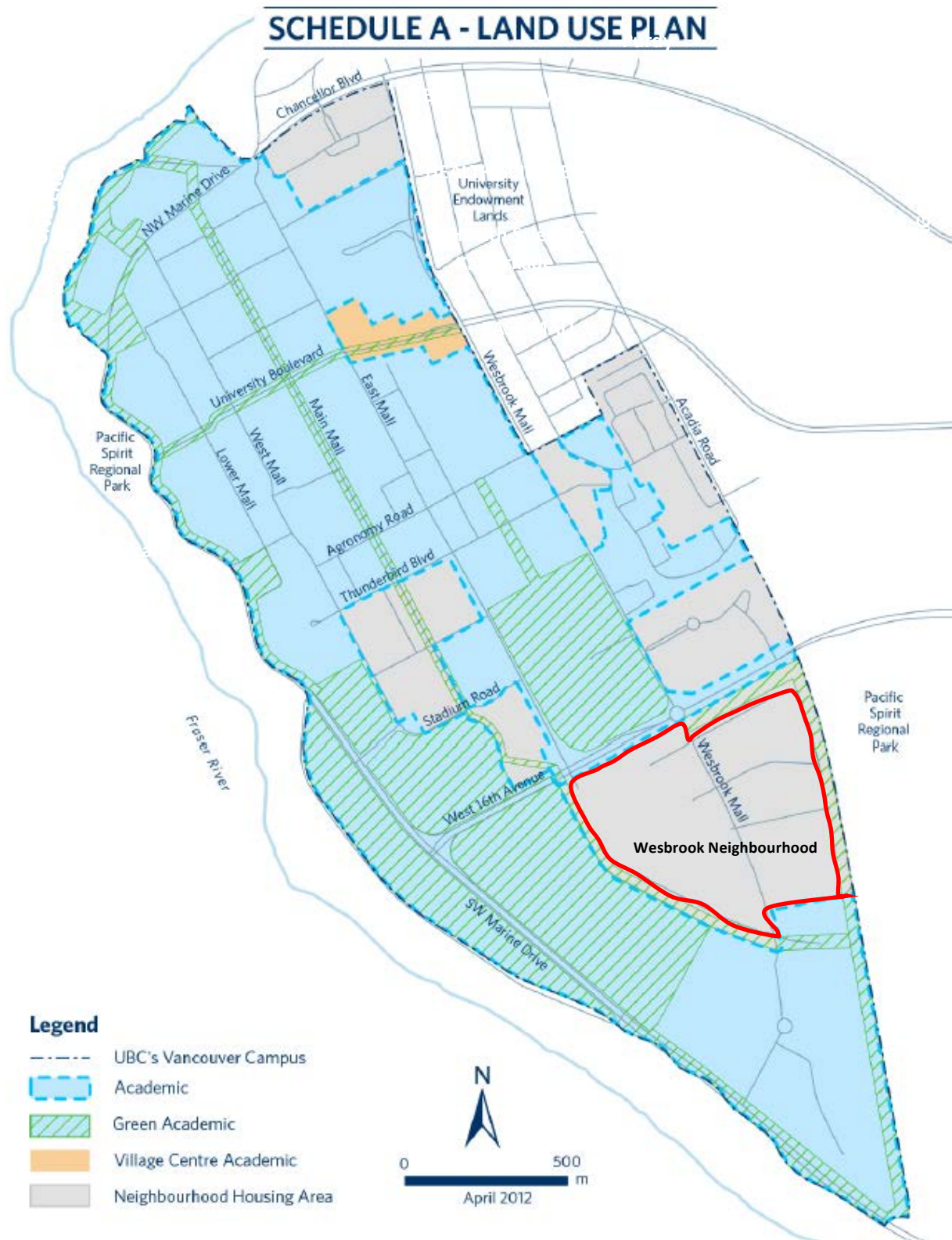
Attachment 5 provides precedent images and distances of outdoor basketball courts from residential areas across Vancouver as a comparison to what is being proposed. It should be noted that surrounding ambient noises will differ across locations, and adjacency impacts to single family homes may differ from impacts to multi-unit buildings.

Additional Considerations:

In addition to considering the revised site, design, and layout, the UNA Board may also wish to consider specifying the facility for daytime hours of use only, and including this requirement as part of the development permit to minimize noise impacts at nighttime. In addition, the UNA may also wish to explore accommodating specific user groups (such as programmed UNA camps) for designated use times throughout the day.

Attachments:

- 1. UBC 2015 Land Use Plan**
- 2. Proposed Basketball Court-Wesbrook Neighbourhood Siting Summary**
- 3. Site Specific Analysis-distances from neighbouring residential buildings**
- 4. UNA Noise Impact Study**
- 5. Basketball Court Precedent Images**



Attachment 2 – Proposed Basketball Court-Wesbrook Neighbourhood Siting Summary

BASKETBALL COURT SITING | SUMMARY



THE UNIVERSITY OF BRITISH COLUMBIA
CAMPUS + COMMUNITY PLANNING

PROJECT
WESBROOK BASKETBALL COURT

DATE
2022 / 02 / 02

PAGE
1

Attachment 3 – Site Specific Analysis-distance from neighbouring residential building

BASKETBALL COURT LOCATION | DISTANCES FROM NEIGHBOURING RESIDENTIAL BUILDINGS



THE UNIVERSITY OF BRITISH COLUMBIA
CAMPUS + COMMUNITY PLANNING

PROJECT
WESBROOK BASKETBALL COURT

DATE
2022 / 02 / 04

PAGE
2

Noise Measurement at Webber House

Date of measurement: January 27, 2022

Last Calibration: January 27, 2022 2:29 pm

Time of measurement: January 27, 2022 2:31 pm to 2:56 pm

Ambient Temperature: 5c

Humidity: 81%

Weather: Sunny

Wind: 7km/h W

The screenshot shows the Vancouver, BC Weather app interface. At the top, it says 'Vancouver, BC Weather' with a green checkmark and 'SAVED TO MY LOCATIONS'. Below this, it says 'Updated on Thu., Jan. 27, 3:05 p.m.'. The main display shows a large '5°C' with 'FEELS LIKE 3' and a sun icon with a cloud. Below this, it says 'A few clouds'. To the right, there is a 'TOP STORY' box with the text: 'Consider the start to February as a GIFT to ski resorts in B.C. First look at how much snow is coming, HERE'. At the bottom, there is a grid of weather data: Wind (7^W km/h), Humidity (81%), Visibility (48^{km}), Sunrise (7:50^{AM}), Air Quality (2 Low Risk), UV (1 Low), Wind gust (11^{km/h}), Pressure (↓102.8 kPa), Ceiling (9100^m), and Sunset (5:00^{PM}).

Source: Weather Network 2022 ([Link](#))

UNA Noise Bylaw

Definitions

“Continuous Sound” means any Noise occurring for a duration of more than three minutes, or occurring continually, sporadically or erratically but totaling more than three minutes in any 15-minute period of time;

“Daytime” means from 0700 hours to 2200 hours on any weekday, and from 1000 hours to 2200 hours on any Saturday, Sunday or Holiday;

“Nighttime” means any time not included within the definition of Daytime;

“Point of Reception” means: (a) a point in a lane or a street, adjacent to but outside of the property occupied by the recipient of the Noise, that represents the shortest distance between that property and the source of the Noise; or (b) where no lane, street, or other public property exists between the recipient and the source, any point outside the property line of the real property from which the Noise emanates; and (c) in either case at least 1.2 metres (4 feet) above the surface of the ground;

Noise bylaw Section 10

No person shall Cause Continuous Sound the Sound Level of which:

(a) during the **Daytime exceeds a rating of 55** on an Approved Sound Meter when received at a Point of Reception; or

(b) during the **Nighttime exceeds a rating of 45** on an Approved Sound Meter when received at a Point of Reception.

Noise Level Decibel Scale

DECIBEL SCALE



Source: UNA Noise Bylaw Brochure 2014

Ambient Noise Level

Ambient noise level was recorded before and after the sound measurement.

There are external factors like vehicle drive by, pedestrians, background noise from playing field that can affecting the ambient noise level.

Ambient Noise			
	Start	Duration	LAeq (TH) [dB]
Info	-	-	P1 (A, Lin)
Sample 1	2022-01-27 14:32	02:42.0	48.9
Sample 2	2022-01-27 14:52	02:51.0	47.4

Ambient noise level during the period of measurement is between **47.4 db to 48.9 db**. Ambient noise level excludes period with vehicles and trucks drove by.

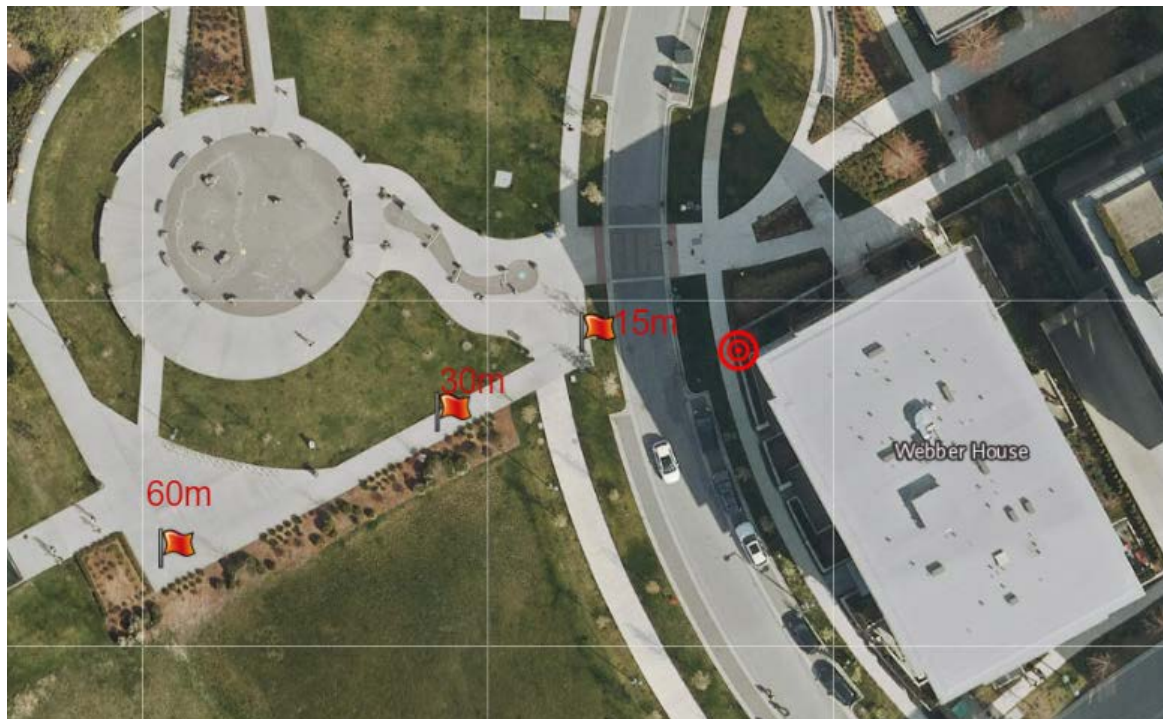
Bouncing Locations:

Locations are predetermined at 15m, 30m and 60m away from the nearest point of reception.

60m is approximate the same distance between the proposed basketball court to the nearby Webber House.

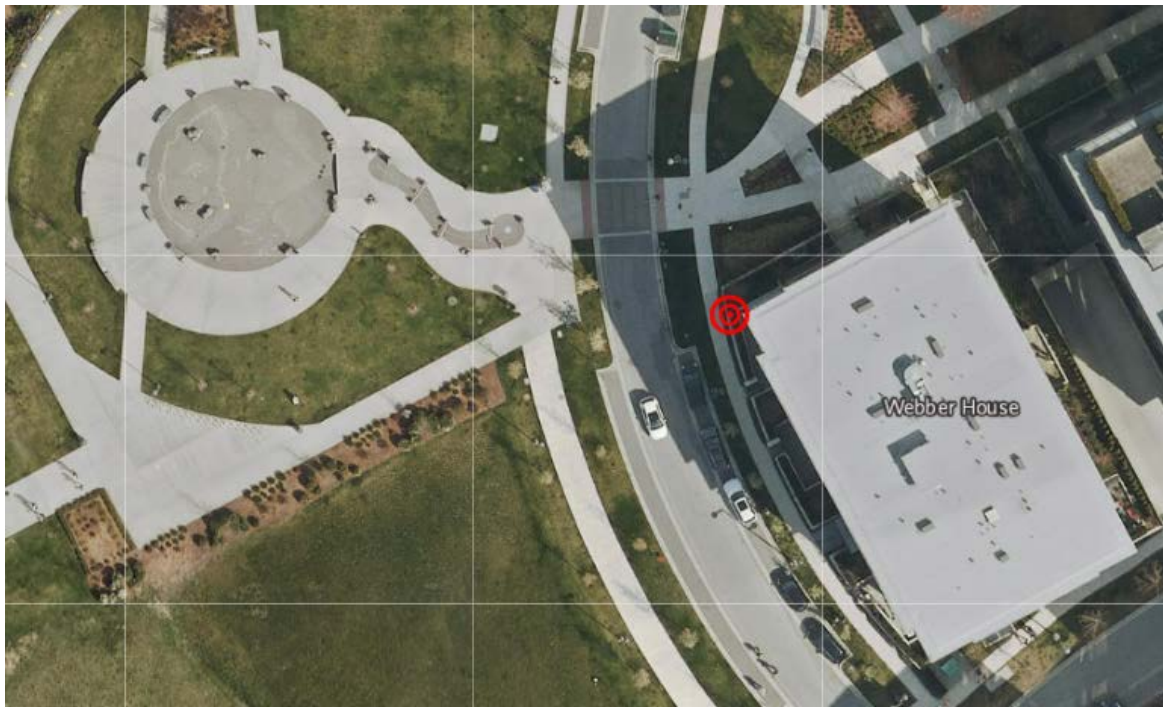
Distance is measured from the edge of the North West corner of Webber House to the following marker locations: 15m Marker, 30m Marker and 60m Marker.

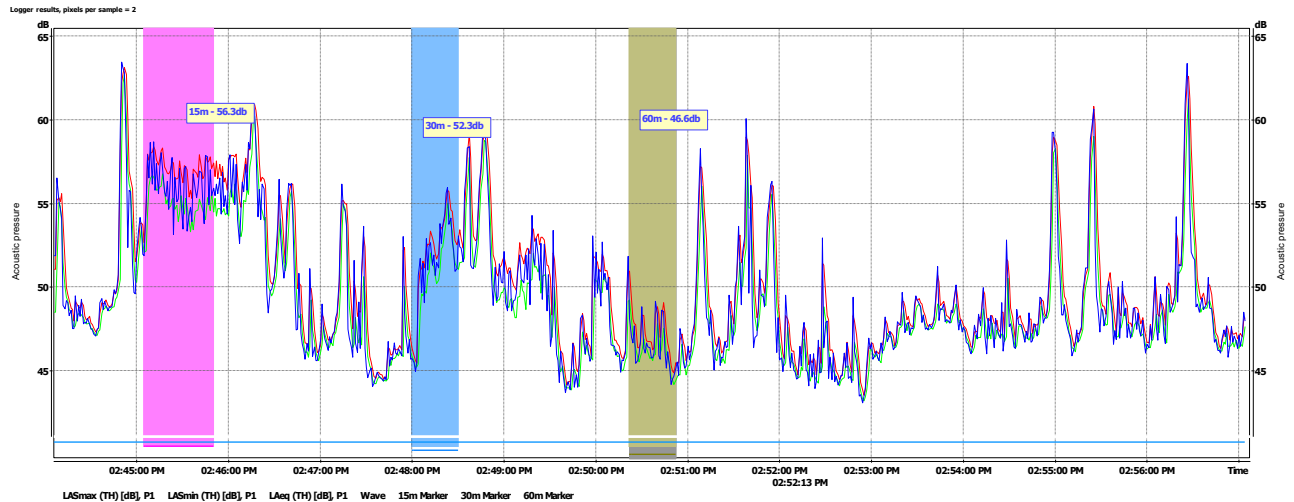
During the noise measuring period, 2 UNA team members bouncing 2 basketballs continuously for up to 1 minute and 30 seconds at each location.



Results

Point of Reception 1 – Northwest Corner of Webber House





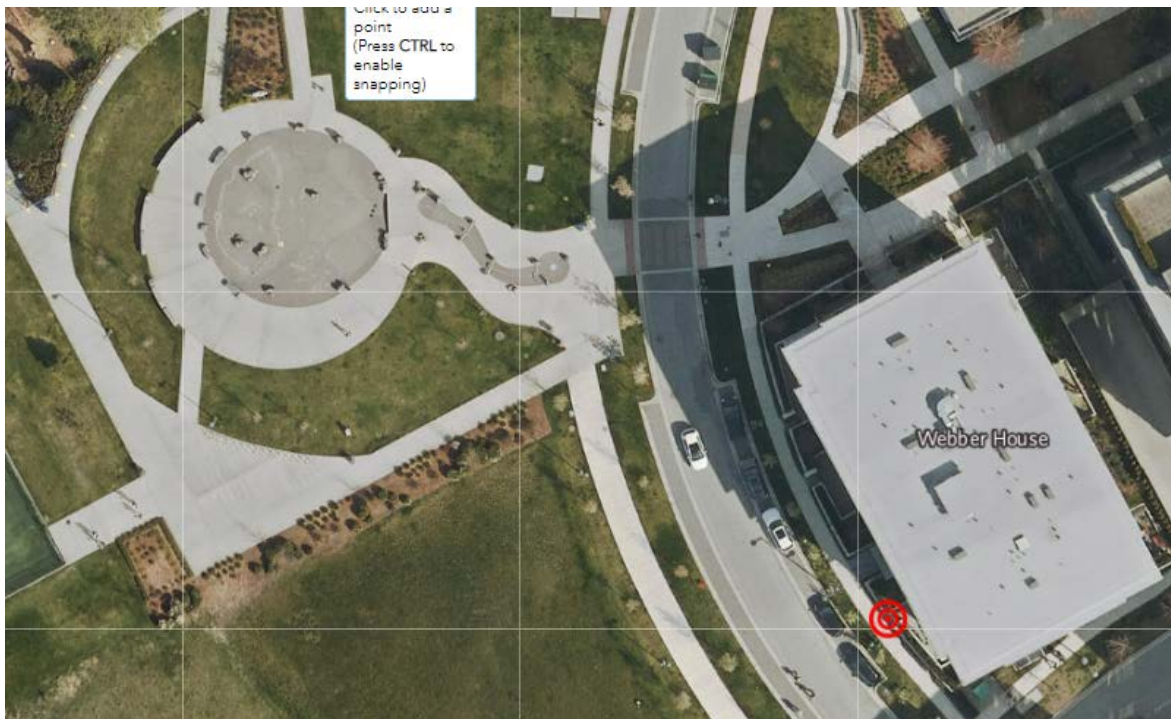
	Start	Duration	LA _{eq} (TH) [dB]
Info	-	-	P1 (A, Lin)
15m Marker	2022-01-27 14:45	00:45.0	56.3
30m Marker	2022-01-27 14:48	00:30.0	52.3
60m Marker	2022-01-27 14:50	00:30.0	46.6

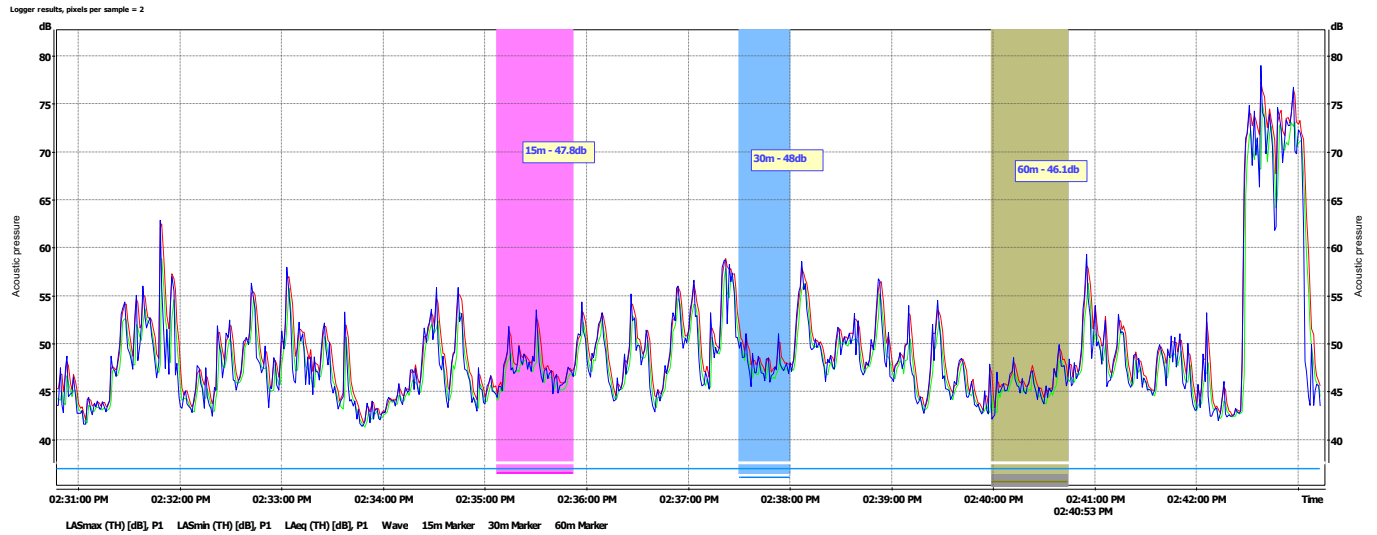
Noise bylaw Section 10

No person shall Cause Continuous Sound the Sound Level of which:

- (a) during the **Daytime exceeds a rating of 55** on an Approved Sound Meter when received at a Point of Reception; or
- (b) during the **Nighttime exceeds a rating of 45** on an Approved Sound Meter when received at a Point of Reception.

Point of Reception 2 – Southwest Corner of Webber House (Unit 106 Patio Entrance)





	Start	Duration	LA _{eq} (TH) [dB]
Info	-	-	P1 (A, Lin)
15m Marker (39m)	2022-01-27 14:35	00:45.0	47.8
30m Marker (44m)	2022-01-27 14:37	00:30.0	48
60m Marker (70m)	2022-01-27 14:39	00:45.0	46.1

Noise bylaw Section 10

No person shall Cause Continuous Sound the Sound Level of which:

- (a) during the **Daytime exceeds a rating of 55** on an Approved Sound Meter when received at a Point of Reception; or
- (b) during the **Nighttime exceeds a rating of 45** on an Approved Sound Meter when received at a Point of Reception.

Attachment 5 — Basketball Court Precedent Images

BASKETBALL COURT PRECEDENTS | DISTANCES FROM NEIGHBOURING RESIDENTIAL BUILDINGS



DAVID LAM PARK



QUEEN ELIZABETH PARK



KITSILANO BEACH



GRAYS PARK



MT. PLEASANT PARK



GRANVILLE ISLAND



THE UNIVERSITY OF BRITISH COLUMBIA
CAMPUS + COMMUNITY PLANNING

PROJECT
WESBROOK BASKETBALL COURT

DATE
2022 / 02 / 02

PAGE
3

April 12, 2022

File: 2407-22A-R02

University Neighbourhoods Association
202-5923 Berton Avenue
Vancouver BC V6S 0B3

Attention: Wegland Sit

Dear Wegland,

**Re: Wesbrook Temporary Basketball Court
Noise Assessment**

It is proposed that a temporary outdoor basketball court will be located near Wesbrook Community Centre between Berton Avenue and Webber Lane in Vancouver near the University of British Columbia. As part of this proposal, BKL has been engaged to conduct a noise assessment of the proposed basketball court. Noise measurements at an existing outdoor basketball court were conducted and used to inform a 3-D noise model for the proposed court. This document outlines the findings of our assessment. A glossary of acoustic terms are attached.

Scope of Assessment

The University Neighbourhoods Association (UNA) request a noise study be completed via email on March 22, 2022. The scope of the requested assessment was as follows:

The study will measure impact noises resulted by:

1. *ball bouncing*
2. *players noise*
3. *ball striking the backboard*
4. *ball striking the hoop.*

Acoustic consultant will conduct noise measurement and then process noise measurement into noise model of the proposed basketball site. Noise model will use GIS data from UBC Campus Planning to simulate the surrounding buildings and terrain. This model should include:

1. *The proposed basketball court location*
2. *Existing buildings information*
3. *Proposed building in Lot 6 information (good to have but not absolutely necessary)*

Based on the noise model, the noise model should accurately predict noise level from basketball court usage and then compared to the UNA noise bylaw.

Reporting will provide detail of the methodology and result of the noise impact assessment.

While we are not able to reliably anticipate the basketball court usage, our assessment considers the required noise sources, typical usage and predicts the noise level at the requested building using standard acoustic modelling methodologies.

Project Description

The proposed outdoor basketball court location is northeast of the existing volleyball courts in the Westbrook Park area. Sports fields, volleyball courts and a soccer field, are located to the west and northwest of the proposed court respectively. The closest noise sensitive buildings are low-rise multi-family residential buildings which are located to the east and southwest of the court. To the southeast of the proposed court is undeveloped land which is proposed to be developed into multi-family residential in the future. The proposed court (shown in red), adjacent facilities and closest noise sensitive receptors are shown in Figure 1.

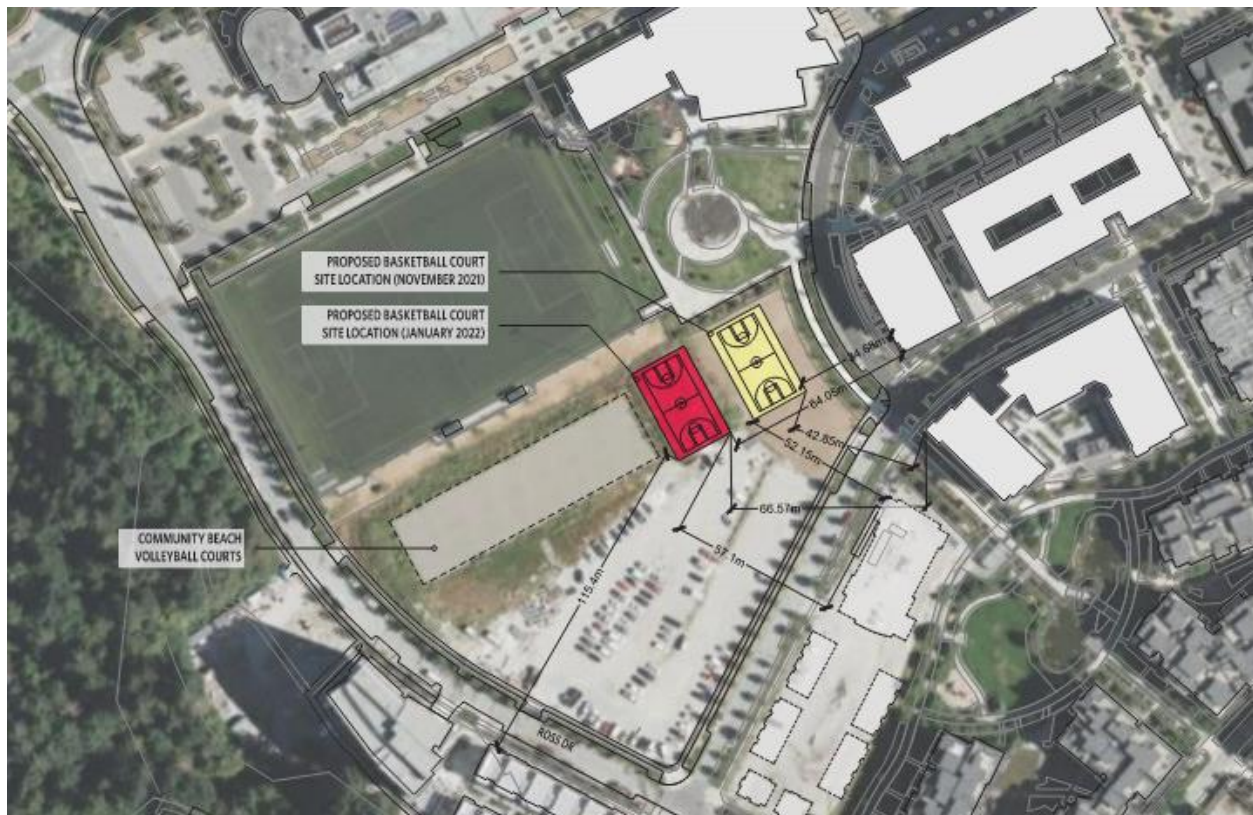


Figure 1: Proposed Court, Adjacent Facilities and Closest Noise Sensitive Receptors

The proposed outdoor court is a standard size basketball court with one hoop at each end of the court. There are no other facilities associated with court. The expected activities at the court will include those typical of a community outdoor court; a mix of individual use, small group use (shooting and bouncing of ball) and basketball games (can be either half court or full court games). There is

typically no management of the use of outdoor courts so the actual use will depend on the individual users and could involve any combination of the activities listed above (e.g., individual skills at one hoop, half court game at the other hoop). The noise from the court will be associated with basketball bouncing (ball contact with the court surface), ball impact with the hoop and backboard and verbal communication from the users of the court. There will also be periods of time when the court is not in use.

Criteria

The proposed court and noise sensitive receptors are both located within the University of British Columbia area. Noise within the area is governed by the University Neighbourhoods Associated (UNA) Noise Control Bylaw (issued 2008).

The noise bylaw states that that no person shall cause continuous sound (defined as a sound that occurs for more than three minutes in a 15 minute period) of which:

Daytime (Weekdays: 7am to 10pm, Weekend & Holidays: 10am to 10pm) exceeds 55 dBA at a point of reception
Nighttime (all other times) exceeds 45 dBA at a point of reception.

The bylaw states that the dBA levels are slow response levels. The Point of Reception can be represented as the property line of the receptor. It also states that no person shall cause non-continuous sound which disturbs the quiet of any person. As the bylaw states that the noise criteria can not be exceeded and that dBA levels are slow response, we have assumed that the $L_{max}(slow)$ is the appropriate noise metric to consider for the bylaw assessment.

Noise Measurements

Outdoor Basketball Court Activities

To assist with developing the noise model of the proposed court, BKL conducted noise measurements at an existing outdoor basketball court located near Totem Park Residences on Thunderbird Blvd. The measurements were taken on March 25, 2022 between 10:15am and 11:45am. The measurements captured the following activities:

- Half court basketball games with six players;
- Activity at both ends of the court – half court game and individual training; and
- Individual activities including bouncing basketball and basketball impacts with hoop and backboard.

While the $L_{max}(slow)$ metric is relevant for the bylaw assessment, we have reported the L_{eq} and $L_{max}(slow \text{ and fast response})$ for completeness. During the measurements, there were other activities in the area which contributed to the noise environment including aircraft passbys and vehicle passbys. The measurements are summarised in Table 1 below.

Table 1: Summary of Basketball Court Measurements

Activity	Distance	Measured Level		
		Leq	Lmax (slow)	Lmax (fast)
Bouncing ball	3m	67 dBA	70 dBA	75 dBA
	5m	61 dBA	64 dBA	67 dBA
Shooting ball (impact with backboard and hoop)	3m	60 dBA	68 dBA	74 dBA
	5m	57 dBA	62 dBA	69 dBA
Half court game 3 on 3 (six player total)	6.5 m from the west edge of court	58 dBA	70 dBA	71 dBA
	Centre court	59 dBA	66 dBA	72 dBA
	1m from edge of court	61 dBA*	Between 61 and 77 dBA	Between 69 and 84 dBA
Both ends of court in use: Half court game 3 on 3 (six player total) at north end and individual training at south end	Centre court	61 dBA	68 dBA	76 dBA

* average based on 6 measurements around perimeter of the court

Ambient Noise Levels

On March 25, 2022, noise measurements of the ambient noise levels were also taken, both near the existing court and near the sensitive receptors at the proposed site. Location 1, near the existing court, was selected to be representative of the ambient environment but away from the activities at the tennis and basketball courts. Location 2 was selected to be representative of the buildings near the proposed basketball court.. The measurement results are provided in Table 2. The monitoring locations are shown in Figure 2.

Table 2: Summary of Ambient Noise Level Measurements

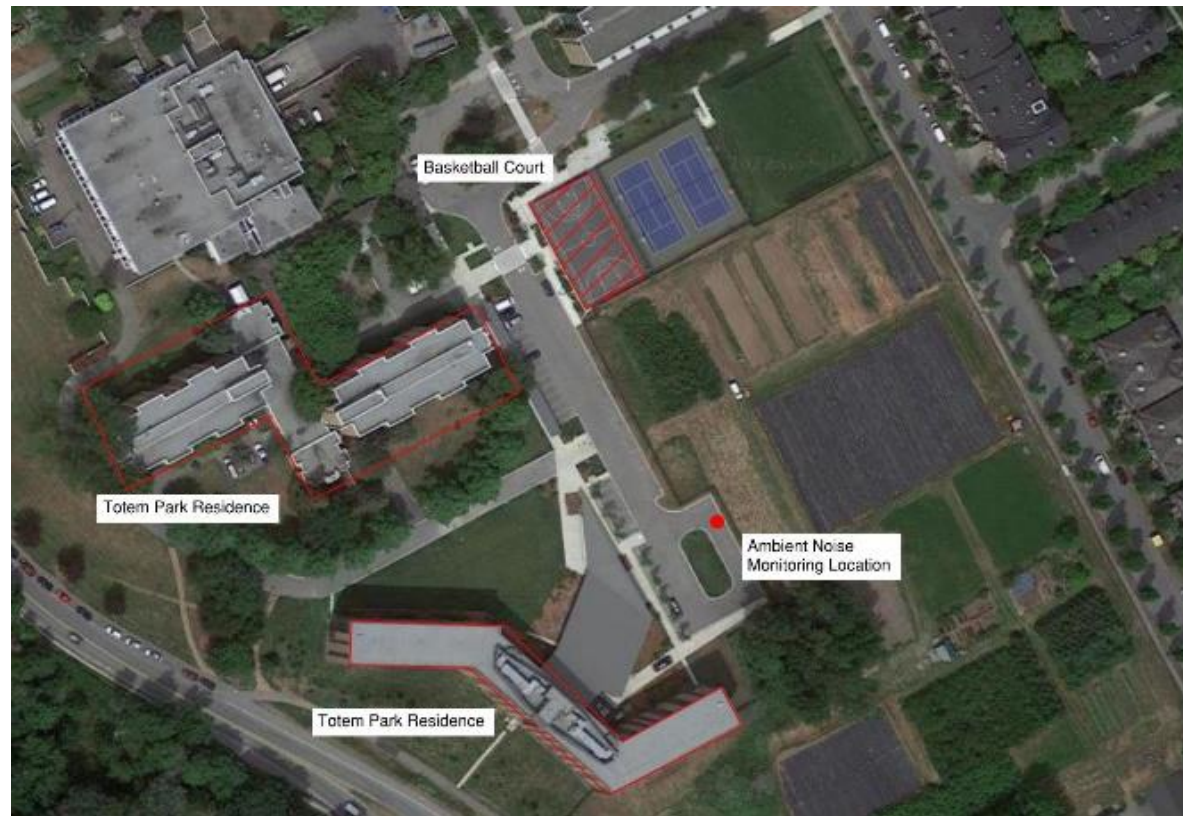
Site	Description	Time	Measurement		
			L90	Leq	Lmax
Location 1: Near Totem Courts	The monitoring was conducted at an open space which was 65 m away from the basketball court. Two residential buildings were located 50 m to the south and 70 m to the west of the monitoring location. The microphone was set up at the height of 1.5 m above ground. During the monitoring period, recurring noise from aircraft, occasionally traffic movements, and distant maintenance works were observed near the monitoring location.	11:30 – 11:40	42 dBA	49 dBA	64 dBA (fast) 63 dBA (slow)
Location 2: Wesbrook Community	The monitoring was conducted at an open space on Webber Lane 23 m across from Webber House. Another residential building was located 48 m to	11:59 – 12:14	46 dBA	55 dBA	71 dBA (fast) 69 dBA (slow)

Site	Description	Time	Measurement		
			L90	Leq	Lmax
	the south of the monitoring location. The microphone was set up at the height of 1.5 m above ground. During monitoring period, recurring noise from aircraft, occasionally traffic movements, and children playing were observed. During the measurement, there were garbage loading sounds from a truck but these were excluded from the ambient measurement.				

Figure 2: Ambient Monitoring Locations



Location 1:



Location 2:



Noise Model

A 3-D noise model was developed using noise modelling Cadna/A software. The model implements noise prediction standard ISO9613-2 and considers the heights of the sources and receptors, reflective surfaces, octave band level for each noise source and ground type. The model setup details are provided in Table 3 below.

Table 3: Model Setup and Data Inputs Summary

Parameter	Value
Calculation Standard	ISO 9613-2:1996
Ground Absorption	G = 0 (hard ground) for hard surfaces like concrete and basketball court G = 1 (soft ground) for park area
Reflection Order	2
Building Reflection Loss	1 dB
Building heights and outlines	Building outlines and heights mostly provided by UNA, where data was not available building heights were estimated from aerial images and photos taken on site.
Ground elevation contours	City of Vancouver 1m contour lines

For the model, we included the three most significant noise sources:

- Bouncing of ball;
- Sound of hoop when ball impacts (measurement included backboard and hoop impacts); and
- Player communication.

We used the results of the noise measurements taken at the site to estimate the sound power level (Lw) for each noise source and to calibrate the noise model. Given that there were other noise generating activities in the area, the noise measurements of the individual activities were typically the most reliable to develop a sound power level for the different activities. The average levels predicted by the model for a basketball game were within 1 dB of the levels measured during the 3 on 3 game on March 25, 2022.

For the assessment, we modelled a representative worst-case scenario with a half court game of three on three at both ends of the court (total of 12 players using the court). The Lmax (slow) levels were predicted for every floor of the building that are adjacent to the proposed court, including the proposed buildings to the east of the court that are not yet built.

The noise sources used in the model are summarized in Table 4 below.

Table 4: Noise Source Details

Source	Type	Lw (dBA)	Height	Description
Bouncing of ball	Area source	85	0.25 m	Noise from ball impacting the ground. As per our measurements, we have assumed the Lmax (slow) level is 4 dBA higher than the average level.
Shooting of ball	Point source	78	3 m	Noise from impact of ball against the backboard and the hoop. As per our measurements, we have assumed the Lmax (slow) level is 8 dBA higher than the average level.
Voice from players	Area source	75	1.5 m	We have assumed that all players will communicate with a raised voice and that one person will be speaking at all times. We have assumed the Lmax (slow) level is 8 dBA higher than the average level which is consistent with a typical “loud” vocal effort level.

Discussion

The model predicted the noise levels for all buildings surrounding the site at every floor. The highest predicted Lmax (slow) level on each facade is shown in Figure 3.

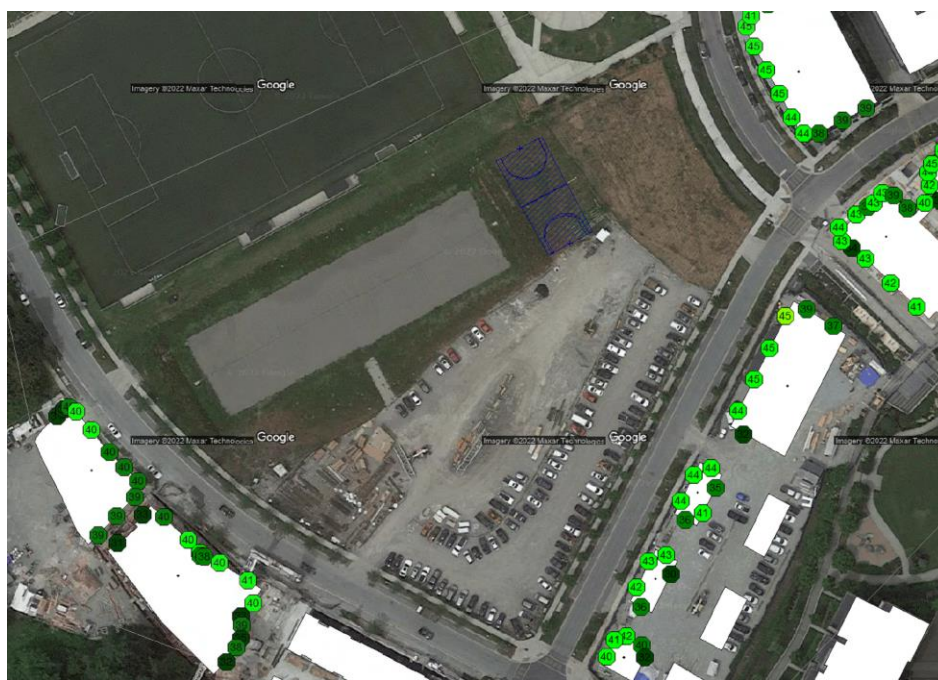


Figure 3: Predict Noise Levels Lmax (slow) - dBA

The highest predicted L_{max} (slow) level is 45 dBA at 3388 Webber Lane and the proposed dwellings on Birney Ave. This occurs for most floors for the facades facing the courts as shown Figure 4. The predicted noise levels are all below the 55 dBA daytime criteria but some building exposure levels are equal to the night-time criteria of 45 dBA.

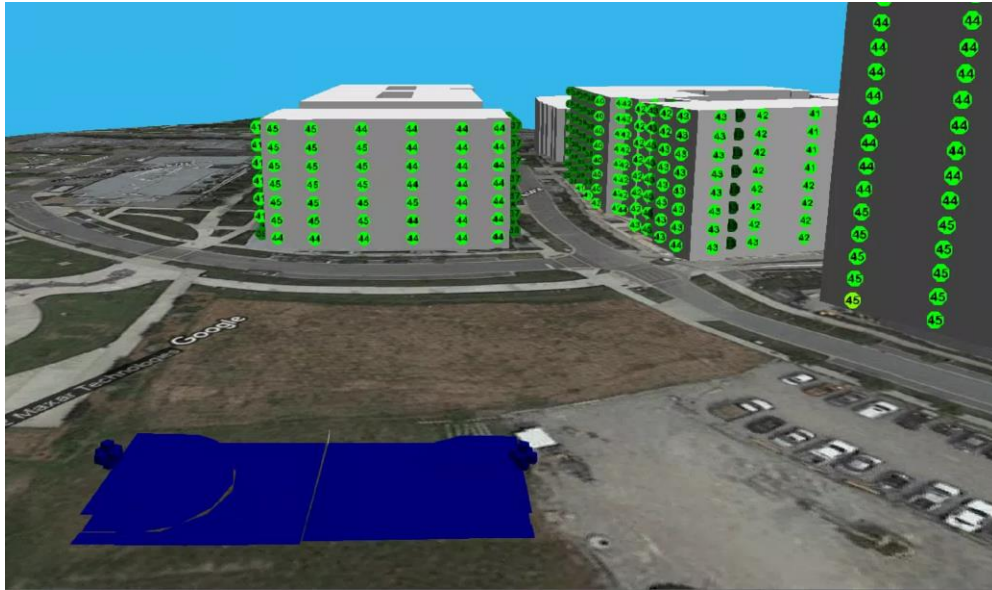


Figure 4: Predicted Facade Noise Level L_{max} (slow) - dBA

Some noise sources are considered to be more annoying to humans due to their character (e.g. impulsive or tonal noise sources). It is possible that the noise sources associated with the courts could be considered impulsive and therefore may be more annoying to receivers. The UNA bylaw does not state any correction should be applied for sources which may be considered to be more annoying. However, for reference, ANSI S12.9-2005/Part 4 technical standard *Quantities and Procedures for the Description and measurement of Environmental Sound – Part 4: Noise Assessment and Prediction of Long-Term Community Response* states that a penalty of 5 dB can be added to account for the increased annoyance of a regular impulsive noise source. While this is not required by the bylaw, even if a 5 dB penalty was applied, the noise levels would be below the 55 dBA daytime criteria, however, it would exceed the nighttime criteria at a number of receptors.

While the bylaw specifies consideration of the slow response level, human response to impulsive sound is closer related to fast response levels. For completeness, we also reviewed the expected L_{max} (fast) levels. Our measurements indicated that the L_{max} (fast) level for basketball activities was typically between 5 and 8 dBA higher than the L_{max} (slow) level. Therefore, the L_{max} (fast) level at the closest receptor building could be up to 53 dBA L_{max} (fast). We note that this level is below the 71 dBA L_{max} (fast) level that was recorded during the ambient measurement taken at Location 2.

There is the potential for other noise sources such as conversation if there are spectators seated around the courts. To minimize the potential impacts, any seating should be faced away from the closest residential buildings.

Summary

BKL conducted noise measurements of basketball activities at Totem Courts to assist with developing a noise model for the proposal outdoor court to be located near the Westbrook Community Centre. The noise model considered player communication, ball bouncing and shooting sound sources. The model indicates that the highest expected L_{max}(slow) level would be 45 dBA. The typical noise level from basketball activities is not expected to exceed the daytime criteria at anytime but may exceed the nighttime criteria at some receptors.

We trust this information is sufficient for your purposes. Please let us know if you have any questions.

Sincerely,

BKL Consultants Ltd.

per:



Brigitte Martin P. Eng.

Acoustical Consultant

martin@bkl.ca

Enclosures: Glossary

Glossary

A-weighting – A standardized filter used to alter the sensitivity of a sound level meter with respect to frequency so that the instrument is less sensitive at low and high frequencies where the human ear is less sensitive. Also written as dBA.

ambient/existing level – The pre-project noise or vibration levels.

decibel – The standard unit of measurement for sound pressure and sound power levels. It is the unit of level that denotes the ratio between two quantities that are proportional to pressure or power. The decibel is 10 times the logarithm of this ratio. The reference pressure used for airborne sound is 20 μPa , while the typical reference pressure used for underwater sound is 1 μPa . Also written as dB.

equivalent sound level - The steady level that would contain the same amount of energy as the actual time-varying level. Although it is, in a sense, an “average,” it is strongly influenced by the loudest events because they contain the majority of the energy.

maximum sound level – The highest exponential time-averaged sound level, in decibels, that occurs during a stated time period. The standardized time periods are 1 second for "slow" and 0.125 seconds for "fast" exponential weightings

octave bands – A standardized set of bands making up a frequency spectrum. The centre frequency of each octave band is twice that of the lower band frequency

receiver – A noise-sensitive stationary position at which noise levels are received.

sound – The fluctuating motion of air or other elastic medium which can produce the sensation of sound when incident upon the ear

sound power – The total sound energy radiated by a source per unit time

time response - Used to describe an exponential weighting applied to a signal to assist with observing the variation in sound pressure level or to better correlate with human perception of loudness. The standard time periods are 1 second for “slow” and 0.125 second for “fast” exponential weightings



PUBLIC CONSULTATION SUMMARY

File: DP22011 Wesbrook Place Temporary Basketball Court
Date: April 28, 2022

Virtual Public Open House

Date & Time: Wednesday April 20, 2022 from 11:30 AM – 1:00 PM and 7:00 – 8:30 PM
Location: Zoom meeting

The details of the event were posted on-site on the Development Permit notification sign and the Campus and Community Planning website. An advertisement was posted online in the Ubyssy running from April 6 to 20, 2022. Notifications were emailed to the University Neighbourhood Association (UNA), the Alma Mater Society (AMS), and Graduate Student Society (GSS). Notification letters for residents within 30 m of the site were emailed to Village Gate Homes for distribution to residents of the neighbouring Mundell House and Webber House, as well as to Wesbrook Properties for Georgia Point.

Campus & Community Planning staff introduced the project and representatives from the University Neighbourhood Association, UBC Properties Trust, and the project landscape architecture consultant presented the project plans. Staff and the applicant team responded to questions about the project.

The meeting was accessible via a Zoom meeting link emailed out to registrants on the day of the event and also posted on the project website. Prior to the event, 38 registrants signed up using the online registration form for the morning/afternoon session and 38 for the evening session. The number of participants, in addition to staff and the applicant team, peaked at 17 as of 11:50 AM for the afternoon session and 18 as of 7:15 PM at the evening session.

Online Comment Form

Comment Period: April 6 – April 27, 2022

During the comment period 207 responses were collected via the online feedback form. 1 submission was excluded for being an exact duplicate of a previous comment and 3 were left blank without a comment.

The predominant affiliation provided by the online comment form respondents:

Alumnus	11
Emeritus	6
Faculty	29
Resident	89
Staff	46
Student	15
UNA	7
No response	3
Other – High School	1
TOTAL:	207



Of these 207 respondents, 180 reported living on campus at UBC, 6 in the University Endowment Lands, 17 in the City of Vancouver, and 4 did not provide a place of residence.

Of a total of 203 written comments that were collected, 132 of these expressed non-support and 71 expressed support.

The primary reasons given for non-support of the proposal included the following:

- The noise impacts to neighbouring building residents will be unreasonable and that noise bylaw enforcement will become an issue;
- Loss of green open space;
- A regulation-sized basketball court is not suitable for the particular location and will support more aggressive competitive players;
- A basketball court is not the amenity that would be most appreciated by neighbourhood residents

Several respondents commented that they felt the University Neighbourhood Association had not adequately consulted with neighbourhood residents on their preferences for an amenity on the site. Alternative suggestions provided included a community garden, playground, or multi-sport court including badminton and pickleball, as well as to leave the area in its current state. Others felt the project was not in accordance with the Wesbrook Neighbourhood Plan.

The primary reasons given for support of the proposal include the following:

- A desire to see additional sporting amenities in Wesbrook Place;
- Basketball is an activity that appeals to a wide range of player groups and the proposed court would provide a place for community members to meet;
- There is a need for facilities available for older children and teenagers for be active.

In addition to online comment forms, 5 sets of email correspondence were received by Campus and Community Planning Development Services staff regarding the project. These emails expressed concerns whether the noise study correctly modelled potential impacts and enquired about the development permit review process, the impetus of the project, and the function of the Development Permit Board and its membership. The correspondence also expressed concern regarding the consistency of the proposal with the Wesbrook Neighbourhood Plan's section on future parks and leisure facilities as well as the lack of policy regarding temporary uses within UBC planning documents. The respondents provided suggestions to further mitigate potential noise impact by moving the facility into the area of the adjacent volleyball courts, using a sound dampening surface treatment and fencing to limit night time access. Further, it was suggested that portions of the Wesbrook Neighbourhood Plan should be reassessed in relation to the current state of neighbourhood completion, current and projected population, as well as changing recreational needs.