18 Confidential Items

18.1 South Adelaide Basketball redevelopment - Feasibility and Business case	
Report Reference	GC220208F18.1
Originating Officer	Registered Architect Strategic Projects – Birgit Stroeher
Corporate Manager	Manager City Activation - Charmaine Hughes
General Manager	General Manager City Development - Ilia Houridis

CONFIDENTIAL MOTION

That pursuant to Section 90(2) and (3)(d)(i) and (ii) of the *Local Government Act 1999*, the Council orders that all persons present, with the exception of the following persons: Chief Executive Officer, General Manager City Development, General Manager Corporate Services, General Manager City Services, Manager Office of the Chief Executive, Manager City Activation, Manager City Property, Chief Financial Officer, City Activation Project Design advisor, Unit Manager Sport & Recreation Facilities, Executive Officer to the General Manager City Development, Communications Advisor, Unit Manager Governance and Council Support and Governance Officer, be excluded from the meeting as the Council receives and considers information relating to the South Adelaide Basketball Club redevelopment Feasibility and Business Case, upon the basis that the Council is satisfied that the requirement for the meeting to be conducted in a place open to the public has been outweighed by the need to keep consideration of the matter confidential given the information relates to commercial information with reference to a current confidential item within the same precinct.

REPORT HISTORY

Report Reference	Report Title
GC211214.R18.2	South Adelaide Basketball Club Proposal

REPORT OBJECTIVE

For Council to consider the feasibility study and business case for constructing a new indoor sports and recreation centre with two FIBA (International Basketball Federation) level compliant indoor basketball courts adjacent to Marion Basketball Stadium off Norfolk Road, Mitchell Park.

EXECUTIVE SUMMARY

Council requested a feasibility report and business case be prepared on a potential extension of two additional indoor basketball courts adjacent to the Marion Basketball Stadium off Norfolk Road.

The proposed redevelopment outlines a facility with two additional indoor FIBA level 2 basketball courts, associated court infrastructure and car parking, at a total estimated project cost for Stage 1 of $11,630,000.

The Stage 1 feasibility and business case considers the development of two new basketball courts, administration, kiosk and change rooms built in a structure to the south of the existing two-court stadium. Potential Stage 2 works also investigated include the redevelopment of the existing non-compliant courts to the south with two complaint indoor basketball courts in the future.

The business case recognises an under supply of indoor courts across the City of Marion and a strong need for additional indoor courts to cater for the year-on-year growth of the South Adelaide Basketball Club (SABC). An assessment of operating models indicates the proposed additional courts and amenities could be operated by the SABC and/or Basketball SA (BSA) under a lease with the City of Marion on a financially viable basis that not only allows SABC to grow, but also improves member experiences.

The project aligns with Council's objective of promoting an active and healthy community.

RECOMMENDATION

That Council:

1. **Note the Feasibility study and associated Business case and the project cost estimate for Stage 1 at $11,630,000.**
2. **Notes the South Adelaide Basketball Club (SABC) proposal, SABC's proposed funding commitment of $250,000 towards project capital costs.**
3. **Endorses Administration to progress a Section 48 prudential report for Stage 1 of the SABC project.**
4. **Note that Council at the General Council Meeting on 14 December 2021 endorsed the project to be included on the Council's Unfunded Initiatives list and to seek partnership funding.**
5. **Authorises the Mayor and/or Chief Executive Officer or delegate/s to release information to key stakeholders in relation to the matter notwithstanding confidentiality orders.**
6. **In accordance with Section 91(7) and (9) of the Local Government Act 1999 the Council orders that the financial and commercial in confidence information contained within the report, any attachments, and the minutes arising from this report having been considered in confidence under Section 90(2) and (3)(d)(i) and (ii) of the Act, except when required to effect or comply with Council's resolution(s) regarding this matter, be kept confidential and not available for public inspection for a period of 12 months from the date of this meeting. This confidentiality order will be reviewed at the General Council Meeting in December 2022.**

DISCUSSION

The shortage of indoor courts to support club sport in the City of Marion is well documented and has been discussed for several years.

To address the situation and move the conversation forward a staged concept proposal has been developed by the South Adelaide Basketball Club (SABC) and Basketball SA (BSA) for the existing site at Norfolk Road, Mitchell Park.

The SABC unsolicited proposal concept design identified three stages of works with an indicative cost of $9.275m for Stage 1.

At the General Council Meeting on 15 December 2021 (GC211214.R18.2) Council formally considered the proposal and noted a subsequent written request from the SABC to focus on a 2-court solution and not the entire 6-court concept, noting the larger concept had broader implications for the site as well as other user groups and residents. After considering the scaled back proposal Council resolved the following:

1. *Note South Adelaide Basketball Clubs proposal for 2 additional indoor basketball courts.*

2. *Authorises (1) costing the establishment of 2 indoor basketball courts adjacent to (immediately to the South of) the existing Norfolk Road stadium, as proposed by the South Adelaide Basketball Club; and (2) updating of the 2018 business case regarding the demand for additional courts in southwestern Adelaide: With a report to be brought back to the first General Council meeting in February 2022.*

Following the meeting, Council staff engaged consultants to develop the feasibility proposal (Attachment 1) and business case assessment (Attachment 2).

Feasibility Proposal

The proposal illustrates a two staged plan of development to create an on grade, compliant 4-court indoor basketball facility at the site.

Stage 1 enables the retention of the existing two indoor courts on Norfolk Road, Mitchell Park with the addition of two new FIBA level 2 compliant basketball courts and associated court infrastructure directly to the south/ southeast.

Building footprint includes for:

- Two FIBA level 2 indoor basketball courts.
- Seating for 370 spectators.
- Amenities.
- Entry, admin space and kiosk,
- Player and referee changerooms including a first aid room; and
- Additional car parking and interconnecting roadway.

Stage 2 proposes to demolish the existing non-compliant courts and replace them with two new FIBA level 2 compliant basketball courts and support spaces. The cost estimate allows for the building fabric of Stage 1 and 2 to be treated acoustically to minimise noise generated by the facility. Stage 1 can be built and connected with the existing non-compliant court facility if Stage 2 is not built in the future. The building of Stage 1 requires site utilities infrastructure upgrades for water, sewer and power.

The tennis club building, court capacity and ability to continue operation of the tennis facility are not impacted by this proposal.

The proposal considers the site constraints and the flow of traffic generated by the redevelopment, the impact on Norfolk Road and the demand generated by the additional court infrastructure.

Car parking demand and supply have been assessed and the proposal outlines the overflow of car parking at peak demand. The car parking has been reviewed, understanding the precinct demands. This has resulted in the proposed internal section of roadway and footpath leading from the car park adjacent to the facility and the new car park area to the east. Additional lighting to this area has been included in the cost estimate.

Given the car parking is sufficient from a precinct wide perspective, there is no requirement for an elevated facility. This eliminates the issues with built form scale, overshadowing and potential nuisance impacts associated with an undercroft space. An elevated Stage 1 proposal as outlined in the previous concept developed by the South Adelaide Basketball Club (SABC) and Basketball SA (BSA) would result in an anticipated additional cost of $2M, to construct. A future Stage 2 would then also need to be elevated to match floor levels and this stage would also incur significant additional construction costs.

The Stage 1 footprint is set back from the western boundary due to the existing SA Water easement and the regulated trees adjacent.

The proposed separation and retention of the existing courts for Stage 1 enables the facility to be built while operations to the existing courts can continue. A temporary alternate entry to the existing courts will be required during construction. The proposed footprint of Stage 1 enables the increased

footprint required for Stage 2 to occur in the future which will then result in an integrated 4-court basketball facility.

Stage 2 works will encroach into the adjacent soccer site, but it is not anticipated to impact the soccer pitch. There are regulated trees to the west of the court facility which will be impacted and require removal. Construction of the new facility will temporarily impact the extent of car parking adjacent to the construction zone. The ability to maintain restricted access to the internal roadway leading off Norfolk Road, during the construction of the facility will also need to be investigated so there is minimal impact on the other user groups on site.

Budget

- The proposed Stage 1 works for two new basketball courts including site infrastructure upgrades, all known fees and charges are estimated at $11,630,000. Costing is based on a 2024 construction period.

Stage 1 Cost estimate breakdown

Building works	$6,895,671.35
Site works, site utilities upgrades and landscaping	$1,065,522.62
Car parking, pavements and roadway	$1,448,806.03
Contingency, fees and escalation	$2,220,000.00

- The proposed future Stage 2 works for two new basketball courts including all known fees and charges is estimated at $8,620,000. Costing is based on a construction period completed in a further 10 years, being 2032.
- The Cost estimates included are high level and based on currently known conditions.

Should Council commit to seeking a partnership funding contribution for Stage 1 supported by an external source, then consideration needs to be given to the risk of total project costs exceeding $11,630,000 and therefore requiring Council to contribute additional funds.

Business Case

Basketball SA's 2016 Facilities Report identified that the existing Marion Stadium *"….is nearing the end of its life and it is not fit for purpose. There are no social, club or administrative facilities, a lack of amenities and seating, and a growing list of maintenance concerns. The building has a forecast life of 3–5 years."*

The Report identifies upgrading the Marion Stadium as one of six critical actions to occur over the next five years (between 2016 and 2020). Each of the other five critical actions identified by BSA have either been completed or have commenced.

The Indoor Courts Review 2021 report prepared by Council staff highlights:

- an undersupply of indoor courts in the City of Marion,
- ageing facilities,
- a lack of compliant courts; and
- an over reliance on undersized school courts.

There were several other factors raised in this report that have resulted in Council committing to develop an Indoor Facilities Plan (IF Plan) by the end of the financial year 2021/22. The plan will outline options and future prioritisation of capital works to address identified gaps and deficiencies in indoor facilities within the City of Marion.

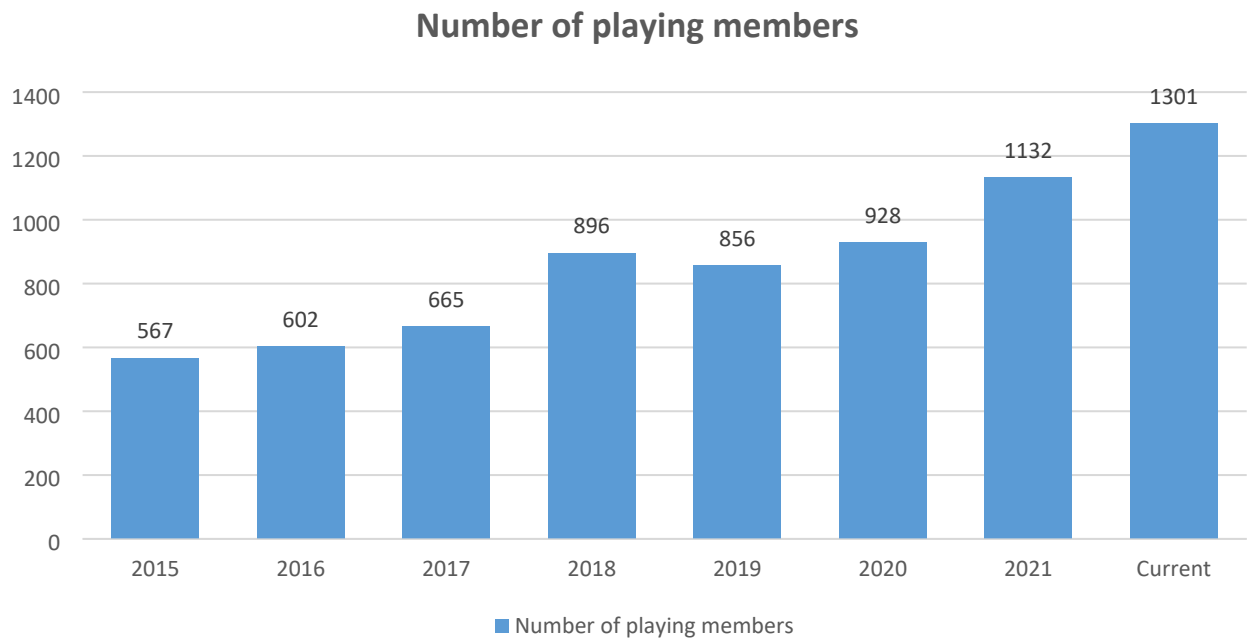
Given the current condition of the existing Marion Stadium, it is expected that future renewal or development of the Marion Stadium will be identified in the Indoor Facility Plan as a key or priority project.

The existing 2-court Marion Stadium (current home court for the SABC) is over 50 years old and no longer meets the SABC's functional needs. Significant capital works would be required to upgrade the existing stadium to bring it up to modern standards and this approach would not address the existing shortfall in the number of courts SABC needs to access. While the Marion Basketball Stadium is not suitable to host senior district games and meet the needs of the Club as a home court, it is suitable for continued use as a training venue and for underage domestic games.

The proposed new 2-court indoor stadium would provide the SABC with two additional courts, a compliant and fit-for-purpose venue to host senior games with seating and additional facilities such as a new kiosk, merchandise room, and an administration base to support the future operations of the SABC. The SABC proposal maximises the ongoing value of the existing Marion Stadium while addressing the Club's pressing need for additional courts and a fit-for-purpose home court.

The SABC has over 1,300 players, making them the largest sporting club in terms of participation in the City of Marion. The SABC utilises over 10 venues outside of their home court, including several single court school facilities which do not have full-size playing courts and are generally only hired in the absence of more suitable facilities.

Over the past seven years, the SABC has experienced a compound annual growth rate in playing members of over 12% per annum.



According to information provided by the SABC, approximately 81% of SABC's membership base resides in the catchment area surrounding the existing Marion Stadium with 41.9% of members residing within the CoM council area. Accordingly, the SABC is confident that the proposed location of the additional courts represents a location that is in the best interest of the club's existing members and will be suitable to support continued growth of the SABC.

The SABC estimates that with an additional two courts and the availability of additional court time at the Mitchell Park Sports & Community Centre (MPSCC), there will be room to accommodate another 200 new playing members – an increase of over 15%.

Should an acceptable funding model be put in place to support the capital costs of this project, and if the project progresses, the City of Marion will need to select a management model for the new stadium. Based on the recent growth of the SABC and the stadium's expected usage as a basketball only facility, the most appropriate management model would be for either SABC and/or

Basketball SA to lease the facility from the City of Marion and for the lessee to operate the stadium and be responsible for all operational and maintenance costs.

Based on this management model, and discussions with the SABC and BSA, there is a high level of confidence that there is sufficient demand from basketball to ensure that the new courts and stadium will be highly utilised and that the lessee will be in a financial position to support the ongoing recurrent costs of operating the stadium. The recurrent costs of operations can be met by a combination of both reduced spending by the SABC on alternative venues currently being hired, and the ability to service additional SABC members creating new and increased revenue streams.

In summary, the current SABC proposal assists the club address current significant constraints to its continued growth and in particular its lack of a fit for purpose home facility. It is expected the new stadium could be operated by the SABC and/or BSA under a lease with the City of Marion on a financially viable basis while also creating greater opportunity for the SABC to grow, improve member experiences and to help Council achieve its objectives of promoting an active and healthy community.

Next Steps

- To progress a Section 48 prudential report for Stage 1 of the SABC project.
- To include the project on the Council's Unfunded Initiatives list to facilitate the seeking of partnership funding.
- For the CEO and Mayor to commence discussions with funding bodies to seek partnership funding and communicate the approach to the South Adelaide Basketball Club.

ATTACHMENTS

1. Marion Basketball Stadium Proposal [**18.1.1** - 27 pages]
2. SABC Feasibility v2 [**18.1.2** - 111 pages]

BRM Advisory

Review of the proposed Marion Basketball Stadium Expansion

January 2022

BUSINESS • RESOURCE • MANAGEMENT

Key Project Stakeholders:

BRM ADVISORY
BUSINESS RESOURCE MANAGEMENT

Level 8, 420 King William Street, Adelaide SA 5000
Tel 08 8168 8401
ABN: 65 067 721 797

EXECUTIVE SUMMARY

The South Adelaide Basketball Club (SABC) has approached the City of Marion (CoM) with a proposal to construct a new two indoor court basketball stadium adjacent to the existing Marion Basketball Stadium (Marion Stadium) at Norfolk Road, Marion on land within the Marion Sports Precinct. The new stadium would provide the SABC with two additional courts, a compliant and fit-for-purpose venue to host senior games with seating and additional facilities such as a new kiosk, merchandise room, and an administration base to support the future operations of the SABC (Project).

The existing two court Marion Stadium which is the current home venue for the SABC is over 60 years old and no longer meets the SABC's functional needs. Significant capital works would be required to upgrade the existing stadium to bring it up to modern standards and this approach would not address the existing shortfall in the number of courts SABC needs to access. While the Marion Stadium is not suitable to host senior district games and meet the needs of the Club as a home court, it is suitable for continued use as a training venue and for junior domestic games and to complement a purpose-built facility adjacent to the existing stadium. The SABC proposal maximises the ongoing value of the existing Marion Stadium while addressing the Club's pressing need for additional courts and a fit for purpose home court.

The Project is not currently envisaged in the suite of CoM strategic management plans and there are no specific capital provisions to fund the Project in CoM's budgets. Therefore, for the Project to progress, it would be beneficial for CoM and the SABC to seek opportunities for funding from both the State and Federal Governments. Based on other recently completed indoor court projects, there has been an appetite from both other tiers of government to help fund such opportunities.

While not specifically envisaged in CoM's Strategic Plans, the Project is aligned with the CoM's 'Liveable' Strategic Objective by creating improved opportunities for residents to enjoy quality recreation facilities.

Should an acceptable funding model be put in place to support the capital costs of the Project, and if the Project progresses, CoM will need to select a management model for the new stadium. Based on the recent growth of the SABC and the stadium's expected usage as a basketball only facility, the most appropriate management model would be for either SABC and/or Basketball SA to lease the facility from CoM and for the lessee to operate the stadium and be responsible for all operational costs.

Based on this management model, and our discussions with the SABC and BSA, we have a high level of confidence that there is sufficient demand from basketball to ensure that the new courts and stadium will be highly utilised and that the lessee will be in a financial position to support the ongoing recurrent costs of operating the stadium. The recurrent costs of operations can be met by a combination of both reduced spending by the SABC on alternative venues currently being hired, and the ability to service additional SABC members creating new and increased revenue streams.

The additional courts are expected to increase SABC's capacity to take on a further 200 players and rejuvenate the existing Mini Panthers program which has almost ceased due to a lack of court access.

In summary, the SABC proposal greatly helps the club address current significant constraints to its continued growth and in particular its lack of a fit for purpose home court. We expect the new stadium can be operated by the SABC and/or BSA under a lease with the CoM on a financially viable basis while also creating a great opportunity for the SABC to grow, improve member experiences and to help Council achieve its objectives of promoting an active and healthy community.

TABLE OF CONTENTS

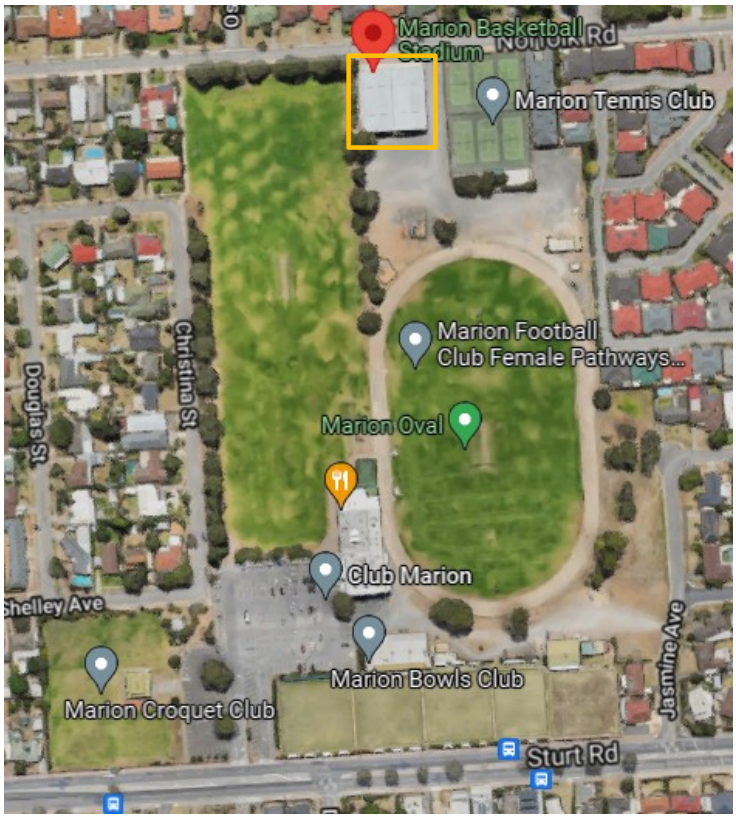
INTRODUCTION

Marion Basketball Stadium

The Marion Basketball Stadium (Marion Stadium) is one of a number of existing indoor recreation facilities owned by the City of Marion (CoM).

The Stadium is located within the broader Marion Club Sporting Precinct which is bordered by Sturt Road to the south and Norfolk Road to the North. An overhead view of the Marion Stadium and its positioning within the sporting precinct is shown in Figure One.

Figure One: Overhead view of the Marion Sporting Precinct and the existing Marion Basketball Stadium



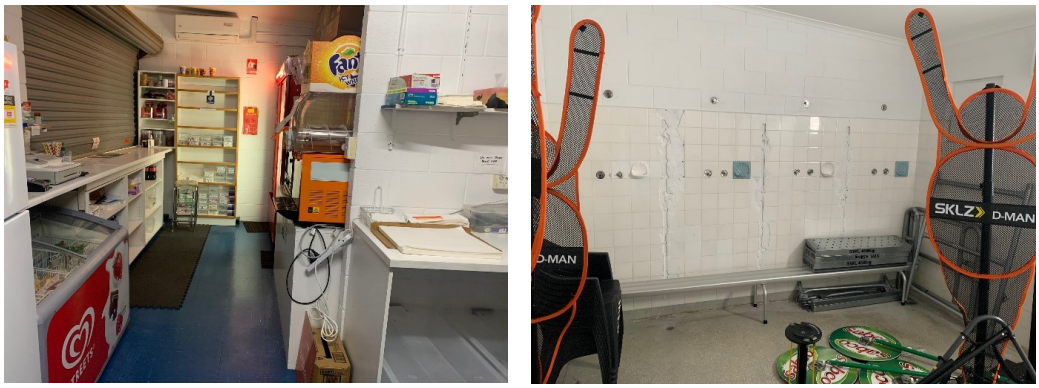
The Stadium was constructed in the late 1950's and contains two courts, changing rooms, a small kiosk and limited other facilities. The Marion Stadium is the current home base for the South Adelaide Basketball Club (SABC). According to the SABC, the Marion Stadium:

- no longer meets the needs, standards and expectations of the basketball community as a place where senior district and NBL1 games can be played;
- is isolated within the Club Marion Sporting Precinct;
- lacks an inviting arrival experience;
- lacks capacity for both the SABC and other community events or programs; and
- has inadequate changerooms, office space, health and catering facilities which are expected in a modern indoor court facility.

Figure Two: Existing court infrastructure

The court surface is in good condition having recently been replaced however the court itself is not compliant or suitable for competition basketball. There is a lack of seating and spectator facilities and very poor change room facilities. The above photos show the limited run-offs at either side of the court which presents a safety issue for games and limits room for spectators.

Figure Three: Kiosk and changeroom facilities



The existing kiosk is very basic with limited cooking and food service facilities and no deep fryer. The service area for the Kiosk backs onto the showcourt meaning that those lining up for service are at risk of interfering with play. The changeroom facilities are incredibly poor, with no working showers and very limited space. The Marion Stadium does not have a permanent liquor license.

The Marion Stadium is currently leased by CoM to Basketball SA (BSA) with the SABC holding a sub-lease for shared use of the facility with BSA. There are strong relationships between BSA and the SABC which is evidenced by both parties working together to develop a proposal to redevelop the Marion Stadium.

About SABC

SABC was formed in 1952 and was one of the founding clubs in the sport of basketball in South Australia. According to information provided by the SABC to CoM in December 2021, the SABC is the largest sporting club in the CoM with 3,841 members and 1,301 players.

The SABC runs its own domestic basketball competition which currently has over 160 teams (eight players per team) and is open to all junior players both girls and boys (U8's to U18's) of all abilities. Players who play in this domestic competition train one night per week and play games on Saturdays at a variety of different court venues hired by SABC.

The SABC is also one of 11 clubs who participate in the BSA District Competition which is Basketball SA's elite representative basketball competition, involving male and female junior (Under 10 to Under 18), youth league (Under 21/23) and senior (open-age) teams.

The SABC provides a pathway for its elite men's and women's players as a participating member of NBL1, a national semi-professional basketball league.

The SABC has experienced significant growth in recent times with existing demand for approximately eight courts each weeknight for training as well as utilising over 10 different venues to accommodate its domestic basketball competition on Saturdays.

The SABC's most pressing strategic issues are court access, and the poor condition and lack of suitability of its existing leased court facilities.

The Project

On 15 December 2021, SABC and BSA presented a proposal to Council for the staged upgrade of the Marion Stadium. While the full proposal envisages a new six court facility to be constructed on the existing site over a long-term development horizon, Stage 1 of the proposal is the construction of a new two court stadium located alongside the existing two courts to produce a four-court precinct. In addition to the two new courts, the new stadium section would also include:

- Compliant changeroom facilities;
- An office that would become the administration base for SABC;
- New canteen and bar;
- Showcourt with designated seating; and
- Allied health room

Figure Four shows the proposed upgrade plan.

Figure Four: Stage 1 'Home of Basketball in the South'

The Stage 1 proposal does not envisage the removal or relocation of the existing tennis courts or any other existing sporting infrastructure at the Marion Sports Precinct nor does it involve any upgrades to the existing Marion Stadium.

Based on early and indicative cost estimates, the expected capital cost of the Project is between $8 and $10 million. For the purposes of this Review we have assumed a $10 million capital cost.

Following the presentation, Council resolved as follows:

That Council:
1. Note South Adelaide Basketball Clubs proposal for 2 additional indoor basketball courts.
2. Authorises up to XXX to be spent on (1) costing the establishment of 2 indoor basketball courts adjacent to (immediately to the South of) the existing Norfolk Road stadium, as proposed by the South Adelaide Basketball Club; and (2) updating of the 2018 business case regarding the demand for additional courts in southwestern Adelaide (by direct engagement and negotiation rather than the usual tender process, due to the urgent need for information); With a report to be brought back to the first General Council meeting in February 2022
3. Includes the project on its list of unfunded priorities and seek election commitments towards two new indoor courts and amenities.

This Review has been specifically prepared to meet the requirements of this Council resolution and focusses solely on the Stage 1 expansion (two additional courts) of the Marion Stadium (Project).

Should an acceptable funding mix be achieved to support the Project, additional due diligence work would need to be undertaken by CoM including concept and detailed designs, cost-benefit analysis, risk assessment and a prudential report (which will be required under Section 48 of the Local Government Act as the Project would exceed the financial threshold).

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Exclusions and Limitations

Given time and other constraints, we have been asked to respond to a specific scope of work which excludes the following elements that would ordinarily form part of a more detailed assessment or Business Case relating to progressing such a Project:

- Undertake a detailed assessment of alternative sites for a new stadium;
- A formal cost benefit analysis of the social and community costs and benefits;
- An assessment of the planning and development considerations relevant to the area;
- A detailed project risks assessment which considers the risk to CoM and SABC/BSA; and
- Undertaking and/or assessing the outcomes of community and key stakeholder consultation to determine the impact of the Project on other groups.

There are also limitations in our work resulting from the very early nature of the concept designs and the absence of a detailed capital cost assessment. This means that key scope inclusions / exclusions which will impact the eventual operating model and financial outcomes for the new facility have not yet been made. Some examples relate to the:

- electricity consumption relating to the capacity and type of air-conditioning and lighting;
- whether or not solar panels will be included in the capital budget and how much electricity consumption this will offset (if any);
- number of seats and the opportunities that may relate to using the new stadium for events and carnivals

While these are significant exclusions and limitations, this Review still provides additional information to progress the decision making of CoM. The identified gaps can be filled at a later stage of Project progression and will ultimately be required to allow for the production of a Prudential Report which will be required under Section 48 of the Local Government Act before the Project construction commences.

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ALIGNMENT WITH KEY PLANNING DOCUMENTS

City of Marion Plans

Community Vision – Towards 2040

The Community Vision contains six key themes that represent the shared values of the City. The theme most relevant to the Project is the 'Liveable Theme where healthy lifestyles are celebrated.

City of Marion Strategic Plan 2019-2029

Under the Liveable Theme of the Strategic Plan, by 2029 CoM has committed to providing excellent sporting facilities to create more opportunities for residents to enjoy recreation and social interaction.

City of Marion – Business Plan 2019-23

The redevelopment of the Marion Stadium is not specifically envisaged in the 2019-23 Business Plan as a major capital works Project, with the focus in the Business Plan being on the redevelopment of the Mitchell Park Sport and Community Facility and on considering options for additional recreational facilities at the Marion Sports Precinct.

City of Marion Annual Business Plan 2021-22

The redevelopment of the Marion Stadium is not specifically envisaged in the 2021/22 Annual Business Plan, however there is a stated priority project to identify options for recreational facilities at the Marion Sports Precinct. Considering this Project is consistent with this priority in the Business Plan.

City of Marion Long Term Financial Plan 2021-2031

The LTFP links Council's Business Plans and Asset Management Plans and translates the outcomes and strategies of Council's Business Plans into financial terms. The CoM is currently operating and is forecast to operate well within its key financial ratios. Despite the capital cost of the Project not being included in forward projection, the CoM has sufficient financial capacity to support progression of the Project if it chooses to do so.

State Government Plans

Growth State

Growth State is the South Australian Government's plan for economic growth. Like with any infrastructure Project, the economic activity created by upgrading the Marion Stadium will result in additional construction activity and support employment, providing direct and indirect economic benefits to the broader community.

30 Year Plan for Greater Adelaide

The 30 Year Plan for Greater Adelaide provides a vision for how Adelaide will look and feel in 30 years time. In the Infrastructure – Open Space, Sport and Recreation section of the plan, Policy 102 states "Strategically locate sports and recreational facilities to cater for community needs". Given the identified club and community need for the facility the Project will be aligned to the 30 year plan.

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Game On Strategy

Game On: Getting South Australia Moving is an initiative of the South Australian government which outlines a framework for ensuring physical activity and exercise can fit seamlessly into daily lives to improve the well-being of communities.

Developing enhanced and compliant court infrastructure is consistent with one of the eight key outcomes of Game On, being the provision of "High quality, inclusive and accessible recreation infrastructure".

State Sport and Recreation Infrastructure Plan

The State Sport and Recreation Infrastructure Plan states "It has been identified that there is a specific need for basketball in the south and inner south and generally across the metropolitan areas. To cater for the needs of people interested in basketball and other court sports, future developments should feature a minimum of four courts." While the Project only envisages a two court expansion, the Project is broadly consistent with the objective of improving access to indoor courts in the southern suburbs of Adelaide.

Commonwealth Government Plans

Sport 2030

Sport 2030 is the vision and the plan for sport and physical activity in Australia over the next 12 years to be delivered in partnership with Australia's sporting, physical activity, technology, education and corporate community. The plan states "The availability of accessible and sustainable sporting and physical activity infrastructure is critical when it comes to getting Australians moving more" and confirms that the Australian Government will play a key role in funding sporting infrastructure.

Strategic Alignment Summary:

The expansion of the Marion Stadium is not specifically an envisaged project in the suite of CoM Strategic Management Plans however the plans do reference the completion of an options assessment for upgrades to the Marion Sports Precinct. There are no existing financial provisions to support the capital cost of the Project within CoM's existing budget or Long Term Financial Plan.

Providing improved community recreation infrastructure is strongly aligned to key themes in the CoM's strategic documents including helping to support the Liveable Theme of the Strategic Plan..

The level of alignment with State and Federal strategic policy documents can be important in attracting partnership funding to support delivery of the Project. Recent history confirms there has been an appetite from both the State and Commonwealth Government to assist with funding indoor court projects. The Project has a strong level of alignment with both State and Federal planning documents.

RATIONALE FOR THE PROJECT

The case for additional courts in Adelaide

BSA's 2016 Facilities Report identifies that most key indoor court facilities (at that time) in metropolitan Adelaide were at capacity, in poor condition and not fit for purpose. There were also no indoor stadia that had more than four indoor courts which falls significantly behind other states which have multiple 4,5,6,7,8, and even 10+ court facilities. The level of investment in new facilities at that time was not keeping up with the growth of basketball and was a significant constraint to further growth in participation of the sport.

Since the 2016 report, five major new indoor facilities or upgrades to facilities have been completed or have commenced in metropolitan Adelaide, with those that have been completed still able to operate at full peak period capacity with both basketball and non-basketball usage.

Despite the recent investment in new indoor court infrastructure that has seen 16 new indoor courts [1]constructed in Adelaide across three major sites, there are many district basketball clubs that are still desperate to find additional court time to meet continued growth and demand from new participants. Many clubs are forced to turn junior players away due in part to a lack of access to court infrastructure to accommodate training and games.

The shortage of courts is further identified and supported in the recently released State Sport and Recreation Infrastructure Plan released by ORSR which specifically identified a shortage of indoor courts in the southern and inner southern suburbs of Adelaide.

Condition of the existing Marion Stadium

BSA's 2016 Facilities Report identified that the existing Marion Stadium "*....is nearing the end of its life and it is not fit for purpose. There are no social, club or administrative facilities, a lack of amenities and seating, and a growing list of maintenance concerns. The building has a forecast life of 3–5 years."*

The Report identifies upgrading the Marion Stadium as one of six critical actions to occur over the next five years (between 2016 and 2020). Each of the other five critical actions identified by BSA have either been completed or have commenced.

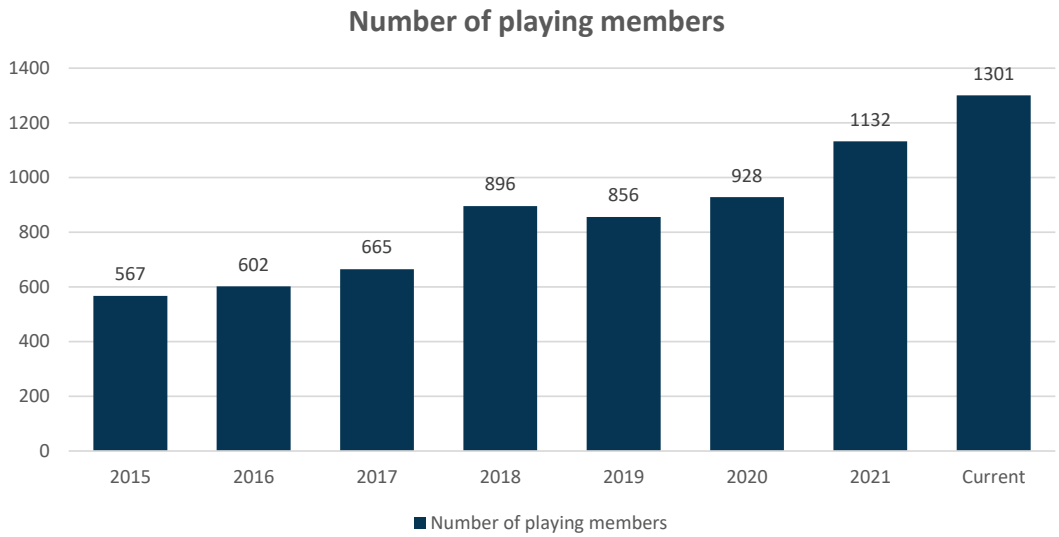
Demand for additional courts from the South Adelaide Basketball Club

At December 2021, the SABC had over 1,300 players making them the largest sporting club in terms of participation in the CoM. The SABC utilises over 10 venues outside of their home court, including a number of single court school facilities which do not have full size playing courts and are generally only hired in the absence of more suitable facilities.

[1] Five courts at the Arc, six courts at St Clair and five courts at The Lights.

Over the past seven years, the SABC has experienced a compound annual growth rate in playing members of over 12% per annum. Year by year membership numbers over this period are shown in Figure Five.

Figure Five: Growth in playing members at SABC



In FY2021, SABC spent approximately $190k on external court hire during a year that was impacted by COVID restrictions and an inability to train for a number of months. The SABC estimates that with the current number of members, external court hire costs for the next 12 months may be in the order of $250k.

Having full time access to two additional courts at Marion Stadium is estimated to help to reduce the money spent on external court hire by more than 50% and increase the capacity of the club to service an estimated additional 200 members.

Potential Location for a new stadium

According to information provided by the SABC, approximately 81% of SABC's membership base resides in the catchment area surrounding the existing Marion Stadium with 41.9% of members residing within the CoM council area. Accordingly, the SABC is confident that the proposed location of the Project at the Marion Sports Precinct represents a location that is in the best interest of the club's existing members and will be suitable to support continued growth of the SABC.

South Adelaide Basketball Stadium Business Case – June 2018

SABC has been seeking to address the current limitations with the existing Marion Stadium for many years. In 2018, SABC engaged KPMG to undertake a Business Case (KPMG Report) in relation to an alternative opportunity to develop a seven-court facility on land at the Adelaide Airport to replace the current Marion Stadium as the major home court for SABC.

The KPMG Report went into significant detail regarding the potential operating model and social and community benefits of progressing the specific opportunity.

The analysis contained in the KPMG Report has been beneficial in providing background information about the need for new courts and some of the expected community and social benefits that can be realised by constructing improved infrastructure for use by SABC.

Indoor Court Review Report - 2021

In 2021, a report was prepared by CoM that mapped the supply and demand of indoor court facilities in the city. Table One summaries the four facilities identified in the report, which are owned by the CoM, providing indoor basketball courts.

Table One: Indoor court facilities owned by the CoM

Facility	Number and size of courts	Current condition and age (per report)
Marion Leisure and Fitness Centre	Three indoor basketball courts suitable for domestic but not district competition basketball.	Courts are in good condition.
Marion Basketball Stadium	Two indoor basketball courts used for district competition basketball but not suitable for this use.	Stadium is approximately 60 years old and in poor condition. Associated facilities are either substandard or non-existent.
Cosgrove Hall	One undersized basketball court but facility mainly used for volleyball.	"The building is aging but in average condition."
Mitchell Park Sports and Community Centre (under construction)	Two fully compliant competition basketball courts.	Currently under construction to be opened in mid 2022.

Following completion of Mitchell Park Sports and Community Centre, CoM will own eight indoor courts to provide this type of leisure facility for its approximate 90,000 residents.

The Indoor Court Review Report refers to a court provision rate of an average of 1 court per 10,000 residents[2] (ROSS Planning). Following completion of the Mitchell Park Sport and Community Centre, CoM will be just under the benchmark range in terms of indoor court provision. However, care should be taken in using such a broad benchmark to assess latent demand for indoor courts as:

1. Basketball participants commonly travel outside their local government area to use quality indoor courts.
2. The KPMG Report[3] states that basketball participation in South Australia (4.6% of the population) significantly exceeds the national average (2.4% of the population), meaning that the use of a national benchmark for court supply may understate the actual requirement.

A more accurate measure of unmet demand for courts comes from a bottom up approach; analysing the membership and participation rate at local clubs in the area.

[2] Provision rate provided ROSS Planning Pty Ltd (Recreation, Open Space, and Sports specialist consultants).
[3] South Adelaide Basketball Stadium Business Case June 2018 Page 13

Indoor Facility Plan

As an outcome of the Indoor Court Review, CoM has committed to finalising an Indoor Facility Plan by the end of financial year 2021/22. The plan will outline options and future prioritisation of capital works to address identified gaps and deficiencies in indoor facilities within the CoM.

Given the current condition of the existing Marion Stadium, we expect that future renewal or development of the Marion Stadium will be identified in the Indoor Facility Plan as a priority project.

This Plan will be critical in determining how and where the city should allocate resourcing to support indoor courts. Ideally, this Plan would have been completed prior to a decision on the Project, however given the current external funding opportunities and the proposal being put forward by SABC, it is highly likely that a decision on the Project will be required prior to completion of this Plan.

Ongoing suitability of the existing Marion Stadium as a training venue

According to SABC, while the existing Marion Stadium is not suitable for its current use as a district basketball venue, the existing courts are still suitable for training and younger age domestic competitions. The lack of suitability for games is mainly due to:

- Unacceptable change rooms with no showers and a lack of space for players;
- Non-compliant court run-offs;
- small and insufficient reception area;
- undersized administration facilities;
- Lack of space for spectator seating; and
- Lack of suitable food and beverage facilities and access issues to the current cafeteria.

SABC's plan is to develop a new facility to meet its needs while maintaining the existing Marion Stadium courts for training; a use which is more suited to the current condition and function of the asset.

Mitchell Park Sports and Community Centre

CoM is currently constructing a new two court indoor facility as part of the Mitchell Park Sports and Community Centre (MPSCC). Construction is due to be completed during the middle of 2022.

It is proposed that usage of these two additional indoor courts will be shared between SABC, BSA and Phoenix Volleyball Club. It is expected that BSA will transfer a majority of the fixturing of its District Competition currently held at Marion Stadium to MPSCC. This will free up court hours at Marion Stadium for additional training usage by SABC.

SABC is expected to use its allocation of court hours at MPSCC to support its ongoing training and domestic basketball competition to slightly reduce reliance on other third party facilities.

SABC view MPSCC as supporting its current lack of supply of courts but given the size and the shared nature of the facility, is not considered to be a suitable venue to act as a future home court for the Club.

ECONOMIC AND SOCIAL IMPACT OF THE PROJECT

Undertaking a detailed cost-benefit analysis is beyond the scope of this Review however we have been asked to explain the social and economic benefit of pursuing the Project.

The 2018 KPMG Report that was based on an alternative proposal to this Project and contained a detailed economic cost-benefit analysis for that alternative development proposal. While the numbers contained in that analysis cannot be directly applied to this Project, the nature of the costs and benefits can be considered.

From an economic and social impact perspective, costs that can be identified in relation to progressing this Project include:

- Capital cost of construction;
- Whole of life or recurrent costs of operations; and
- Opportunity cost of other potential uses for the site within the Marion Sports Precinct.

Benefits that can be identified in relation to progressing this Project include:

- Consumer surplus, being the benefit received by a person for consumption over and above the cost of that consumption;
- Producer surplus, being the benefits to business from additional utilisation and visitation in and around the new indoor courts;
- Personal health benefits, being the benefits to participants who are being active;
- Health system savings, being the reduced health system costs as a result of a more active community;
- Volunteering benefits; being the benefits associated with the new volunteering opportunities that the new Project will create;
- Mental Health and Wellbeing benefits, being the improved social and mental wellbeing of people actively participating in sports; and
- Terminal value, being the residual value of the new courts at the end of their useful life.

Should CoM wish to further understand the specific cost and benefits of progressing the Project, an analysis using the Office for Recreation Sport and Racing's Social and Economic Benefit Cots Analysis Tool (SEBCAT) the social and economic costs and benefit could be commissioned. This may also support the application for any State or Federal funding that may be available to contribute towards the capital cost of the Project.

Rather than using a formal tool, the other way of considering the social and economic benefits of progressing with the Project is to understand the potential increase in participation and other non financial benefits to the SABC.

Participation

Based on our discussions with SABC, the current condition and lack of availability of court infrastructure is constraining the club's opportunities for growth particularly regarding the SABC Domestic Competition and Mini Panthers program.

While the SABC has a playing membership base of more than 1,300, the Club is currently capped in terms of its ability to adequately service additional players. The SABC estimates that with an additional two courts and the availability of additional court time at MPSCC, there will be room to accommodate another 200 new playing members – an increase of over 15%.

It is not just junior players who are being impacted by the availability and condition of courts available to SABC. At the high performance end of the Club, we have been advised that a number of highly regarded junior and senior players have left the SABC and joined rival district clubs on account of the lack of availability of courts which impacts the high performance and coaching programs that SABC can offer to retain and improve the SABC's elite talent.

Other direct benefits for SABC

Due to the poor condition and lack of facilities, the existing Marion Stadium is no longer suitable to act as a home court for a district basketball club. By progressing the Project, SABC would gain access to the following key amenities that are no longer available or up to standard at the existing Marion Stadium.

Location for SABC employees

The new facility would provide a base for SABC's committee and existing four paid staff (approximately 3.2 FTE) to work and interact. The SABC expects this would improve the engagement levels of staff (who currently work from home due to a lack of alternative space) and should lead to additional benefits in terms of productivity and oversight.

A home base for players and supporters

The Club has extremely limited facilities for club supporters who want to watch games. For elite level games (NBL1), capacity in the stadium is limited to between 100 and 200 which is significantly less than demand and comparable crowds that attend other NBL1 fixtures (500+).

There are also no suitable facilities for the SABC to hold presentations following games, where players and supporters can hear about the performance of teams across the various venues.

A more appropriate venue with facilities including seating, catering and a bar is highly likely to create additional enjoyment for players and supporters who are in turn more likely to have a more fulfilling experience when interacting with the SABC and the sport of basketball. This should result in increased participation, player retention and help to support the future viability and success of the SABC.

Safer environment

The existing Marion Stadium is home to SABC's competitive senior fixtures. Like many other facilities which were designed and constructed at the same time as the Marion Stadium, the court has extremely limited run-offs either side of the court and a lack of first aid or allied health room. Accordingly, there are risks relating to continuing to play senior fixtures at the current Marion Stadium.

Economic and Social Benefit Summary:

Utilising the existing Marion Stadium as a home court and the lack of alternative court facilities in the area is placing significant constraints on the SABC. By investing in a fit for purpose facility with compliant competition courts and suitable associated infrastructure, CoM would be removing a major barrier to the future growth in participation and success of the SABC.

This is highly likely to increase participation at the SABC and in turn the level of physical activity being undertaken by residents of the CoM.

BRM Advisory

FUTURE OPERATING MODEL

Operating Model Options

Indoor court facilities are generally operated under one of three alternative operating models which are detailed in Table Two: Potential operating modelsTable Two.

Table Two: Potential operating models

Operating Model	Description	Examples
External operating model	Operated by a third-party operator under a Management Agreement with a council.	St Clair (Charles Sturt) The Gardens (Salisbury) Marion Leisure (Marion)
Internal operating model	Operated by council with a combination of council staff and labour hire staff.	The Arc (Campbelltown) The Lights (Port Adelaide Enfield)
Direct lease (either direct with Club or via a sporting body such as BSA)	Operated by a Club or Association who is usually the major or sole tenant of the facility.	Marion Basketball Stadium (Marion) Wayville Sports Stadium (Adelaide Showgrounds)

The external operating model is usually favoured where there are multiple stakeholder and club users of a recreation facility and generally occurs with larger and more complex recreation facilities where there are multiple commercial recreation assets such as indoor courts, gymnasium facilities or aquatic facilities. Major recreation centres such as St Clair and Marion Leisure Centre operate under the external model. A majority of externally run indoor court facilities in South Australia are operated by either YMCA or Belgravia Leisure.

An internal operating model (council operated) is usually favoured where council wants to exert a high level of control over usage and the programs offered at a site. For large recreation sites (such as The Arc and The Lights) council may determine that the internal operating model can provide a cost-effective delivery model when there is sufficient scale. Again, usually sites operated under an internal operating model have multiple different stakeholders and user groups who require management and oversight.

The direct lease approach is usually favoured where an indoor court facility is of a size and scale where it is solely or majorly used by one club or association and there are limited commercial elements (such as gymnasiums) within the facility. That single club or association is then given responsibility to manage the facility in accordance with a lease or license agreement and will usually keep all revenue streams and be responsible for operating costs and minor maintenance.

Preferred operating model

The Marion Stadium expansion is proposed to address the current shortfall in court facilities for the SABC and there is no known plan for other clubs or sports to access the redeveloped facility on a regular basis (at least initially).

There would seem to be no commercial or operational basis for CoM to seek to implement an external or internal operating model at the redeveloped Marion Stadium. Accordingly, and consistent with the current operating model at the Marion Stadium, the direct lease model is the most suitable operating model to progress in relation to a redeveloped Marion Stadium.

Currently, BSA holds the headlease at Marion Stadium (which expires in September 2023) and subleases courts to SABC on a fee for service basis. Post redevelopment, there is an opportunity for SABC to become the head lessee or alternatively for BSA to retain the head lease.

Both BSA and SABC have close working relationships and we understand both parties have indicated a willingness to work together regardless of which entity holds the head lease to achieve an optimal outcome for the benefit of basketball.

Lease / License fees

CoM has an existing Policy titled 'Leasing and Licensing of Council Owned Facilities Policy' (Leasing Policy) last authorised on 14 December 2021. The Policy is applicable to the extensive range of council owned facilities and multipurpose sites which are ultimately leased or licensed to community clubs and/or commercial organisations to allow these organisations to deliver services that are valued by the community.

The Leasing Policy sets out specific criteria for:

- eligibility for a lease;
- the fees that will be charged;
- the term of agreement; and
- responsibilities for costs.

Unless there is a compelling reason to divert from the Leasing Policy (discussed below), the assumption should be that any future lease of the expanded Marion Stadium would be prepared consistent with the terms of the Leasing Policy. Under the Leasing Policy, the lessee (either SABC or BSA) would be offered a lease to utilise the Marion Stadium on the following key terms:

- Annual rent calculated at a rate of 7% of the market rent in accordance with Council's asset valuation data;
- Term of five years (unless otherwise approved by Council);
- All maintenance (including in this instance the resurfacing and re-sanding of court floors) will be the responsibility of the Lessee;
- Utilities (electricity, gas and water) will be the responsibility of the Lessee.

After consultation with both SABC and BSA, it is evident that a lease offering in accordance with the Leasing Policy would be a highly desirable outcome. The only point of contention if such a lease was offered would be regarding the Lease term.

If SABC are committing capital to the redevelopment and supporting the attraction of State and/or Federal grant funding, there could be a strong case for a much longer tenure.

Rationale to divert from the Leasing Policy

Indoor courts are capital intensive assets which have an ability to generate recurring revenue.

Generally speaking, indoor courts do not generate a 'commercial return'; i.e. the revenue generated from courts does not cover operational expenses, asset renewal costs and generate a return on capital investment. Accordingly, there are limited examples of private commercial investment in indoor court infrastructure in South Australia and this kind of infrastructure is generally only provided by the public sector.

However, the revenue that can be generated from indoor courts may create sufficient cashflow that would allow a lessee to pay an annual rental higher than the 7% of commercial rent prescribed in CoM's Leasing Policy, particularly considering the lessee does not need to generate a return on capital or make financial provision for asset renewal costs.

Departure from the Leasing Policy could also be justified by the high capital renewal costs relating to indoor courts which may be borne by CoM in the future and the additional revenue streams that may be generated by a lessee through the ongoing use of the stadium and rationalisation of current operations.

A future lessee of the redeveloped Marion Stadium may also be willing and able to pay a higher lease fee in exchange for longer tenure than the five years prescribed in the Leasing Policy.

These factors should be balanced against the SABC commitment of $250,000 towards the capital cost of the Project and their potential high level of influence over the ability to source additional funding from both the State and Federal Government to support the Project.

Financial analysis has been undertaken detailing the forecast financial viability of the proposed Marion Stadium based on a structure consistent with the current Leasing Policy.

CoM should review the financial analysis to determine whether it considers leasing the redeveloped stadium in accordance with the Leasing Policy is equitable for the SABC, other stakeholders and all ratepayers.

FINANCIAL VIABILITY

This section develops a preliminary operating forecast which considers the annual financial impact on the lessee and CoM as the building and land owner of progressing the Project.

Given concept designs for the facility have not yet been finalised, nor have the terms of the lease been negotiated, the following analysis is highly indicative and should not be relied upon for budgeting purposes.

Financial impact on SABC

This financial analysis assumes the redeveloped Marion Stadium (four courts in total) is operated as a separate business unit and leased by SABC under the existing CoM Lease and Licensing Policy. The assumptions have been informed by discussions with both BSA and SABC and based on benchmarking of revenues and costs from both the existing Marion Stadium and other basketball stadiums in Adelaide.

There are both new revenue streams and cost savings that will be realised by SABC if the Project progresses as well as additional expenditure that will be incurred. These are detailed in Table Three and Table Four.

Table Three: Revenue and cost impacts

Revenue or costs avoided	Assumptions
Savings in external court hire costs	SABC is currently using over 10 external venues to deliver training and its domestic competition. By rationalising some of this activity into the Marion Stadium, cost savings will be realised. SABC has prepared a schedule which details the existing court bookings which will no longer be required and has applied an average hire rate of $38 per hour to these bookings.
Additional membership net revenue	SABC has forecast the capacity to service an additional 200 new playing members as a result of the additional court capacity created. The revenue less cost of servicing these members has been factored into the forecast.
Additional domestic game fees	These 200 additional members will participate in the SABC domestic competition. In addition to membership fees, this will also generate additional net game fees (game fees less cost of running the domestic competition).
Casual hoops	As the redeveloped stadium will likely be open during off-peak hours, there will be an opportunity for members of the general public to use the facility for casual shooting. 50 shooters per month at $5 per head has been assumed in the financial forecast.
Kiosk and Bar Revenue	The additional functionality and presence of a bar is likely to lead to opportunities to generate additional revenue at the redeveloped Marion Stadium. Sales of $2,000 per week at 10% net margin has been assumed in the forecast.

Table Four: Expense assumptions

Expenses	Assumptions
Salaries and wages	No additional paid staff will be required manage the venue. Direct salary costs have been incorporated to service additional members and domestic competition teams.
Administration costs	Financial provisions have been provided for internet and phone, professional fees, staff amenities and consumables.
Property costs	Includes cleaning, electricity (partially offset by solar panels), water and gutter and window cleaning. Assumes CoM pays for cost of insurance.
Lease costs	Lease costs assumed to be paid in accordance with CoM Leasing and Licensing Policy. Per advice from CoM this is estimated to be $15,050 per annum.
Minor repairs and maintenance	$12k for floor maintenance per annum plus a provision for $33k of additional maintenance, including regular indoor painting. Some club members expected to deliver maintenance services on a volunteer basis (i.e. basic plumbing).
Contingency	Based on 10% of revenue for unforeseen costs not considered as part of the analysis.
Finance expense	Currently excluded on the basis that SABC will not need to borrow to fund their capital commitment.

Figure Six: Indicative operating impact on SABC

Profit and Loss

Marion Stadium - Base Case

$	2020/21 Yr 0
Revenue	
Additional membership and domestic competition net revenue	71,860
Savings in external court hire costs	155,000
Casual Hoops	2,727
Net kiosk/bar revenue	10,000
Total Revenue	**239,587**
Expenses	
Salaries & Wages	-
Administration	**19,900**
Internet and telecommunications	2,400
Marketing	-
Professional fees	5,000
Staff amenities / training	2,500
Consumables	5,000
Other	5,000
Property Costs	**111,250**
Cleaning	35,000
Electricity	40,000
Water	10,000
Security	1,200
Contents insurance	5,000
Lease costs	15,050
Gutter and windows	5,000
Repairs and Maintenance	**45,000**
Minor repairs and maintenance	45,000
Finance	**23,959**
Interest expense	-
Contingency (% of Revenue)	23,959
Total Operating Expenditure	**202,609**
Total Operating Surplus / (Deficit)	**36,979**

In today's dollars (i.e. ignoring the impact of inflation between now and when the redeveloped stadium may be opened), Figure Six shows the expected annual financial impact on SABC's annual financial performance as a result of entering into a proposed lease with the CoM for the management of the expanded Marion Stadium. This analysis is based on a 'normal year' of forecast performance. Financial performance on an annual basis will fluctuate based on a variety of factors.

Based on the analysis and the assumptions in Table Three and Table Four, progressing with the redevelopment is expected to result in an improved operating annual performance for SABC estimated to be $37k per annum. This estimate includes an operational contingency provision of $24k for unforeseen costs. Actual performance will be dependent on SABC's ability to realise estimated court hire savings and grow membership by 200 to achieve additional net revenue. The SABC will also bear additional risk of unforeseen issues with the Stadium over the long term which may not be covered by warranty and insurance policies.

Financial impact on CoM

As the land and building owner and lessor, CoM will also be subject to costs and revenues which will ultimately impact CoM's statement of comprehensive income and rates. Table Five estimates the annual financial impact of progressing the Project on CoM.

Table Five: Impact on CoM financial performance from progressing the Project

Financial impact	Amount ($)	Assumptions
Lease fees received	$15,050	Estimate per CoM Leasing and Licensing Policy.
Less		
Depreciation	$250,000	Based on assumed $10m build cost and 40 year asset life.
Maintenance costs	$25,000	As building owner, major maintenance will be the responsibility of CoM. Assumed to be 0.25% of capital cost.
Insurance costs	$11,000	Based on $10m construction value and current existing rate per dollar for coverage under the Asset Mutual Fund.
Financial costs	$97,375	Assume 50% of the cost is externally funded leaving $4.75million to be funded by CoM. Assume current CAD rate of 2.05%
Lease / Lessee Management	$25,000	Provision for internal costs of managing stakeholders and other internal overheads.
Annual recurrent cost	**$393,325**	
Number of rateable properties	43,618	Per Grants Commission as at 1 January 2021.
Annual cost per ratepayer	**$9.02**	

While the operating costs for the CoM in relation to the operation of the redeveloped Marion Stadium are not significant, the annual recurrent costs when asset and finance costs are brought to account could be in the vicinity of $393k per annum. On a cost per ratepayer basis this represents an annual additional impact of $9.02 per ratepayer. CoM should be aware of the financial impact of progressing the Project on CoM's ratepayer base and consider this cost against the significant community benefits that can be realised from improved recreation infrastructure. Should CoM wish to quantify these benefits, a formal cost benefit analysis can be commissioned as part of the next stage of Project due diligence.

FUNDING MODELS

Recent Indoor Court Projects

Consistent with the findings of the 2016 BSA Facilities Report, the lack of supply of indoor courts in and around Adelaide is evidenced by a number of recent Projects undertaken by Local and State Governments to address the identified under supply. Table Six describes the major indoor court projects that have either commenced or have been endorsed over the last five years.

Table Six: Recent major indoor court projects

Stadium	Description of funding model
State Basketball Centre (Wayville)	Currently in detailed design phase. Received a $15.6 million grant from the State Government with a $1.0+ million contribution from BSA. Four Court extension to the existing three courts at Wayville. Designed to be the home of basketball in SA and a home base for BSA and the Adelaide Lightning.
Mitchell Park Sport and Community Club (Mitchell Park)	Two court stadium constructed by the City of Marion. $5.0 million Federal Grant with the remainder (approximately $10.0 million) funded by council. The Project also included facilities for football, cricket netball, tennis a dog obedience centre , and a community Neighbourhood Centre.
The Lights Recreation Centre (Lightsview)	Five court stadium constructed by City of Port Adelaide Enfield. Home of the North Adelaide Rockets. $3.6 million received from the State Local Government Infrastructure Program as well as a donation of land from the State Government (valued at approximately $4.0 million). Remainder of the Project was funded by Council (approximately construction cost in the order of $20 million).
St Clair Recreation Centre (Woodville South)	Six court indoor stadium. $26 million facility which attracted $11.5 million of State Government funding.
Wulanda Recreation and Convention Centre (Mount Gambier)	Six indoor court facility with significant seating for large events. Also includes significant aquatic elements. $15 million received from the Federal Government and $10 million from the State Government. Total project cost in excess of $60 million.

Table Six shows there has been significant State and Federal funding provided to support the construction of indoor courts, with each of the projects progressing with a financial contribution from either State or Federal government. The amount of grant funding provided will generally depend on the significance of the facility in a regional or state level context. As this Project represents more of a local level facility to service the specific requirements of a community basketball club, there may be some limit to the level of interest from both higher tiers of government to co-fund the Project.

Proposed funding model for this Project

The specific funding model for this Project has not yet been determined and at this point there has been no formal financial pledges or commitments to support the Project from any tier of government.

The SABC has committed in writing to a financial contribution of $250,000 cash towards the Project, however this is expected to represent only approximately 2.5% of the capital cost. An alternative or additional funding option that the SABC may consider is to borrow funds from either CoM or a commercial lender to fund a larger portion of the Project. Should the SABC be asked to borrow an additional portion of the capital cost of the Project, a more detailed financial assessment of the

financial viability of the stadium should be undertaken to ensure that loan interest and principal could be repaid by the SABC.

Regardless of whether a larger financial contribution from the SABC is sought, it is likely that a significant financial commitment from the CoM will be required in order to attract State and/or Federal funding for the Project.

STAKEHOLDER ASSESSMENT

Relevant stakeholders

While undertaking community and stakeholder consultation is beyond the scope of this Review it is important that readers understand the complexity surrounding the multiple interests within the Marion Sporting Precinct and the surrounding neighbourhood and how progressing this Project could impact a number of key stakeholders.

Table Seven identifies the key groups who will be impacted by progressing with the Project and the key considerations for CoM in relation to each group.

Table Seven: Key stakeholders

Stakeholder	Key considerations
SABC	The need to add more fit for purpose facilities and additional court access
BSA	The ability to continue to run its existing competitions at either the Marion Stadium or at the MPSCC. The objective for BSA is to be financially no worse off if a decision is made to transfer the lease of the existing Marion Stadium to SABC.
Marion Sports Club	No direct involvement in the current Marion Stadium but may wish to be engaged in relation to the proposed land use.
Marion Tennis Club	Not directly impacted by the proposed Stage 1 works but could be impacted if a larger development / expansion was considered by council in the future. Carparking access may also be an issue during busy periods (i.e. Saturdays).
Other precinct users	The new courts will reduce the amount of carparking and available open space for future development.
Norfolk Road residents	Norfolk Road residents have reportedly been vocal about noise issues stemming from the existing use of the Marion Stadium both in the early morning and late evenings. With the proposed expansion moving further into the Marion Sports Precinct, into a newer sound resistant building, the impacts from usage of the new courts on Norfolk Road residents is expected to be less. CoM should consider nearby residents as part of the community consultation process that will accompany further progression of the Project and/or the Development Application.
Other nearby residents	As above

Key stakeholder risks

In our view, the key stakeholder risks relating to the Project include:

1. Noise impacts on nearby residents;

2. Impact on the Marion Tennis Club as a result of the stadium encroaching on their courts and the reduction in available carparking; and

3. The long term suitability of the infrastructure to meet the needs of SABC.

Each of these risks should be considered by CoM and investigated in detail as part of future stages of public consultation.

STUDIO NINE ARCHITECTS

South Adelaide Basketball Club Feasibility Study

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Project Number

0909-121

Date

27 January 2022

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Contents

Introduction

Following a request from The City of Marion, Studio Nine Architects have compiled a Feasibility Study for the South Adelaide Basketball Club Redevelopment.
The feasibility study includes:

- To investigate the establishment of 2 new indoor basketball courts adjacent to (immediately to the South of) the existing Norfolk Road stadium
- Consideration of the existing courts structure/facade requirements with regard to building rules compliance due to the adjacency of the new courts
- Consideration of the building rules requirements for the new development
- Capacity of existing services infrastructure and advice on required upgrades due to the proposal
- Provision for spaces internally and externally that align with the Stage 1 unsolicited proposal submitted to Council by SABC. Including investigation of further efficiencies in the internal planning of the facility.
- Identification of the extent of car parking available on site and the assessment of required car parking.
- Identification of the capital required for the SABC Redevelopment
- Assessment of broader community connections, circulation with validation of options that address traffic impact assessment
- Consideration of the impact to existing structures, views and levels and integration with the existing basketball facility if an elevated option is required due to car parking requirements
- Consideration of ESD initiatives
- Consideration of efficient structural and civil solutions

The feasibility study is to investigate two options for the site:

1. At Grade Concept
2. Elevated Proposal

Project Team

Role	Organisation	Personnel
Client	City of Marion	Birgit Stroeher
Architect	Studio Nine	Justin Cucchiarelli
Project Leader	Studio Nine	Nick Ng
Graduate of Architecture	Studio Nine	Nick Gelekis
Services Engineer	Norman Disney & Young	John Witzke
Traffic Engineer	Cirqa	Tom Wilson
Cost Manager	Rider Levett Bucknall	Simon Howlett
Structural Engineer	Jack Adcock Consulting	Jack Adcock
Building Certifier	Trento Fuller	Luke Trento

Background

The South Adelaide Basketball Club (SABC) have been in discussions with Council for several years seeking opportunities for the development of additional indoor courts to address the increased demand for the sport and the significantly ageing Stadium that is currently their home on Norfolk Road.

The City of Marion Business Plan 2019-2023 outlines the need to identify options for recreational facilities at 262 Sturt Road. For several years, the SABC has been seeking a solution to address the growing demand for indoor courts and the ageing condition of the Stadium.

Council subsequently incorporated a two-court indoor facility as part of the new Mitchell Park Sports and Community Centre development to address some of the need that had been outlined by the SABC. This new facility opening in May 2022 should provide some benefit to the SABC but does not address the ageing Marion Basketball Stadium or the number of additional courts the SABC suggests it requires.

SABC Club Proposal - June 2021

The proposal illustrates a staged plan of development to create an elevated six-court indoor facility. Stages 1 and 2 retain the existing two indoor courts on Norfolk Road with the addition of four new courts directly to the South/South East. Stage 3 proposes to demolish the existing courts and replace with two new courts with supporting commercial allied health offering at ground level.

The proposed six indoor court development would imply relocation of six tennis courts from the existing site locality, being the current home of Marion Tennis Club. Car parking demand and supply has not been tested or verified in the proposal. Hence a site wide strategy should be considered with traffic assessment on access/ egress and related effects.

The bulk and scale of the proposal will represent a significant change to the locality with a two storey vertical façade addressing Norfolk Road and also the main oval. The form of the proposed building will also contain views across the site.

The proposal provides flexibility to consider options of reducing the number of courts provided at this site. The proposed separation and retention of the existing courts for stage 1 provides potential to investigate a four-court stadium, with future works to consider integration of the built form and related effects on the locality.

SABC Club Proposal - June 2021 (cont.)

Studio Nine understand the reasoning behind the elevated proposal to be:

- To assist in providing additional on grade car parking for the 6 court option

With a four court option car parking requirements can be met by an on grade concept. We have reviewed the elevated proposal and raise the following issues/queries:

- Additional construction costs
- RLB has advised that the elevated option will cost $800/sqm over an at grade option. This equates to a $2M premium.
- Potential CPTED issues
- Two different level stadium until second stage is completed
- Additional stairs and lift
- Additional bulk and scale
- Additional overshadowing

Project Snapshot

Item	At Grade Concept
Building Area (Ground Floor)	2450
Landscape/Car Park Area (sqm)	6630
Car Parks (on site)	239
Cost	$11.63M + GST

Scope

The options to be investigated because of the feasibility study include:

- Assessment of an on grade or elevated solution, including assessment of statutory planning requirements. Council will provide an overview of planning compliancy on the SABC proposal and also information on regulated trees affected
- Proposal for future refurbishment of existing 2 courts building
- Updated floor and site plans, including demolition extent.
- Elevational and section proposals showing the building fabric and interface with the existing 2 court facility
- General arrangement and advice on structural, civil and building services requirements
- Consideration of energy efficient and sustainability outcomes
- Assessment of building rules compliancy requirements
- Car parking arrangements and traffic analysis
- Cost estimate of the proposal based on a 2022/2023 construction period.
- Two 3D renders of the facility for use by Council in seeking partnership funding

Preliminary Planning Advice (CoM)

General Comments

- Current use has existing use rights as a basketball stadium, tennis courts and carpark.
- Current number of parking spaces is not confirmed.
- Site is located within a 'Recreation' Zone.
- Development is associated with or ancillary to the primary purpose of structured, unstructured, active and / or passive recreational facilities. 'Indoor Recreation Facility' is an envisioned use within the zone.

Application Process

- A future application would require Public Notification as the site is located adjacent land used for residential purposes.
- It is likely the Marion Council Assessment Panel would be the relevant authority (i.e. the authority tasked with making a decision).

Zone Aspirations

- Development should include building, landscape and streetscape design elements what achieve high visual amenity particularly along public roads and open spaces.
- Buildings should be designed and sited to manage visual impacts. Proposed buildings should be setback a minimum 8 metres from a boundary which is zoned to, or does, accommodate a sensitive receiver (i.e. dwellings).
- Buildings should be designed to mitigate the visual impacts of massing on residential development within a neighbourhood-type zone (i.e. the built form should be designed so that impacts on adjacent residential allotments is mitigated).

Elevated Proposal

- Need to consider impact of additional vehicles utilising Norfolk Road to access site (additional traffic generation numbers, noise etc)
- The provision of 4.5 car parking spaces per 100m2 of total floor area is required for Indoor recreation facilities. It is highly recommended a traffic consultant be engaged to consider the existing parking situation and provide comment on the likely parking needs of the future use (especially in the instance where a shortfall in parking is proposed).

Preliminary Planning Advice (CoM) (cont.)

- Car parking area should be designed to ensure safe and convenient access is provided to vehicles and pedestrians. Pedestrian egress and safety is of higher importance given the number of children expected to utilise the facility.
- Unclear how access from the ground level to the upper level is provided – one lift would not suffice.
- Unclear where waste receptacles are kept.
- Given an above grade design would increase the visual bulk and scale of the built form, the design should be of a high quality and incorporate a mixture of colours, materials, finishes and fenestration to maximise visual presentation. The current design, provided sufficient setbacks are provided to the north (stage 3) and visual treatments are proposed to reduce the undercroft void, appears to be of high quality (note if the design was changed to provide solid pre-cast concrete or colorbond upright walls with limited visual interest or fenestration the building design would be inappropriate)
- Circulation spaces between Stage 1 and 2 are limited and it is unclear how convenient access to stage 3 courts would be achieved.
- Unclear if existing trees along western site boundary are to be retained – will need to confirm if any are Regulated.
- Acoustic assessment would be required to provide advice on proposal in relation to noise generated from the use (i.e. basketball activities), services (i.e. air-conditioning), waste pick up/disposal and carparking.

At Grade Concept

- Loss of existing parking to accommodate additional courts would be problematic (car park is generally full when existing stadium is at peak use) and additional spaces would need to be accommodated on site.
- Similar comments as above in relation to design and appearance, noise etc

Preliminary Certification Advice (CoM)

Section A Classification

The proposed will be a Class 9 assembly building and 7a carpark.

Section B Structure

To assess the structure, engineering calculations will be required as deemed necessary to determine the structural adequacy of proposed additions.

Section C Fire Resistance

As the plans are not dimensioned or scaled it is difficult to determine the exact floor areas of each part of the building. An estimation shows the proposed building would be treated as a large, isolated building as it exceeds the maximum allowable floor area for the classifications. This would require the building to be sprinklered throughout and a minimum 6m access driveway for emergency vehicles provided on all sides.

An alternative solution may be required for the side facing 262A Sturt Rd Marion, as it will not be possible to achieve the required access. It may be possible to have a fire wall along this side. Or alternatively a realignment of the title boundaries may alleviate the matter.

The floor above the carpark will need to be fire rated.

Section D Access & Egress

Access for persons with a disability will be required to all areas normally used by the occupants. An elevator serving the upper floor will be required.

For both levels, the building will be required to have a minimum of 2 exits with a maximum of 20 metres travel to a single exit or, to a point in which travel in 2 different directions is available (then maximum of 40 metres to one of those exits).

Section E Services & Equipment

The building will be required to be provided with fire hydrant, fire sprinklers (throughout both levels), hose reel and portable fire extinguisher coverage for fire fighting purposes. It would be expected that firefighting tanks and pumps will also be necessary.


Site

Site

The Stadium is located on the northern boundary of the 262 Sturt Road Sports and Community Precinct and is surrounded by the Marion Tennis Club, Marion Oval and outdoor playing fields utilised by football, soccer, and other sporting groups. The stadium has another entry point off Norfolk Road.

There is an existing easement on the property extending from Christina Street in an Easterly direction toward the main oval. The easement is titled to SA Water Corporation. As such, until further investigation and an ultrasonic survey, it is expected that the easement will remain.

Site Site Plan 15

Budget

The purpose of the Feasibility Report is to establish a project budget. Based on previous experience we believe this total project costs may be in the order of $10-15m.

The SABC Proposed Stage 1 Works for two new courts was estimated at $10million. A cost estimate for renewal of existing courts has not been evaluated to date however is anticipated to be less than Stage 1 works and is not proposed to be completed for another 5 – 10 years.

Consultation

Due to Covid-19 and the short project duration we have not undertaken traditional consultation with external stakeholders. We have liaised with City of Marion staff.

Key Project Drivers

1. Establish a clear community vision for the redevelopment
2. Ensure that development is realistic and achievable
3. Consider the impact to existing structures and levels
4. Assessment of existing structure and capacity of existing services infrastructure
5. Consider the spatial and relationships of those spaces that will support efficient and compliant use
6. Consider redevelopment wide sustainable initiatives
7. Establish whether the options are viable
8. Identify the extent of car parking available on site
9. Identify the capital required for redevelopment

Car Parking

The site currently comprises of the existing 1450sqm South Adelaide Basketball Club stadium and the Marion Tennis Club. They are serviced by a 146-space parking area. Vehicle access and egress to the site is off Norfolk Road.

The City of Marion's Development Plan identifies a parking requirement of 4.5 spaces per 100 m² for development in this area. On the basis of an existing floor area of 1450sqm, the existing site would have a theoretical requirement for 65 parking spaces.

The design team is conscious of the proposed car park extension and car park overflow design in reducing and minimising the amount of traffic that egresses onto Norfolk Road. The proposed car park overflow is accessed via a one-way lane from the existing car park, with separate ingress and egress entry points from Jasmine Avenue.

Car Parking

	Current	Proposed (Total)
Area of facility (sqm)	1450	4000
Car Park Requirements (Council)	65	180
Car Parks on Site	146	239
Variance	+81	+59

Site Context

Existing Conditions

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Site Context

Existing Conditions

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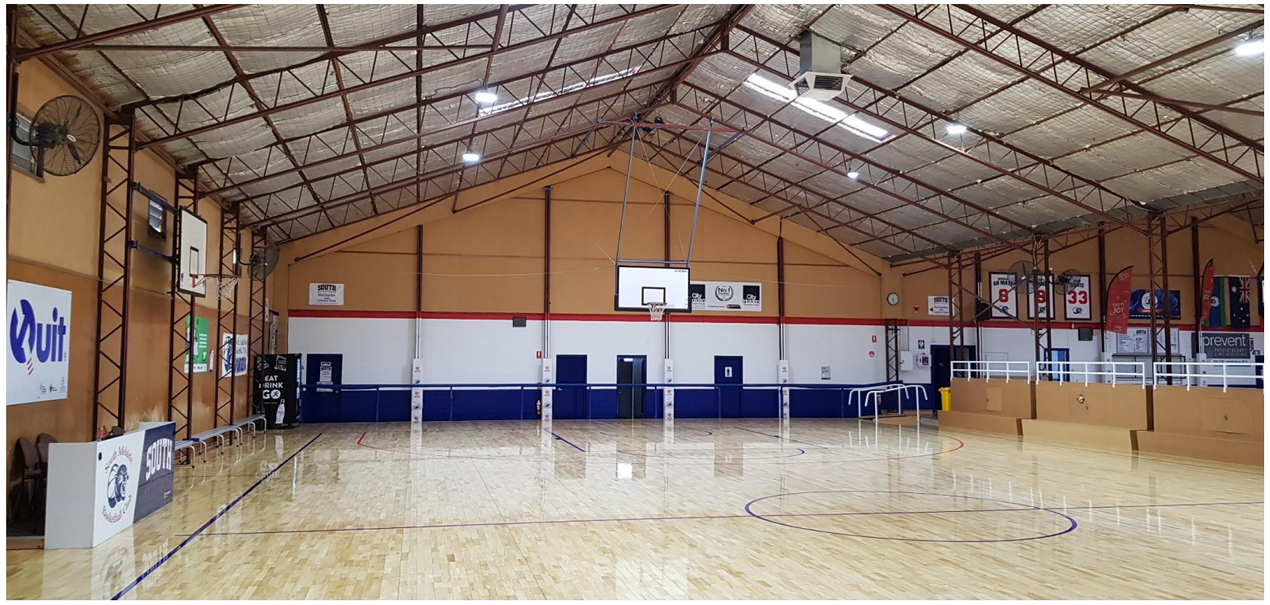
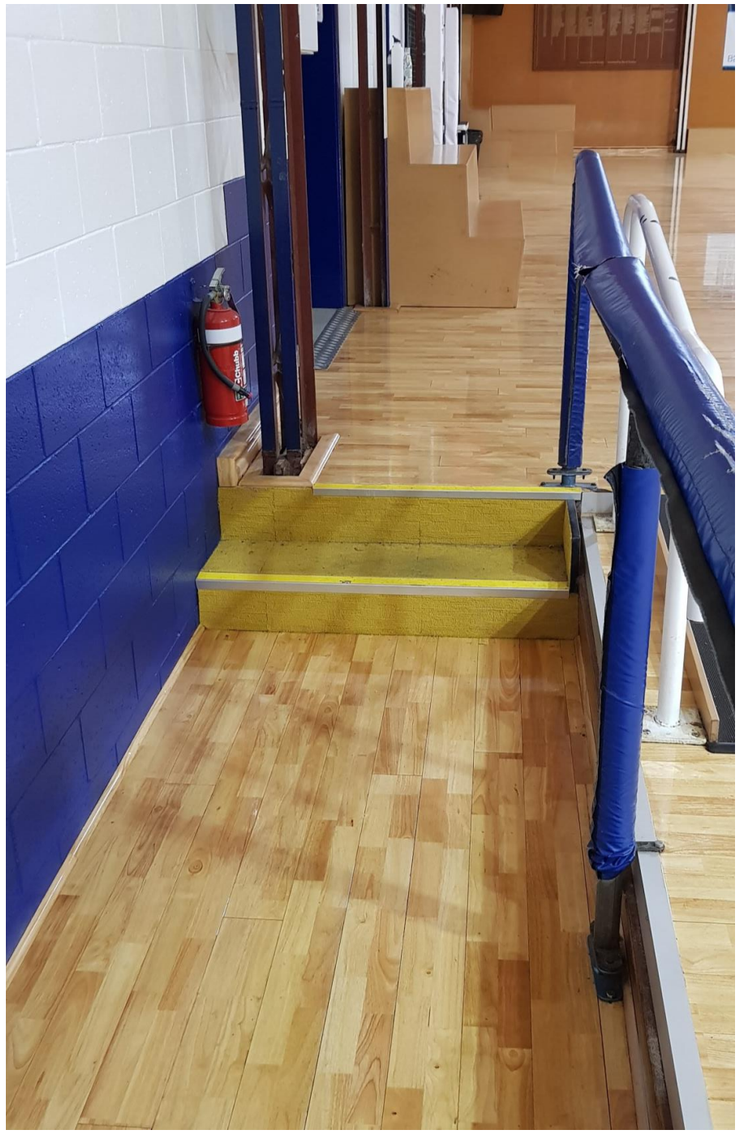
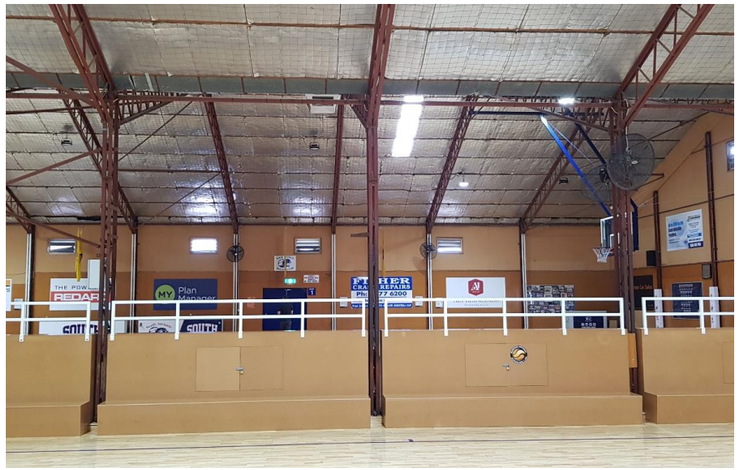






Option 1
At Grade Concept

Option 1

23

Brief

Studio Nine understand the scope of works is to complete a Feasibility Report for City of Marion at the South Adelaide Basketball Club. It will include the following:

- Retain existing two courts
- Provide 2 new FIBA compliant courts and amenities
- Allow for spectator seating (350 seats)
- Investigate masterplan options including on grade and raised court option
- Cost high level options. Cost Manager to be engaged directly by CoM
- Traffic Engineering considerations
- Building Services Engineering considerations including infrastructure
- Building Certification considerations
- Structural and Civil Engineering considerations
- Environmentally sustainable design considerations
- Investigate interface between new and existing stadium and NCC requirements
- Cost estimates at relevant stage. (Cost Manager to be directly engaged by CoM)
- Consider bulk and form of new facility in both options

Option 1 24

Functional Brief

Option 1 - At Grade	Proposed Area (sqm)
Internal	
Public Amenities	50
Change Rooms	150
Admin / Meeting Rooms	30
Reception / Lobby / Canteen	100
Circulation	40
Storage	80
Main Stadium (basketball courts)	2100
Total	**2550**
External	
Entry Forecourt	180
Car park extension (33 spaces)	1000
Car park Overflow (127 spaces)	4000
Pedestrian Walkway Link	390
Vehicle Access Link	550
Total	**6020**

Option 1 25

Environmentally Sustainable Design

The following sustainability opportunities and initiatives should be considered in developing the concept design for the SABC Redevelopment:

Passive Design

- The existing building has limited opportunity for daylight and connection to the surrounding environment. There is an opportunity in designing the new building to connect the indoor and outdoor sporting environments, through passive building design, incorporating daylight, views and fresh air into all parts of the new facility. This will not only provide a facility that uses less energy to run through reduced reliance on lighting and air conditioning, but also a space that is connected to nature and the surrounding environment.
- The building massing and orientation should be considered with passive design in mind. Each elevation and the building orientation should be considered separately and glazing and facade treatments optimised, with external shading used to minimise summer solar gains.
- Natural ventilation should be encouraged where practical to minimise reliance on air conditioning.
- The building should provide some shading to ground level indoor/outdoor space to provide a comfortable and welcoming entry to the building. Whilst the site is surrounded by lawn and green space, there is limited shading due to the nature of the sporting fields, therefore some shading by the building will provide welcome respite.
- Use light coloured building materials to minimise the heat island effect.

Option 1 26

Environmentally Sustainable Design (cont.)

The following sustainability opportunities and initiatives should be considered in developing the concept design for the SABC Redevelopment:

Energy and Green House Gas Emissions

- The building envelope (walls, floor, ceiling, glass) must be considered for thermal performance, to meet the requirements of the NCC 2019 Section J requirements.
- Consider where air conditioning and heating is needed. Natural ventilation should be the dominant mode of ventilation. Where required, air conditioning should be able to be zoned. Consider evaporative air conditioning for sports halls.
- Large ceiling fans, i.e. big ass fans or air pears, to assist with air flow in some areas where ceiling heights permit, in particular in sports halls. Sports halls should have high level operable louvres or other openings for natural ventilation and to purge hot air.
- Install LED lighting, with daylight and motion sensor controls.
- Specify extensive metering and sub-metering for energy management.
- Use zero ODP refrigerants and insulation. Consider if low GWP refrigerants are appropriate.
- Maximise the PV array on roof areas. Whilst this is an upfront cost, payback is in the order of 4 years.
- All external lighting should be designed for zero light pollution to surrounding residential properties.

Option 1 27

Environmentally Sustainable Design (cont.)

The following sustainability opportunities and initiatives should be considered in developing the concept design for the SABC Redevelopment:

Water

- Water efficient fittings with the minimum WELS ratings:
  - Taps 6 Stars
  - WC's 4 Stars
  - Waterless urinals
  - Showers 3 Stars
- Connect to Oaklands Water recycled stormwater supply for use in cleaning and irrigation. Investigate the costs and benefits of dual reticulation to toilets.
- Appropriate and predominately native plating should be selected to minimise irrigation water use.

Indoor Environment, Health and Wellbeing

- Designing for health and wellbeing or people, with good indoor environment quality should be a key project driver.
- Views to the surrounding sports facilities and vegetation are provided through the transparency of the building (via glazing or openable doors). Connection to nature is also provided through outdoor spaces planned near to the building.
- All paints, sealants and adhesives used should be specified as low VOC.
- All composite timbers used should be specified as low formaldehyde.
- A high level of thermal comfort should be provided, through use of shading and insulation.
- Noise levels should be managed to provide an appropriate level of acoustic comfort for space usage.

Option 1 28

Environmentally Sustainable Design (cont.)

The following sustainability opportunities and initiatives should be considered in developing the concept design for the SABC Redevelopment:

Materials and Waste

- The design team should specify materials which reduce the environmental impacts for the whole building over its entire life cycle.
- Products which are recovered or have a recycled material content should be specified in preference, in particular for finishes, interior design and public art purposes.
- Where PVC based materials are required they should be specified as Best Practice PVC.
- All timber used should be recycled or specified as FSC certified.
- All concrete should be specified with fly ash as a cement substitute.
- Specify locally sourced materials wherever viable, for example timber and stonework.
- Specify recycled and recovered materials wherever viable, particularly sourced from the local area in order to build in a recognition of the local area and heritage.
- An operational waste management plan should be in place, and space should be provided in appropriate locations to facilitate the segregation of operational waste streams for recycling and disposal. This should include green waste.
- Consider a policy for all food sold in the retail spaces to be in compostable containers. Ban straws, plastic bags and single use items.

Option 1 Architectural Statement

Program

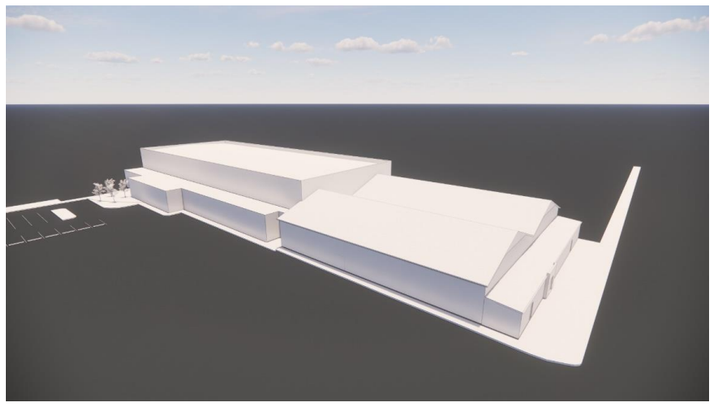
The building is designed to accommodate two FIBA approved basketball courts. Ancillary spaces are to the East of the new building, servicing the courts to the West, with circulation in between. Two additional changerooms are located to the South of the building. There is tiered seating for a total of 370 spectators.

The new building is linked to the existing basketball stadium via a new opening. The floor level of the new building will be on grade, hence a new ramp will be required at this opening.

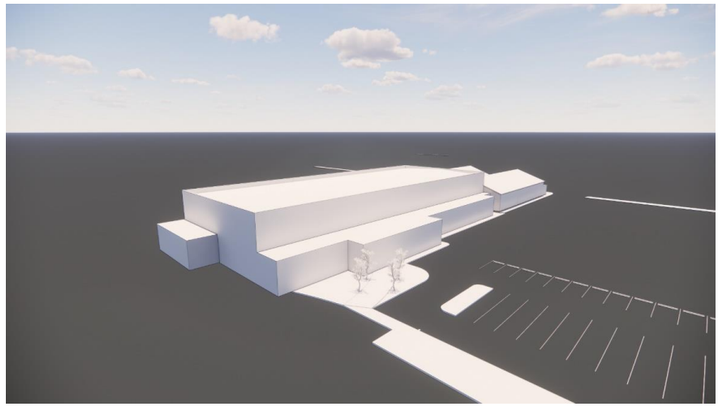
During construction, the existing entry double door to the North of the stadium will have to be used. A temporary external ramp will be required for access into the building.

The massing of the building is taking into consideration the current scale of the existing building it sits next to.

Massing model 3D



View from North East



View from South East

Narrative

The designers are mindful of the impact the development will have on adjacent residential properties, surrounding landscape and additional traffic.

Studio Nine will take inspiration for the design from

— History of South Adelaide Basketball Club

— History of the site

— Using datum lines from the existing basketball stadium

Materiality

The materiality for this concept is minimal, utilising three main materials:

— Masonry to lower part of building

— Lightweight steel cladding to upper part of building

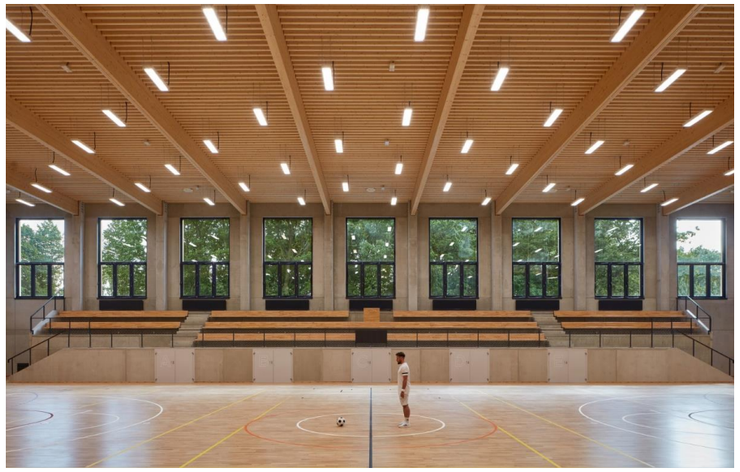
— Glazing – intermittent use to allow natural light and views

Option 1
Precedent Imagery

Option 1

Precedent Imagery

33



Option 1

Precedent Imagery

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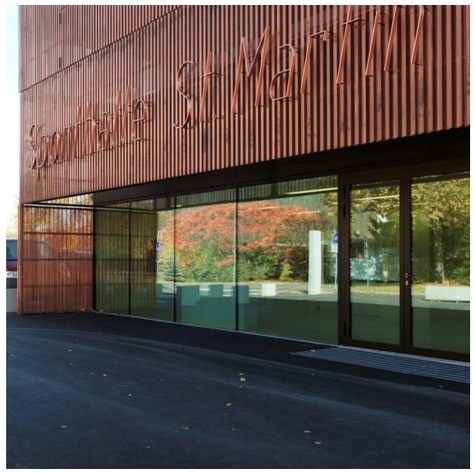

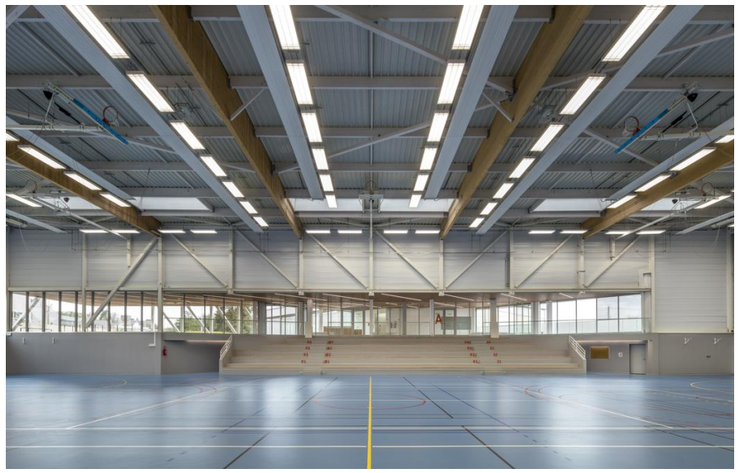

Option 1

Precedent Imagery

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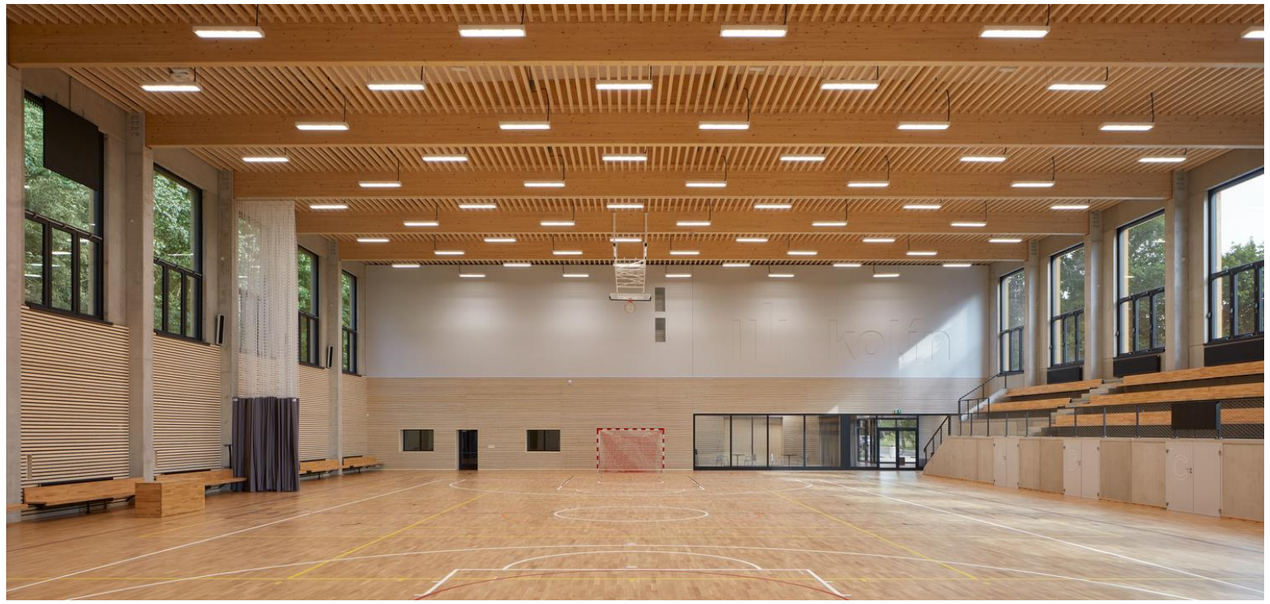
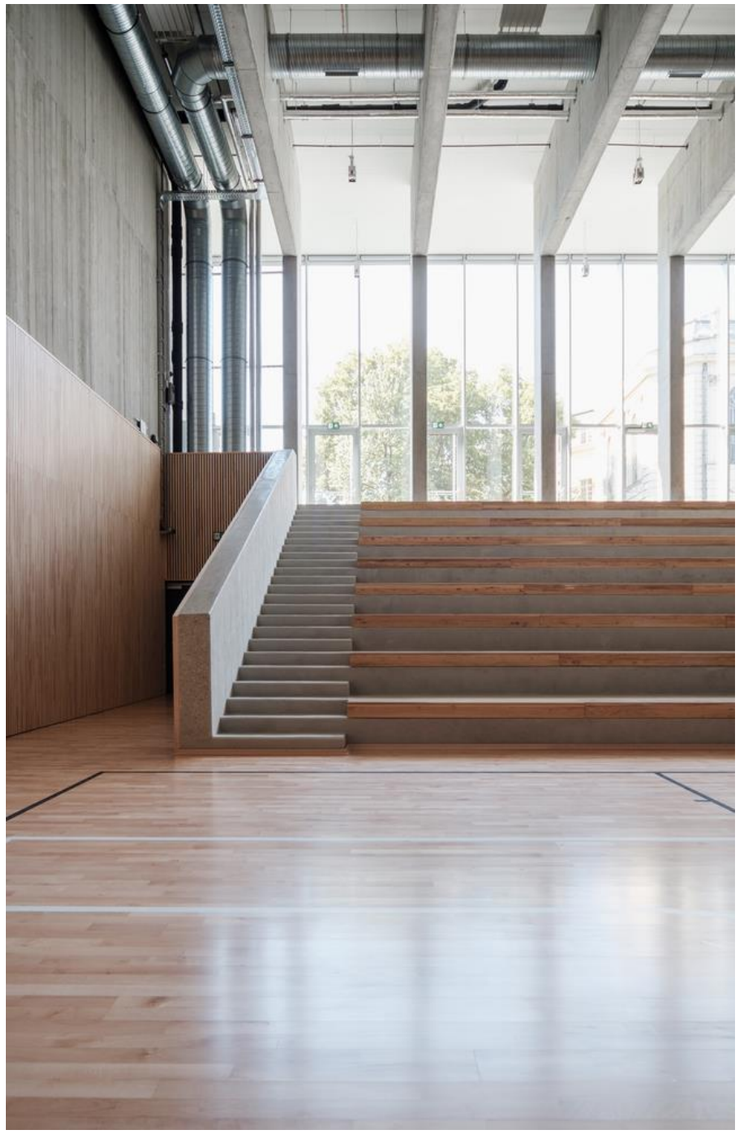
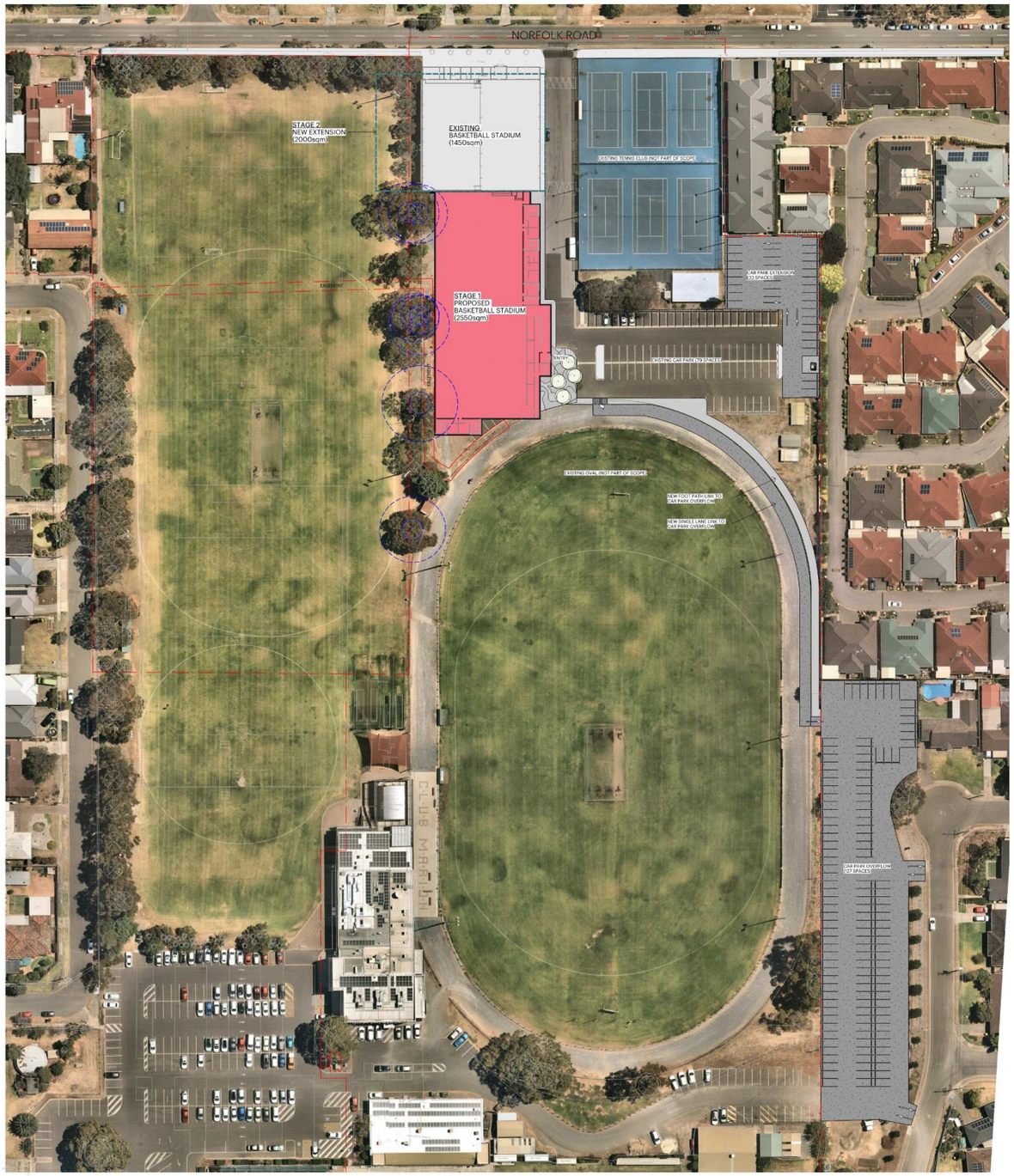


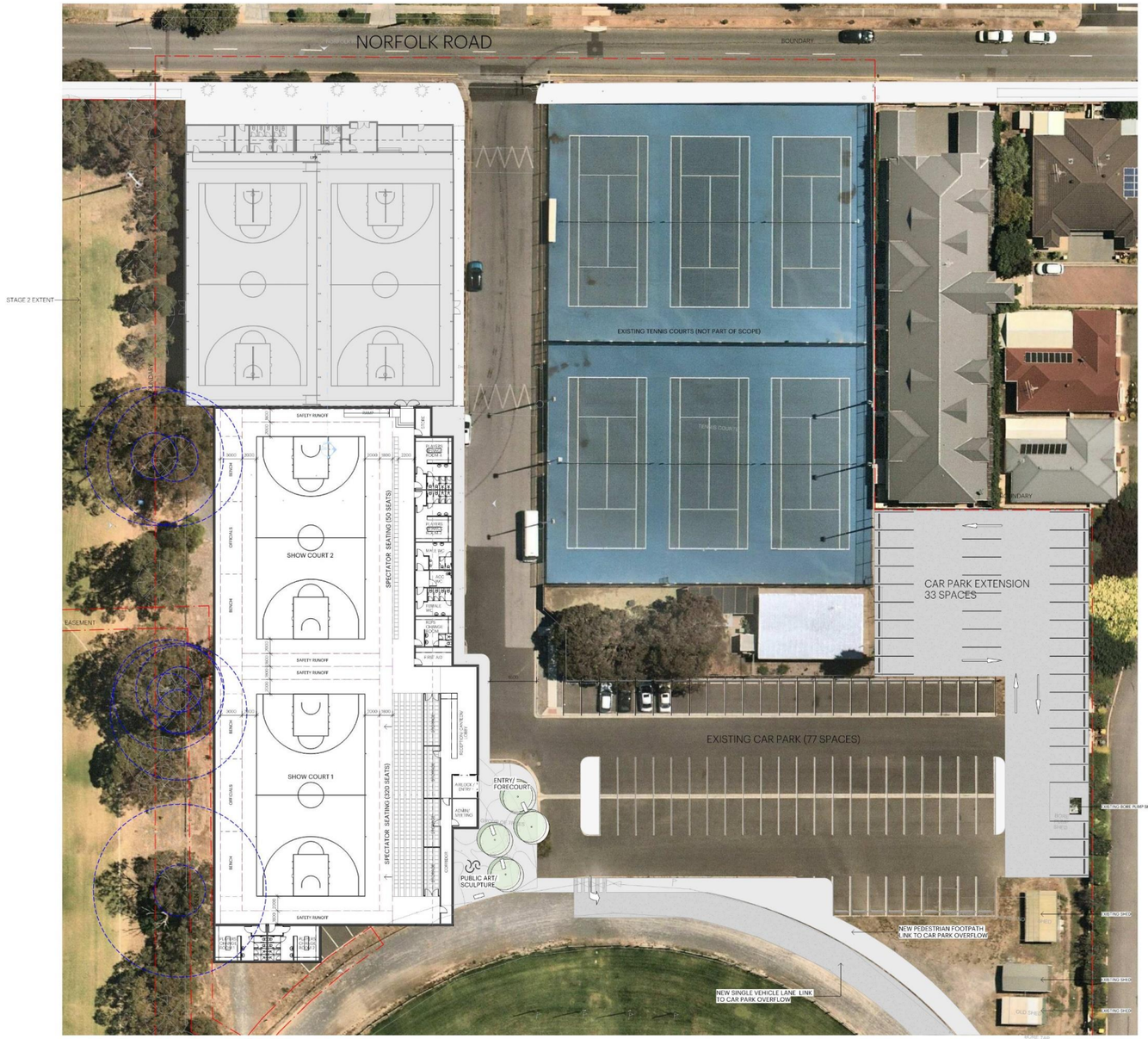


Option 1 Concept

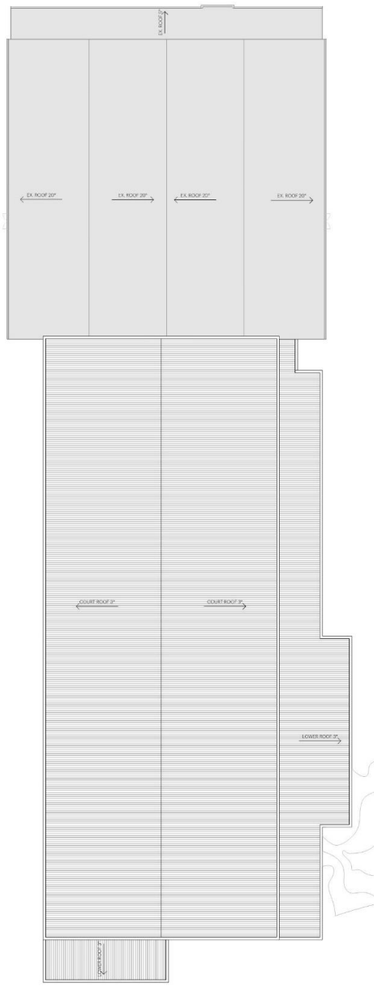


Site Plan
SCALE 1:500

STUDIO NINE ARCHITECTS
9 King William Street
Kent Town SA 5067
Australia
P +61 8 8132 3099
hello@studionine.net.au
studionine.net.au
©2021, Copyright
PROJECT: SABC Feasibility Study
DRAWING TITLE: Site Plan
PROJECT NUMBER: 0909-121
DRAWING NUMBER: SK02
ISSUE: PRELIMINARY
DATE: 24/01/2022
SCALE: 1:500 AT A0
PROJECT NORTH
TRUE NORTH

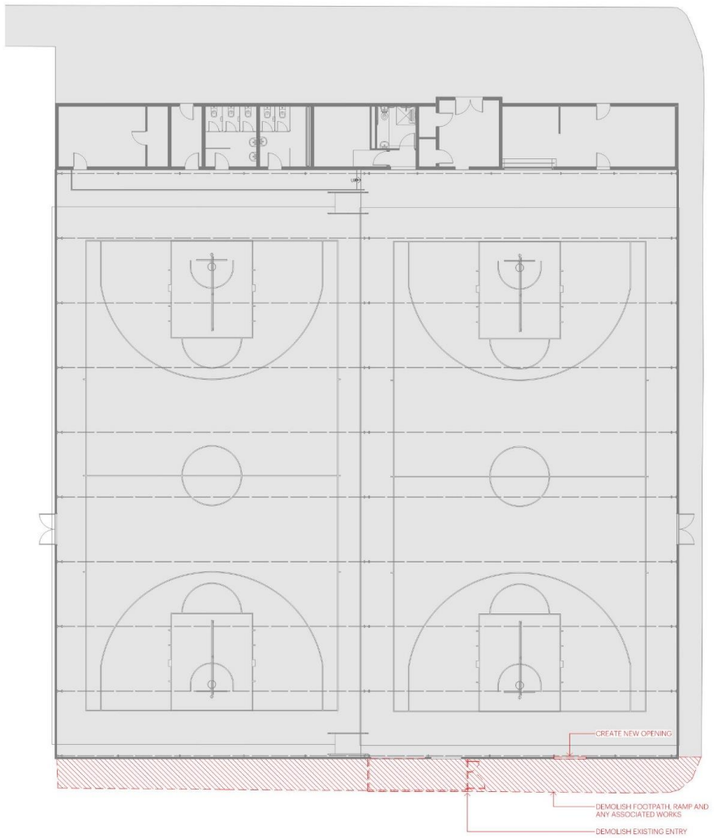


Ground Floor Plan - Option 1
SCALE 1:200



Roof Plan - Option 1
SCALE 1:200

STUDIO NINE ARCHITECTS
PROJECT: SABC Feasibility Study
DRAWING TITLE: Floor & Roof Plan Option 1
PROJECT NUMBER: 0909-121
DRAWING NUMBER: SK03
ISSUE: PRELIMINARY
DATE: 24/08/2022



Demolition Plan
SCALE 1: 100

PROJECT NORTH TRUE NORTH
SCALE 1:100 AT A0 0 1 2 5 10
STUDIO NINE ARCHITECTS
9 King William Street Kent Town SA 5067 Australia
©2021 Copyright
PROJECT SABC Feasibility Study
DRAWING TITLE Demolition Plan
PROJECT NUMBER 0909-121
ISSUE PRELIMINARY
DRAWING NUMBER SK04
DATE dd.mm.yyyy

Option 1
Consultant Advice

Structural Engineering

Refer to Jack Adcock Consulting Appendix

Existing Building

The existing stadium is comprised of very light open web truss members utilised as both columns and rafters in the existing structure. The building is of braced, portal frame construction with lightweight cladding, purlins and girts. The flooring surface is relatively new. Given the age of the building and the nature of its construction it is unlikely to conform to the current Australian Standards requirements for structural strength and serviceability, however over the years it has generally performed well.

In this stage of the development the proposed modifications involve penetration of the southern wall in one location to create an opening. This would be achieved structurally by providing trimmers and a wall head to support the existing, cut structural members. The penetration must be located to avoid structural steelwork columns. There is a slight chance of encountering steel bracing within the proposed wall – if that is the case, the bracing can be relocated without significantly detracting from the current structural performance of the existing building.

Structural Engineering (cont.)

New Stadium

The new stadium is proposed to constructed from a combination of materials. The roof would be of steel sheet and light gauge purlin construction, supported by structural steelwork, probably with an optional allowance for solar panels. To avoid impeding circulation and court views a free spanning solution would be recommended, resulting in the need for either welded beams (700 WB 150) or nominally 1200 mm deep roof trusses (comprised of 200 x 100 x 6.0 RHS top and bottom chords on flat, with 150 x 100 x 4.0 RHS internal webs).

Support for the roof would either be gained from precast reinforced concrete panels nominally 250 mm thick, or from braced, structural steel columns. The current option for a masonry veneer lower level with lightweight clad upper level would require the utilisation of structural steel columns as wall restraints and, due to the significant height of the building, would be in the 310 UC range in size. Wall heads would be required at the transition between masonry and lightweight cladding, and secondary header and mullion members will be required to trim doorways, windows and other penetrations to the external walls.

Significant structural steel wall and roof bracing will be required to stabilise the building (either 150 SHS struts or 125 x 125 EA cross braces).

The floor would be of reinforced concrete construction. With reference to the previously completed geotechnical investigation (WGA report WAD170193 dated 10 April 2017) non-engineered fill varying in depth from 300 mm to 1000 mm is expected. This fill must be reconditioned and compacted to achieve a reliable performance. To support the main building loads, bored piers are recommended. Perimeter footing beams are expected to support masonry (or precast concrete) walls, and local footing beams would be utilised in necessary areas such as wet areas, internal masonry walls and the like.

The anticipated “design life” of the building is 50 years.

Civil

Reference is made to the previously completed Civil Works Plan (document WAD170193-C20 revision 2 dated 4 April 2018) completed by WGA as part of a past planning exercise.

New carparking areas are expected to be of asphaltic construction and several layers of compacted quarry rubble and fine crushed rock, overlaying the existing soil. Proof rolling and reconditioning, compaction and proof rolling of the existing soil is likely to be required due to the presence of up to 1.1 metres of fill located in investigative boreholes. For more detailed recommendations of pavement preparation, refer to WGA geotechnical investigation (report WAD170193 dated 10 April 2017).

Surface runoff from the new carparking areas would be collected via a detention and infiltration basin, through a swale, and then connected (with restricted flow) to the existing stormwater infrastructure located near the southwestern corner of the existing stadium building.

Cost Estimate

Rider Levett Bucknall have prepared a Cost Estimate Report for this option.

Refer to Rider Levett Bucknall Appendix for details.

The current estimated total cost for this option is $11.63M + GST.

Traffic

Refer to Cirqa Appendix for report and drawings

The proposal comprises the redevelopment of the Marion Basketball Stadium to provide an additional two (2) basketball courts with a seated spectator capacity of 370 persons as part of Stage 1. A future Stage 2 may also occur, albeit will be subject to further analysis and assessment.

The proposal will comprise the reconfiguration of the existing shared parking area, resulting in a minor decrease to its capacity (a loss of 35 parking spaces). However, an additional overflow parking area (capable of providing in the order of 127 parking spaces) will be provided to compensate for the loss as well as accommodate additional demands forecast to be associated with the proposal.

Building Services

The building service scope determined by Norman Disney & Young. Refer to NDY Appendix for report & drawing mark-ups.

The development will require significant upgrades to the site services infrastructure including increased capacity to the Electricity Supply, Water and Sewer connections to accommodate the new Stadium with consideration for spare capacity for future stages.

All new fire protection systems are required including the likelihood of fire water storage tanks and fire pumps to serve a new hydrant network with a booster cabinet. New provision of natural gas connection is also proposed.

Mechanical services will utilise evaporative cooling for the show courts and reverse cycle A/C for the change-rooms and admin, etc.

Comms and security will utilise new systems integrating with the existing systems in the existing Building.

Site Infrastructure

Refer NDY Appendix

Specific aspects of the site services infrastructure addressed include:

- Electrical Site Services Infrastructure
- Communications Site Services Infrastructure
- Fire Protection Site Services Infrastructure
- Water supply and drainage
- Fuel Gas

Electrical Services

Refer NDY Appendix

Specific aspects of the electrical services design addressed include:

- Electricity Supplies
- Switchboards and Mains Cabling
- Metering
- Power Distribution
- General lighting and Sportslighting
- Emergency Lighting, and control/monitoring systems

Mechanical Services

Refer NDY Appendix

The mechanical services will include:

- Evaporative cooling proposed to serve the Show Court spaces including spectator areas.
- Optionally, gas radiant heating provided to the Show Court spaces (subject to client preference and site gas capacity).
- Reverse cycle air conditioning provided to the change rooms and admin.
- No air conditioning is proposed to the canteen. Canteen to utilise secondary air transferred from the reception/ lobby.
- Mechanical Ventilation systems to serve:
  - New toilets/ amenities/ cleaners cupboards
  - Show Court spaces to feature natural ventilation openings.
  - No building management system (BMS) is proposed. Mechanical systems and to feature local controls only.

Hydraulic Services

Refer NDY Appendix

The Hydraulic Services to the project will comprise:

— Potable water supply
— Hot water and cold water reticulation
— Sanitary plumbing and drainage (including trade waste)
— Roof drainage and rainwater
— Natural gas service

Fire Services

Refer NDY Appendix

The Fire Protection Services to the Project will comprise:

— New fire water supply from authority main in Norfolk Road (subject to flow test / network analysis verification and SA Water consultation)
— Fire hydrant system
— Fire water storage tanks and/or pumps (subject to flow test / network analysis verification and SA Water consultation).
— Fire hose reel system.
— Fire Detection and Alarm System (inclusive of associated interfaces with the Sound System for Emergency Purposes and Mechanical Services shut down,
— Sound System and Intercom System for Emergency Purposes (SSISEP)
— Portable Fire Extinguishers and Fire Blankets.
— Multi Aspirated Smoke Detection System (MASDS) for high-level detection of Show Court areas.

Certification

We note the following regarding preliminary certification advice from Trento Fuller:

a) Single storey Class 9b Building, Type A or to be Type B construction with firewall to separate new from existing (depending on whether the existing building has combustible external walls).

b) While considered single storey, a part of the spectator seating (directly above the storage area) is a mezzanine. The mezzanine is not included in the rise in storeys as the floor area is less than 200 m2.

c) All new external walls to be constructed to comply with BCA C1.9 and be of non-combustible construction throughout, including internal linings

d) Consideration to any ancillary items that are attached to external wall required to be non-combustible to comply with BCA C1.14

e) The wall between the existing stadium and new building may need to be fire rated (120/120/120) – however please see point (a) above as not required for Type A construction

f) The doors leading from the new building to the existing stadium will need to be fire rated (-/120/30) – however please see point (a) above as not required for Type A construction

g) Clarification required on whether the building will be leased for other purposes (i.e. public assembly hall, community hall, etc – this would trigger smoke hazard management requirements)

h) Travel distance is excessive and will require further review (consider western Exit doors). Also note that sufficient exit withs are required for the total occupant numbers in the building.

i) Emergency lighting and exits signs to comply with A2293-2017

j) Toilets to comply with AS1428.1-2009. Facilities required for the building must be to accommodate the persons to comply with BCA table F2.3.

k) An Access WC (with shower) and changeroom to be provided for players as well. Including the accessible change room and toilet would provide sufficient facilities for 50 participants only. Is this sufficient?

l) Fire hose reel coverage and hydrant coverage required for the building to comply with BCA E1.3 & E1. The hydrant will need a booster, and 20l/s water supply.

Certification (cont.)

m) The building will be either of Type A or Type B construction – the floor above the storage rooms (including column supports). The FRL is 30/30/30 (if Type B) or 120/120/120 (if Type A).
n) It is assumed that allotment boundaries are not within 3 metres. As a result, external walls do not require an FRL due to the permitted concessions for steel (portal) column construction.
o) Access required to 50% of the pedestrian entrances, and where an entrance is further than 50 metres away from an accessible entrance
p) Check all doorways have the required doorway circulation space with a minimum 850mm clear opening (please review corridor adjacent admin/meeting)
q) Ramps to comply with AS1428.1-2009 incorporate landings handrails and kerb rails, tactile indicators, handrails extensions
r) All automatic doors are required to comply with BCA D2.19 and activate open on fire alarm (if installed), or power failure.
s) Smoke detection is not required as spectator seating is less than 1,000 people
t) All external walls to comply with BCA FP1 for weather proofing
u) Fresh air to comply with BCA-F4
v) Building to be designed to comply with Section J 2019 (note that insulation will be required to the walls and roof and there are limitations with regard to the area of skylights permitted)

Appendix Norman Disney Young

Norman Disney & Young
A TETRA TECH COMPANY

FEASIBILITY STUDY

Building Services

SABC FEASIBILITY STUDY
Studio Nine Architects

CONFIDENTIAL

Revision: 1.1 – Formal Issue
Issued: 27 January 2022

Table of Contents

1 EXECUTIVE SUMMARY

1.1 Purpose

Norman Disney & Young has been engaged by Studio NINE Architects to undertake a Feasibility Study of the Mechanical, Electrical, Communications, Security, Fire Protection & Hydraulic Services for the Proposed South Adelaide Basketball Club (SABC) expansion project.

This document outlines the Key Design Elements and Feasibility Considerations relating to the Engineering Services for the project.

1.2 Building Services Summary

Please find a summary description of proposed building services below.

1.2.1 Mechanical Services

Temperature control systems will be provided throughout the proposed basketball stadium. The show court areas are proposed to be provided with evaporative cooling, coupled with gas radiant heating as an option, subject to the site gas supply infrastructure capacity to be confirmed.

Changerooms, admin, reception, canteen and lobby areas will be provided with air conditioning delivered by individual reverse cycle split system type systems. No centralised air conditioning plant is proposed.

Mechanical ventilation will be provided to the new canteen, in addition to the new amenities.

The mechanical systems will be provided with localised controls.

1.2.2 Electrical

The existing electricity supply to the site will be upgraded to a higher capacity to accommodate the additional electrical loads associated with the new basketball stadium. A new pad-mounted transformer will be required on the site to replace the existing low-capacity over-under supply off Norfolk Road. The new supply will reticulate to a new site main switchboard (MSB) integrated into the new building with a submain supply backfeeding the existing building and site supplies. Distribution switchboards are to be provided to serve new areas constructed as part of the project.

No permanent standby generator system is proposed for this building.

General power will typically be provided via wall mounted outlets. Outlets will be located in floor boxes in selected areas as required. Lighting shall generally comprise a combination of recessed, suspended and surface mounted luminaires.

Lighting types in all areas are to be selected to provide appropriate lighting for the operational requirements of each space and also to suit architectural aesthetic requirements. High-output and high-impact LED highbay luminaires will be utilised within the show court areas to provide code-compliant Sportslighting.

New external lighting shall be provided to illuminate the building perimeter and approach. Code compliant lighting to be provided for new carpark areas.

Centralised lighting control will be provided throughout the site. Emergency and exit lighting will be provided throughout with centralised monitoring system.

1.2.3 Communications

The existing building incorporates only telephone and security connections. There is no data network system within the existing building. The telecommunications connections to the new site can be extended from the existing building to provide similar levels of communications connectivity. Additional underground conduits are to be provided within the common services trench proposed in the central driveway to allow flexibility for future telecommunications connection upgrades.

A communications network system is to be established within the new building to allow integration of telephones, data networking, POS, security & CCTV, AV and scorekeeping systems.

Category 6A cabling shall be used for all new horizontal cabling. The site will be provided with Wireless Local Area Network for corporate network access.

Cabling and cable access pathways shall be provided in the show court areas for the installation of the scoring and AV systems.

1.2.4 Security

A new electronic security system shall be provided to the new basketball stadium incorporating Access Control, monitored intruder detection and a new CCTV surveillance system.

Intruder detection shall comprise reed switch door and window monitoring and motion detection to internal spaces. the new system shall integrate with the existing system presently installed in the existing building. The system shall be capable of being monitored by an external security monitoring service.

The access control system will be controlling all external doors and selected internal doors to restrict access to staff and plant areas.

CCTV surveillance will be provided to key building areas in the new built areas including main entries/foyers and coverage of the sideline and spectator areas.

1.2.5 Fire Protection Services

Fire protection services to the site require a significant upgrade as part of the development. A new hydrant booster assembly will be required for the site as well as new storage tanks, pumps, fire hydrants, fire hose reels, sprinklers subject to confirmation, fire extinguishers, fire detection and alarm system, sound system and intercom system for emergency purposes are proposed.

Given the limitations to the Utility water infrastructure in the vicinity of the site, it is likely the available water supply will be insufficient and will require some measures to be implemented to the overall hydrant system serving the facility incorporating fire pumping facilities and possibly on-site storage tanks.

New control and indicating equipment are proposed at the site entry to allow for provision of full Fire detection and alarm system and occupant warning system.

1.2.6 Hydraulic Services

Hydraulic services incorporate potable water supply, hot water and cold water reticulation, sanitary plumbing and drainage as well as roof drainage.

The water supply connection to the new stadium will be provided from the existing site underground infrastructure provisions. Hot water services will be provided for the building to serve the amenities, and the kitchen with the hot water plant located in dedicated services plantrooms.

A fuel gas supply will be provided to the building to supply canteen cooking equipment and for (optional) gas radiant heating.

2 INTRODUCTION

2.1 Project Description

The existing Marion Basketball Stadium is located on the northern boundary of the 262 Sturt Road sports and community precinct and is surrounded by the Marion Tennis Club, Marion Oval and outdoor playing fields utilised by football, soccer and other sporting groups. The stadium has another entry point off Norfolk Road.

For a number of years, the SABC has been seeking a solution to address the growing demand for indoor courts and the ageing condition of the Stadium.

The proposed new Basketball will complement the existing two indoor courts on Norfolk Road with the addition of two new courts directly to the south. A future development will incorporate the demolition of the existing courts and replace with new courts and mixed-use facility.

The proposal incorporates additional formal carparking facilities on the site.

2.2 Authority

Authority to undertake this report was provided by Nicholas Ng of Studio NINE Architects.

2.3 Revision History

Issue	Rev	Date Issued	Comment
First Issue	1.0	27/01/2022	Formal Issue
Updated First Issue	1.1	27/01/2022	Formal Issue – Minor S9 Comments

3 SITE SERVICES INFRASTRUCTURE

3.1 Overview

The following section addresses the site services infrastructure associated with the SABC Stadium Development.

Specific aspects of the site services infrastructure addressed include:
- Electrical Site Services Infrastructure
- Communications Site Services Infrastructure
- Fire Protection Site Services Infrastructure
- Water supply and drainage
- Fuel Gas

3.2 Site Services Infrastructure Summary

Description	Size/Capacity Details	Comments
Electrical Site Services Infrastructure		
High Voltage Cabling	By SA Power Networks	
New Substation	1 x 750kVA	▪ New on-site Pad-mounted transformer to replace existing low-capacity low-voltage supply to the existing stadium. ▪ The supply upgrade should be sized to accommodate future stages of the upgrade (depending on likely timeframes) subject to availability and negotiation via SA Power Networks. ▪ Supply and installation by SAPN – supply offer to be sought from SAPN.
Site Maximum Demand	Day 1: 250kVA Ultimate based on 6-court facility: 580kVA (estimated)	▪ The existing maximum demand is 55kVA. The upgrade works will contribute to a significant increase in maximum demand. ▪ Day 1 and future maximum demand requirements subject to detailed design and future stage definition.
Portable generator	-	▪ None proposed

Description	Size/Capacity Details	Comments
Communications Site Services Infrastructure		
Communications ICT Network Cabling & Interface	Existing telecommunications connections serving the existing stadium to remain and connectivity provided to the new stadium. 4x 100mm communications underground conduits from Norfolk Road to the new Stadium building shall be provided via a common services trench within the central driveway to provide cable pathway for future telecommunications connections upgrades.	▪ Telecommunications connection requirements to be defined by City of Marion and SABC. ▪ Any new connections to utilise spare conduits provided to be arranged and connected by City of Marion/SABC.
Fire Protection Site Services Infrastructure		
Fire Services connection	New additional fire water connection required from the 100mm town main on Norfolk Road is required for the site.	▪ Viability and take-off location to be confirmed with SA water.
Fire fighting water supply	On site storage tanks and pumps	▪ Subject to consultation with SAMFS, SA Water and building surveyor
Hydraulic Site Services Infrastructure		
Domestic Water Supply	New Ø 50mm domestic water supply to the new Stadium with connection back to the existing building.	▪ Preference is to establish new connections to the new building and back-feed the existing building where possible to facilitate demolition of the existing building in future stages.
Sanitary Drainage to site	New Ø150 drainage connection will be directed from Norfolk Road to the new Stadium. Modifications to the existing underground site infrastructure required to integrate existing infrastructure.	▪ Sewer invert level and connection to be coordinated with the new footings of the new Stadium. ▪ On site pumpstation may be required pending confirmation of the invert level of the pipe on Norfolk Road
Stormwater Drainage to site	Refer to Civil Consultant	
Fuel Gas Supply	New gas supply to the new stadium	▪ Requirement for gas supply to be determined based on requirement for cooking, heating and hot water requirements.

4 MECHANICAL SERVICES

The following section addresses the mechanical services components associated with the new Basketball Stadium.

4.1 General Description

The mechanical services will include:

- Evaporative cooling proposed to serve the Show Court spaces including spectator areas.
- Optionally, gas radiant heating provided to the Show Court spaces (subject to client preference and site gas capacity).
- Reverse cycle air conditioning provided to the change rooms and admin.
- No air conditioning is proposed to the canteen. Canteen to utilise secondary air transferred from the reception / lobby.
- Mechanical Ventilation systems to serve:
    - New toilets/amenities/cleaners cupboards
    - Canteen – commercial kitchen hood will be provided
- Show Court spaces to feature natural ventilation openings.
- No building management system (BMS) is proposed. Mechanical systems and to feature local controls only.

4.2 Design Criteria

The design of the Mechanical Services system will be based on the following criteria:

Item	Design Criteria
Ambient Conditions	Summer 37.0°C dry bulb/21.4°C wet bulb Winter 4.9°C dry bulb Based on the Australian Institute of Refrigeration, Air Conditioning and Heating (AIRAH) recommended design conditions
Internal Conditions	General conditioned spaces: Cooling 24°C dry bulb Heating 20°C dry bulb Design tolerance ±2°C dry bulb adjacent to temperature sensor Design set point 22°C dry bulb RH Design 50% (used for calculation of cooling loads only – RH is uncontrolled) No direct humidity control, humidity control through dehumidification is provided as part of the normal cooling process. Show courts spaces: Cooling 24°C dry bulb No dehumidification provided by evaporative coolers No air temperature heating control setpoint

Item	Design Criteria
Internal Heat Gains	Assumed Lighting and Equipment Load: General areas - 20 W/m^2 Kitchen Areas - 30 W/m^2 or as per kitchen equipment schedule People loads - 70 watts/person sensible; 60 watts/person latent
Occupant Density	Change rooms – As per no. lockers Admin Facilities – As per seating plan
Building Construction	Based on DTS provisions: Roof – 3.7 m^2K/W thermal resistance and 0.45 solar absorptance Walls – 1.4 m^2K/W thermal resistance and 0.6 solar absorptance Internal Partitions – 1.4 m^2K/W thermal resistance Floors – 2.0 m^2K/W thermal resistance External Glazing – 3.3 W/m^2K thermal conductance & 0.49 SGHC Confirmation required re: any Alternative Solution (JV3) proposed for the facility and the resultant thermal performance parameters associated with the building construction specifications.
Outside Air	10 L/s per person
Air Distribution	Admin areas: Ducted supply air in new areas via swirl diffusers or as otherwise directed to suit architect requirements. Return and exhaust air via ceiling egg crate grilles. Show courts: Exposed ducted droppers and duct mounted louvred diffusers.
Filtration	Panel dry media to meet AS 1324.2 performance of: No. 1 test dust 20% minimum efficiency. No. 4 test dust 85% minimum efficiency. @ final resistance of 125 Pa.
Smoke Management	No allowance for the building
Toilet Exhaust	To AS 1668.2 as a minimum
Kitchen Exhaust	Internal Kitchens – Engineered Kitchen Hood to AS 1668.2 performance requirements with included air curtain, and exhaust discharged vertically on podium (lean to) roof.
Noise Levels	To AS2107 or otherwise advised by architect / acoustic consultant
Statutory Compliance Documents (applies to each component of the development)	Building Code of Australia AS/NZS 1668.1 AS 1668.2 Occupational Health and Safety Act

4.3 Systems Description

4.3.1 Air Conditioning and Outside Air Ventilation Systems

Each area of the stadium will be served by localised individual air conditioning systems. No centralised air conditioning plant is proposed. Individual air conditioning systems serving each area of the stadium are tabulated below. Note that all systems are of reverse cycle type unless stated otherwise.

Stage – Area	Air Conditioning Description
Show Courts 1 & 2	Roof mounted direct evaporative cooler to be installed to serve the show court spaces. Supply air discharged downward to exposed ductwork droppers within the space, and diffused into the space via duct mounted grille cabinets. Direct evaporative cooling systems utilize a 100% outside air cycle. Relief air from the show court spaces to be via openings within the building facade. These openings may double as natural ventilation during winter, or alternatively the evaporative coolers can be utilized in fan mode only. As on option, wall mounted gas radiant heaters will be provided to the space. However, the feasibility of this shall be confirmed subject to a check in the capacity of existing gas main infrastructure serving the site.
Changerooms	New individual ducted type split systems to be installed to serve the changeroom facilities, including outside air supply to be dragged via wall louvres and/or roof cowls. Condensing units to be located on the lower exterior roof plant deck above.
Admin Areas	New ducted split air conditioning unit to be provided. Natural ventilation to this space via openable windows is feasible, or otherwise outside air intakes to be incorporated into the ducted AC systems. Condensing units to be located on the lower exterior roof plant deck. Confirmation required re: openable windows planned for this space.
Reception / Lobby	New ducted split air conditioning unit to be provided. Natural ventilation to this space via openable windows is feasible, or otherwise outside air intakes to be incorporated into the ducted AC systems. Condensing units to be located on the lower exterior roof plant deck. Confirmation required re: openable windows planned for this space.
Canteen	A roof mounted outside air make-up fan will be provided to this area, supplying the make-up air to the kitchen exhaust hood air curtain. The remaining make-up air to be obtained from the adjacent conditioned reception / lobby space.

4.3.2 Exhaust Ventilation Systems

Mechanical ventilation systems will be provided for new toilets, kitchens, storerooms, and other plant rooms as required in accordance with AS1668.2.

Toilet exhaust and general exhaust will be discharged above roof level or horizontally in accordance with the appropriate code requirements.

A new commercial kitchen hood with ducted exhaust will be provided to serve the new kitchen equipment installed within the Canteen. This hood will be of a low velocity engineered type. Details to be confirmed subject to the cooking line to be advised.

4.3.3 Control Systems

A centralised building management system (BMS) is not proposed for inclusion in the works.

Local wall mounted controls will be provided within each cooling, heating and air conditioning zone. The controls will feature capability for manual on/off control, in addition to automatic time scheduling. Mechanical outside air ventilation systems will be interlocked to the operation of the associated air conditioning unit.

Toilet exhaust systems will be interlocked to the local lighting circuit. Kitchen exhaust systems will be controlled via a local wall mounted control panel with manual on/off capability.

4.3.4 Mechanical Electrical

A new MSSB is proposed to be installed adjacent the electrical switchboard serving the building. Mechanical circuits throughout the building will be served from this board.

5 ELECTRICAL SERVICES

5.1 Overview

The following section addresses the electrical services components associated with the Stadium Development.

Specific aspects of the electrical services design addressed include:

- Electricity Supplies
- Switchboards and Mains Cabling
- Metering
- Power Distribution
- General lighting and Sportslighting
- Emergency Lighting, and control/monitoring systems

5.2 Design Criteria

Item	Design Requirements/Provisions
Substation	▪ A new external pad-mounted substation to be provided, located in a suitable location within the site. ▪ 750kVA overall capacity (provisional) ▪ 250kVA day-1 estimated maximum demand and 580kVA (estimated) eventual agreed maximum demand to be provided by SA Power Networks incorporating 10% spare capacity over estimated maximum demand.
Main Switchboard (MSB)	▪ New replacement MSB ▪ Form 3b construction ▪ Floor standing type with front access ▪ Fully-enclosed sheet metal construction ▪ Retailer and check metering included ▪ Surge protection included (minimum 100kA) ▪ Rated for the building maximum demand including spare capacity for future site developments. ▪ Spare physical space for future connections ▪ Minimum degree of protection IP56
Distribution Switchboards (DBs)	▪ New Distribution Boards provided to serve the new building ▪ Form 1 construction ▪ Ability to separate power and lighting sub-circuits to enable separate sub-metering (for building over 2,500m^2) ▪ Connected to new submains cabling reticulated via underground conduits and/or via vertical electrical services risers and horizontal cable trays within the building ▪ RCD protection of all final lighting and general power sub circuits ▪ 30% spare space and capacity ▪ Minimum degree of protection of IP54 ▪ Submains connection from new MSB to back-feed existing stadium building switchboard.

Item	Design Requirements/Provisions
Metering	▪ Authority (Energy Retailer) metering at Main Switchboard location to replicate existing. ▪ Facilities for separate check metering for lighting and general power, and any major loads such as Mechanical Services, Hot water plant, etc. as required by the BCA ▪ All meters will be equipped with communications provisions for future connection to the Building Management System (BMS) if required in future.
Standby Power	▪ No standby generator proposed to the facility
Power Distribution Cabling	▪ Mains and submains cables to be insulated and sheathed typed – cross-linked polyethylene (XLPE) insulation generally. Where PVC products are used, they shall be Best-Practice PVC. ▪ Mains cabling will be sized for the calculated maximum demand plus 15% ▪ Submains cables to be sized for calculated maximum demand plus the following spare capacities for future growth: – Mechanical services: + 10% – General Light & Power: + 15% – Other: + 10% ▪ Fire-rated cables to be used for essential services and otherwise where required – to AS/NZS 3000 & NCC requirements ▪ Final subcircuit wiring generally to be TPS or XLPE/PVC insulated and sheathed type.
Cable reticulation	▪ Cable ladders/trays to be sized for initially installed cabling plus a minimum of 30% spare capacity for the addition of future cables ▪ Submains cabling from the MSB to distribution boards and major equipment to be reticulated on cable ladders/trays and via underground conduit/pit network. ▪ Submains cabling between floors to be reticulated within services risers on vertical cable ladders/trays ▪ Subcircuit cabling shall reticulate in ceiling and within wall cavities to required positions where possible. ▪ In areas with suspended ceilings, large groups of cables will be installed on cable trays. Small or single groups of subcircuit cabling supported on catenary wire as required. ▪ Cabling to floor boxes reticulated in conduit via conduits cast in slab subject to agreement with the Structural Engineer.
General Purpose Power Distribution	▪ Power and data outlets to be also provided for any specialist equipment to suit (e.g. AV, Scorekeeping, operable partitions and equipment). ▪ Power outlets generally wall mounted. ▪ One power outlet per 15m is proposed for general power requirements and cleaning outlets, mounted around perimeter and corridors as appropriate. ▪ Double 15A captive screw outlet on dedicated circuit for each Comms Cabinet based on IT equipment load per comms rack.

Item	Design Requirements/Provisions	
Recessed Floor boxes	▪ Nominal penetration size of 432mm x 332mm x 90mm(deep) for floor boxes will be required with typically 3 No. conduits to each for power, data and AV cabling.	
General Lighting	▪ To AS/NZS 1680, AS/NZS 1158 and BCA Part J6 ▪ Luminaire utilising LED lamps to be used throughout. ▪ All lamps to be of colour temperature 4000K with rendering index between Ra 80-90. ▪ All new lighting to be dimmable except utility areas such as amenities, kitchens, plant rooms. ▪ Existing lighting to existing stadium to remain.	
Sportslighting	▪ Sportslighting to be provided to Show Courts 1 & 2. ▪ Lighting to meet nominated lighting criteria (e.g. AS2560 and/or applicable sporting body guidelines).	
External Lighting	▪ New external lighting to building perimeter and approaches to the building. ▪ New carpark lighting. ▪ Lighting designed in accordance with AS1158. ▪ External lighting to be IP65 rated minimum and designed to minimize light pollution.	
Lighting Control System	▪ New C-Bus or equivalent lighting control system to be provided to control all lighting within the facility. ▪ Lighting to be switched in groups via lighting control panels. ▪ Motion sensors and local switching will be provided for individual self-contained rooms including amenities. ▪ All new lighting to be dimmable except utility areas such as amenities, kitchens, plant rooms.	
Emergency Evacuation Lighting	▪ Comply with Building Code of Australia (BCA) and AS 2293.1 ▪ Utilises LED lamps ▪ Single point system / single point luminaires with integral 2 hour battery charger / battery packs (dual charge) ▪ Central monitoring system will be provided	
Applicable Standards	Key Standards include:	
	▪ AS/NZS 3000	Australian/New Zealand Wiring Rules
	▪ AS/NZS 3008.1	Electrical Installations – Selection of cables
	▪ AS/NZS 3439.1	Low voltage switchgear and control gear assemblies
	▪ AS/NZS 1680	Interior Lighting
	▪ AS 2293.1	Emergency escape lighting and exit signs for buildings
	▪ AS 2067	Substations and high voltage installations exceeding 1 kV a.c.
	▪ AS/NZS 1158	Lighting for roads and public spaces

5.3 Power Supply

5.3.1 General

The upgrade of the existing electricity supply to the site including new SAPN transformer to be established within the site. This will replace the existing supply to the site which is via an overhead supply which is limited to ~100A nominal.

The transformer will need to be located internal to the site and be situated within a transformer easement to be established on the site (3.5m W x 3.0m D). A 3m operating area extends from the front of the transformer easement. Additionally, a 4m width easement will need to be established over the underground high-voltage cables from Norfolk Road to the transformer locations.

Substation easement to be maintained including clearance from screening and other structures in accordance with SA Power Networks requirements.

Minimum clearance from transformer in accordance with SA Power Networks Service & installation Rules are to be maintained.

5.4 Switchboards

5.4.1 Main Switchboard

New replacement main switchboard (MSB) will be provided for the site. The main switchboard will comply with the requirements of AS/NZS 3000 and AS 61439.1.

The main switchboard will be floor standing type with front access, and of robust, fully enclosed sheet metal construction suitable for non-conditioned space (external). It will be located in either a free-standing external location or integrated into the new Stadium construction where space permits.

The main switchboard will utilise circuit breakers for circuit protection and control purposes including:

- moulded case circuit breakers (MCCB's) for loads greater than 200 Amps and less than or equal to 1000 Amps;
- miniature circuit breakers for loads less than and equal to 200 Amps.

The main switchboard will be rated at 1000 Amps to cater for day-1 loads as well as future stages of site development.

Control of distributed loads on an area-by-area basis will be provided at the main switchboard.

Surge protection on all three phases of the main bus bars will be provided.

A minimum of 30% spare space will be provided on the main switchboard.

Emergency and safety services including:

- Fire protection equipment;
- Fire detection and alarm services;
- Life safety systems and equipment;
- Lift services (future);
- Essential mechanical services (as applicable);

will be supplied from a dedicated "Life Safety Services" bus section on the main switchboard.

Power supplies to relevant fire, smoke, emergency and lift services will comply with the requirements related to these services in AS/NZS 3000 and AS 1670, and where required will be provided with appropriate battery back-up (typically 2 hours minimum).

5.4.2 Distribution Switchboards

Distribution switchboards (DBs) will be provided throughout the building for the efficient management of power distribution throughout the facility.

Distribution switchboards will comply with AS 61439.1 for Form 1 switchboards, generally, and the requirements of AS/NZS 3000.

Separate switchboard chassis will be provided to enable separate metering of for lighting and for general power and large loads (such as mechanical) in accordance with BCA Section J requirements.

Earth leakage/residual current (RCD) protection for personnel protection will be provided on all final lighting and power subcircuits.

A minimum of 30% spare space will be provided on each distribution switchboard.

5.5 Metering

5.5.1 Authority (Energy Retailer) Metering

Existing retailer metering provisions are to be replicated within the new MSB.

5.5.2 Check Metering

Future provisions to enable sub-metering for energy monitoring purposes (BCA Section J8) and otherwise as required.

5.6 Power Distribution

5.6.1 Cable Support Systems

All cabling provided will be installed adequately and appropriately supported throughout their length and compliant with AS/NZS 3000 and AS/NZS 3008.1.1 requirements.

Cabling installed externally will generally be installed underground in HD uPVC conduits.

Where PVC products are to be used, they shall utilise Best-Practice PVC.

Internally cabling will be installed using one or more of the following cabling support measures:

- Supported on cable ladder or perforated cable tray;
- Installed in conduits (HD uPVC);
- Installed in proprietary cable duct/cable ducting systems
- Supported on cable catenary wires.

Cables will not be fixed directly to building structural elements, partitions, ceiling systems or ceiling tiles.

5.6.2 Power Outlets

5.1.1.1. General Purpose Power Outlets (GPOs)

General purpose power and outlets (GPOs) will be provided throughout to suit brief and user requirements and otherwise consistent with industry standards.

5.1.1.2. Equipment Power

Fixed items of equipment including specialist equipment will be provided with discrete, dedicated subcircuit wiring.

All mechanical services plant and equipment, hydraulic services equipment and fire detection services systems will be provided with dedicated submains and subcircuit wiring as appropriate and compliant with the relevant Australian Standards including AS/NZS 3000, AS/NZS 3008.1.1, AS 1670 and AS 1668.

5.7 Lighting

5.7.1 General Interior Lighting

General interior lighting will be provided throughout the building compliant with AS/NZS 1680 requirements and the requirements of the Building Code of Australia (BCA), and in particular Section J, Part J6 requirements.

5.7.2 Light Fittings

Light fittings selected / specified will be high efficiency type fittings and will employ LED lamps.

Where dimmable, interior light fittings will utilise DALI type lighting ballasts and control wiring to permit individual addresses for each light fitting and the ready reconfiguration of lighting zones in response to spatial replanning of floor plans and operational reconfiguration.

5.7.3 Section J Requirements

The lighting design will comply with the maximum lighting power density requirements of the National Construction Code (NCC) – Section J, Part J6.

5.7.4 External Lighting

External lighting provided will utilise high efficiency light fittings and employ high efficacy lamps (≥ 60 lm/W).

External lighting envisaged will include:

- External building perimeter security and access lighting in the vicinity of the development;
- Security and access lighting of building entrances and exits lighting in the vicinity of upgrade works;
- Lighting to new carpark areas

All external lighting will be controlled using PE Cell and time scheduling.

5.7.5 Emergency Evacuation Lighting

A system of emergency lighting and emergency exit signage will be provided throughout for emergency evacuation purposes and compliant with Building Code of Australia (BCA) and AS/NZS 2293 requirements.

Emergency evacuation lighting will be of the single point type with integral battery charger/battery packs employed to provide a minimum of 2 hours battery back-up power.

The emergency evacuation lighting system will be provided with a central monitoring system.

Emergency lighting will generally utilise ***non-maintained*** type emergency light fittings. Emergency exit lighting will generally utilise ***maintained*** type emergency-exit light fittings. 'Running man' type emergency-exit diffusers will be employed.

5.7.6 Zoned Lighting and Lighting Control

The design of lighting throughout will ensure a zoned lighting arrangement suitable for flexible lighting control.

The zoned control of lighting will utilise DALI type lighting ballasts and control wiring to permit individual addresses for each light fitting and the ready reconfiguration of lighting zones in response to spatial replanning of floor plans and operational reconfiguration

6 SECURITY SERVICES

6.1 Overview

Security services for the Stadium upgrade will include expansion of the following existing systems:

- Intruder Detection System
- Access Control
- CCTV Surveillance

6.2 Design Criteria

Item	Description	
Intruder Detection	▪ Intruder detection for all access-controlled doors - forced door alarms. ▪ Reed switches to all external doors including the external terraces on upper floors and the roof deck. ▪ Security motion sensors to selected perimeter areas where potentially susceptible to intrusion.	
Access Control	Electronic access-controlled door to be provided to: ▪ External perimeter doors new Stadium ▪ Nominated internal doors where access is to be further restricted (e.g. admin areas, plant access, etc.) ▪ No allowance for access control provisions to existing building. Access control to include: ▪ Proximity card reader access ▪ Electric strikes or electro-magnetic door locks to suit ▪ Press-to-Exit release buttons, as appropriate ▪ Break glass emergency door release	
CCTV Surveillance	CCTV surveillance monitoring of key areas including: ▪ Building perimeter, particularly main building entries. ▪ General circulation spaces and spectator areas. ▪ IP colour (internal) and full day/night (external) cameras. ▪ Allowance for 4TB of NVR storage per CCTV camera included. ▪ Allowance for display screens inclusive of NUCs for local monitoring.	
Applicable Standards	Key standards include:	
	▪ AS/NZS 2201	Intruder Alarm Systems
	▪ AS/NZS 3000	Australian/New Zealand Wiring Rules
	▪ AS/NZS 3080	Telecommunications installations – Generic cabling for commercial premises
	▪ AS 3081.2	Telecommunications installations – Twisted pair cabling for telecommunications applications
	▪ AS 3082.2	Telecommunications installations – Optical fibre cabling for telecommunications applications

Item	Description	
	▪ AS/NZS 3084	Telecommunications installations – Telecommunications pathways and spaces for commercial buildings
	▪ AS/NZS 3085	Telecommunications installations – Administration of communications cabling systems
	▪ AS 4086	CCTV Standards
	▪ ISO/IEC 14443	Type A – Proximity Cards

6.3 System Description

6.3.1 Intruder Detection System

A proprietary intruder detection system will be provided throughout.

Principally this will comprise the individual monitoring of all access-controlled doors and all external doors.

Passive infrared (PIR) type movement detection shall be used where appropriate for intruder detection purposes in perimeter spaces with particular focus on entry and exit locations.

Keypad to arm/disarm the intruder detection system to be provided at the main entry point.

It is noted the existing building incorporates an intruder detection system. Where feasible the two systems will be integrated to operate in unison, particularly for the purposes of remote monitoring.

Remote monitoring and alarming requirements, as well as interface and connection requirements, to external security monitoring parties will be arranged by City of Marion / SABC.

6.3.2 Access Control System

The access control system will consist of a proprietary access control system with the security head-end located in the Admin offices.

Access control points will include the components noted above.

The access control system will also provide for the supply (and programming) of appropriate numbers of proximity cards to be used in conjunction with the access-controlled doors. A preliminary quantity of 100 cards is proposed.

The programming of controlled access facilities will be determined in conjunction with City of Marion and SABC and will consider:

- Requirement for 24 hour/7day control of access points (e.g. plant rooms, communications rooms, etc.)
- Requirement for access control during selected hours (e.g. after hours) and unrestricted access at other times (e.g. during normal operating hours)

Access control services will be continuously monitored at the access control head-end. Interface with Fire Services will also be provided for fire mode operation.

6.3.3 CCTV Surveillance System

The close circuit television (CCTV) surveillance system will employ strategically located CCTV cameras to new and refurbished areas for the continuous (24 hour/7day) monitoring of selected areas and access control points.

The CCTV system will utilise IP colour cameras for internal areas, and IP full day/night cameras for external locations.

All CCTV cameras will be of fixed view type.

Recording of CCTV activity and images will be carried out at the existing CCTV system head-end located in the Admin offices.

Local data storage will be provided with capacity equivalent to 4TB per camera.

Local monitoring shall be provided in nominated locations including monitor screens, NUC devices, software, programming and licensing, etc.

7 COMMUNICATIONS SERVICES

7.1 General

Communications services for the New Stadium Development will include the following systems:

- Enabling infrastructure/pathways for fibre lead-in cable to the new building
- Cable pathways to enable connectivity between the new and existing building.
- Communications Rack located within the Admin offices.
- Backbone multi-mode optical fibre cabling
- Multi-mode optical fibre patch leads
- Horizontal Category 6A UTP copper cabling
- Telecommunications Outlets
- Category 6A UTP copper patch & fly leads
- Telecommunications Outlets as required for network connection of:
    - AV equipment/systems
    - Scorekeeping and sports equipment
    - Point of Sale systems
- Telecommunications Outlets dedicated for the connection of Wireless Access Points
- Patching of voice/data services to be carried out by the contractor in direct consultation with City of Marion / SABC.

7.2 Design Criteria

Item	Description
Telecommunications Conduit and Pit system	A conduit and pit system will be provided for connection to the existing building and future lead-in cabling to the building. The conduit and pit system will be provided in accordance with the following: ▪ All underground conduits - heavy-duty rigid UPVC with draw wires in accordance with AS/NZS 2053 ▪ Minimum cover depth of 500mm ▪ Trace wires ▪ Minimum 4 x 100mm diameter conduits from property boundary to the building ▪ Communications pits for every 50m or at every change in direction Minimum pit size 800mm D x 600mm W x 600mm L
Backbone Cabling	Backbone cabling will be reticulated via underground conduits from the existing building to the new Stadium. 12-core OM4 multi-mode optical fibre cabling terminated using duplex SC connectors proposed backbone cabling between the buildings. No copper backbone cabling proposed.
Lead-in Cabling	If/when required, new telecommunications connections can be established at the New Stadium Comms Rack by City of Marion / SABC through the Telecommunications Services Provider. At this point the new services can be distributed to the existing building via the backbone cable installed.

Item	Description
Communications Cupboard	New Comms rack will be located within the Admin offices and will be provided with the following: ▪ No false ceiling ▪ No raised floor ▪ Walls, floor and ceiling sealed to prevent dust ingress and concrete dust ▪ Dedicated 24-hour per day air conditioning ▪ Smoke detection system ▪ 1 x 45RU Server rack (800mm W x 1200mm D) for Communications, Security and AV equipment. ▪ Front and rear access to equipment racks. ▪ Rack provisioned with 2 x 15A single phase round pin captive outlet (on dedicated circuit).
Horizontal Cabling	All horizontal cabling will be 4-pair Category 6A UTP copper cabling.
Communication Rack	45RU with 19inch internal frame Width: **800mm** Depth: **800mm.** The following rack accessories/features are proposed: ▪ Perforated steel doors. Side panels with vented top panel. ▪ Lockable ▪ Vertical rails capable of accepting cage nuts ▪ 2 x vertical cable managers ▪ Patch cord managers to suit ▪ 20-way 15A vertical power rail per rack (Number of way, current rating and connector type subject to IT equipment information from City of Marion / SABC)
IT Electrical Loads	Note all active IT equipment to be provided by City of Marion / SABC.
Cable Support Systems	Dedicated cable support systems will be provided for all installed communications cabling. Cable trays will be sized with 30% spare capacity.
Telecommunications Outlets	All telecommunications outlets will be RJ45 Category 6A type. All telecommunications outlets will be terminated in the T568A pin assignment. Data outlets: ▪ Generally wall mounted or in floor boxes ▪ Additional power/data outlets to be provided to suit AV equipment as required. Other items: ▪ Wireless Access Point – 2 x data outlet per point ▪ CCTV surveillance camera – 1 x data outlet per camera ▪ POS – 1 x data outlet per point ▪ AV ▪ Sports equipment ▪ Scorekeeping

Item	Description
Patch and Fly Leads	Patch and fly leads of different lengths will be provided for patching of the active equipment to the cable plant. Generally patch and fly leads will be provided in accordance with the following: ▪ Two Category 6A UTP patch/fly leads per LAN switch port installed. With 10% spare fly leads. ▪ Two multi-mode optical fibre patch leads with duplex connectors per fibre core provided
Communications Cabling/equipment manufacturers	Commercial Grade Providers. No specific requirement.
System Warranty and Certification	Industry standard provisions. No specific requirement.
Testing & Commissioning	All test procedures will be carried out in accordance with AS/NZS 3087.3. Specifically the following tests will be provided: Category 6A UTP ▪ Category 6A (Class E) permanent link performance ▪ Category 6A (Class E) channel performance Optical fibre ▪ OTDR for attenuation ▪ Light Source and Power Meter for insertion loss A copy of the test results will be provided in native file format.
Wireless Local Area Network (WLAN)	A Wireless Local Area Network (WLAN or WiFi) will deployed to serve the building. The WLAN will be designed and installed in accordance with IEEE 802.11b/g. Wireless access points will be distributed as follows: ▪ Location as nominated on the drawings ▪ Power via PoE ▪ All TOs to have minimum 2m of slack for final location ▪ RJ45-RJ45 fly lead of no greater than 5.0m at each WAP

Item	Description
Applicable Standards	The complete installation will be provided in accordance with the following standards and guidelines: ▪ AS/NZS 3080 - Telecommunications Installations ▪ AS/NZS 3084 - Telecommunications installations - pathways and spaces for commercial buildings ▪ AS/NZS 2834 - Computer Accommodation ▪ AS/NZS 3087 - Generic Cabling Systems ▪ AS/NZS 3085 - Telecommunications installations - administration of cabling systems ▪ AS/ACIF S009 - Installation requirements for customer cabling (wiring rules) ▪ AS/ACIF S008 - Requirements for authorised cabling products ▪ AS/NZS 3000 - Electrical Installations Wiring Rules ▪ AS/NZS 2053 - Conduits and fittings for Electrical Installations ▪ TIA-942: Telecommunications Infrastructure for Data Centres ▪ IEEE 802.11b/g/n Wireless LAN Medium Access Control

7.3 Systems Description

7.3.1 Telecommunications Conduit & Pit System

An underground telecommunications conduit system will be provided to facilitate lead-in cabling into the building. Draw wires will be provided in all conduits.

7.3.2 Backbone Cabling

Backbone cabling will terminate in each building at the comms rack location.

All backbone cabling will originate in the existing building and be terminated in the new Stadium Comms Rack.

All overhead sections of backbone cabling will be fully supported upon its entire length using dedicated cable tray. All backbone cabling will be labelled at both ends to identify the origin/destination.

7.3.3 Horizontal Cabling

All new horizontal cabling to telecommunications outlets will be Category 6A UTP copper cabling and be cabled back to the Comms rack serving that zone. All horizontal cabling will be terminated on Category 6A UTP RJ45 patch panels located in equipment rack.

All horizontal cabling will be labelled at both ends to identify the origin/destination.

7.3.4 Cable Support Systems

Dedicated communications cable pathways will be provided for the reticulation of all backbone and horizontal communications cabling. The size of the pathways will be determined to suit the size of cables, bend radius requirements and allowance for future expansion.

All communications cable pathways will be installed in dry locations and be separated from other services including power cabling and lighting and water pipes in accordance with local regulations. Where cable pathways pass through solid ceilings, access hatches will be provided.

Cable pathways will be provided with cable support systems: independently supported cable tray, cable basket or ducting for major cable pathways, and catenary wire, j-hooks and conduit for minor cable pathways. Cable trays to be provided with 30% spare capacity.

7.3.5 Telecommunications Outlets

Unless specifically advised otherwise, all Telecommunications Outlets (TOs) in the work area will be Category 6A UTP RJ45 type and be cabled back to local comms racks.

All telecommunications outlets will be labelled with a permanent typed label that corresponds to the label on the patch panel in the racks.

7.3.6 Patch & Fly Leads

Optical fibre patch leads will be provided in the Comms rack location for patching of active network equipment to the structured cabling plant. The patch cables will be supported by cable managers in the equipment racks.

Category 6A UTP patch leads (stranded-type) will be provided in the Comms rack location for the patching of voice/data outlets to the active network equipment. The patch cables will be supported by cable managers in the equipment racks.

Category 6A UTP fly leads will be provided for connecting of equipment (PCs/laptop/telephone handsets/POS devices/AV Equipment/WAPs/CCTV Cameras, etc.) to the telecommunications outlet. Fly leads will be provided with 10% spare.

Patch and fly leads of differing lengths and colours will be provided to suit the application and minimise cable slack in the rack. City of Marion / SABC to nominate any length and colour preference.

7.3.7 Data Network

City of Marion / SABC will be responsible for the supply, installation and testing and commissioning of the active IP data network to serve the site. This will include provision for a core switches in the Data Centre, and Power-over-Ethernet (POE) edge switches in the Comms Racks.

The data network will be patched and configured to City of Marion / SABC requirements including the creation of Virtual Local Area Networks (VLANs) for different applications, and Quality of Service (QoS).

All application servers, as well as desktop computer equipment (PC's, LCD monitors, keyboard & mouse, etc.) will be provided by City of Marion / SABC.

7.3.8 Wireless Local Area Network (WLAN or WiFi)

A high performance wireless network will be deployed to serve the building. The WLAN will be designed and installed in accordance with IEEE 802.11b/g.

City of Marion / SABC will provide all POE switches, network controllers and Wireless Access Points (WAPs) antennae/equipment. Contractor to carry out the final installation.

8 FIRE PROTECTION SERVICES

8.1 Overview

The Fire Protection Services to the Project will comprise:

- New fire water supply from authority main in Norfolk Road (subject to flow test / network analysis verification and SA Water consultation)
- Fire hydrant system
- Fire water storage tanks and/or pumps (subject to flow test / network analysis verification and SA Water consultation).
- Fire hose reel system.
- Fire Detection and Alarm System (inclusive of associated interfaces with the Sound System for Emergency Purposes and Mechanical Services shut down,
- Sound System and Intercom System for Emergency Purposes (SSISEP)
- Portable Fire Extinguishers and Fire Blankets.
- Multi Aspirated Smoke Detection System (MASDS) for high-level detection of Show Court areas.

8.2 Standards

Key standards and codes governing the fire protection system design and installation include:

- BCA - Building Code of Australia
- AS/NZS1221 & AS2441 Fire Hose Reels
- AS1670 Fire Detection, Warning, Control and Intercommunication Systems
- AS1841 & AS2444 Portable Fire Extinguishers and Fire Blankets
- AS 2419 Fire Hydrant Installations
- AS1668 The Use of Mechanical Ventilation and Air Conditioning in Buildings
- AS3000 Electrical Installations (Wiring Rules)
- AS2941 Fixed Fire Protection Installations
- AS1851 Maintenance of Fire Protection Equipment
- Approved Fire Engineering Brief for the building

8.3 Design Criteria

The design of the Fire Protection Services system(s) will be based on the following criteria:

Design Criteria	Show Courts	Common Space	Canteen / Amenities
Hydrant System	AS 2419	AS 2419	AS 2419
Water Supply	Grade 2	Grade 2	Grade 2
Fire Hose Reel System	Hose reel to be located within four meters of each exit.	Hose reel to be located within four meters of each exit.	Hose reel to be located within four meters of each exit.
Smoke Detection System	Return air, supply air, and point type below and above ceiling smoke detection. Australian Standards AS 1670 and AS/NZS 1668	Return air, supply air, and point type below and above ceiling smoke detection. Australian Standards AS 1670 and AS/NZS 1668	Point type below and above ceiling smoke detection. Australian Standards AS 1670 and AS/NZS 1668
Smoke Detectors	Photoelectric type or multi-head aspirated smoke detection system (MASDS) where advantageous for the high roof space.	Photoelectric type with sensitivity not greater than 5% ob/m. Australian Standard AS 1603	Photoelectric type with sensitivity not greater than 5% ob/m. Australian Standard AS 1603
Sound System and Intercom Systems for Emergency Purposes	Speaker Type: Cone speakers Location: Throughout. Horn speakers in plantrooms Australian Standards: AS 1670.4; AS 60849		

8.4 System Description

8.4.1 NCC Requirements

Architectural drawing indicate the following floor areas:

- Existing building – 1,450m^2
- Stage 1 new building – 2,450m^2
- Stage 2 new building – 2,000m^2

Floor area stage 1 will be 3,900m^2 and stage 2 floor area 5,900m^2.

Preliminary assessment is that the building will be NCC Class 9b assembly building, to be confirmed by the building surveyor.

NCC table C2.2 maximum allowed fire compartment size for Class 9b building as follows:

- Type C construction – 3,000m^2 and 18,000m^3

- Type B construction – 5,500m^2 and 33,000m^3

Building to surveyor to confirm type of construction and maximum allowed floor area and volume.

8.4.2 Water Supply

There is no existing fire fighting water supply connection to the site. Existing SA Water street main is 100 mm outside the site. SA Water require commercial sites to have at least 150 mm water supply pipe before allowing the connection of a fire fighting water supply pipe branch. The nearest 150 mm water supply street main is approximately 300 m away in Norfolk Road and will be very costly to bring to site.

It is proposed to provide onsite fire fighting water supply of at least 288,000 litres, which will allow two hydrants to flow at 20 l\s for 4 hours without infill from the street main and no fire fighting water supply connection required. Tank filling will be from the 50 mm domestic water supply meter.

On site fire fighting pumpset to be provided with suction direct from the storage tanks.

The installation of tanks and pumps will require consolidation of the two allotments as pipes are not allowed to cross title boundaries.

The water supply will be provided from the town mains in Norfolk Road via new fire water connection to the building. The exact requirements for the connection are dependent on the capacity of the infrastructure and the flow/pressure analysis. This will be subject to water flow and pressure tests obtained from SA Water as well as the network analysis.

Consultation with SA Water will be required to finalize scope of work required.

8.4.3 Fire Brigade Booster Connection

A new Fire Brigade booster and suction connections will be installed on an external facade accessible from outside the building to the approval of the SAMFS.

8.4.4 Fire Sprinkler System

NCC table E1.5 does not require sprinklers for class 9b building.

If the NCC fire compartment limits cannot be achieved, then fire sprinklers may need to be provided as part of an alternative solution. This will have to be confirmed by consultation with the SAMFS.

We note that the provision of fire sprinklers will increase the fire fighting water storage tank volume and fire pump capacity.

8.4.5 Fire Hydrants

AS2419.1 requires the following hydrant coverage:

- Two hydrants flowing at 20 l\s total flow for fire compartment less than 5,000m^2.
- Two hydrants flowing at 30 l\s total flow for fire compartment area more than 5,000m^2 but less than 10,000m^2.

To prevent the requirement for 3 hydrants flowing at Stage 2 the building will have to be provided with fire compartments less than 5,000m^2.

On site reticulation and fire hydrants will be provided to achieve full coverage to AS2419.1 requirements.

8.4.6 Hose reel System

Fire hose reel protection will be provided throughout the building in accordance AS2441 requirements.

8.4.7 Fire Detection and Alarm System

Given the nature of the development being a sporting facility for community use, it is proposed for a fully functional analogue/addressable fire detection and alarm system to be provided throughout the building, installed in accordance with the requirements of the BCA, AS 1670, AS1668 and AS / NZS 3000 to provide early fire detection and alarm for occupant evacuation and initiation of fire modes.

The analogue/addressable fire detection system will comprise the following major items:
- New Control and Indicating Equipment (CIE) panel.
- Sound and Intercom System for Emergency Purposes (SSISEP) Panel located adjacent the main fire panel and sub-fire panels / data gathering panels.
- Analogue/addressable smoke detection will be installed in accordance with the BCA (and Fire Engineering Report as applicable).
- Interface to the mechanical air handling systems to initiate fire mode operation.
- Interfaces to ancillary systems located such as the Security, etc.

The fire detection and alarm system will automatically transmit coded signals to the Fire Brigade from Alarm Signalling Equipment (ASE).

Signals will also be transmitted to plant and equipment required to operate in fire mode such as door controls, emergency warning systems, and the mechanical air handling systems required to initiate fire mode operation / shut down.

8.4.8 Smoke Detectors

The smoke detectors will be photoelectric type with sensitivity of not greater than 5% ob/m and in accordance with AS1603. Smoke detectors within the mechanical air handling systems to initiate fire mode operation will comply with AS 1668.1.

8.4.9 Sound Systems and Intercom Systems for Emergency Purposes

Reliable alarm annunciation and communication is required to enable the effective evacuation of occupants in the event of an emergency. The Indicator Panel (IP) for the sound system and intercom systems for emergency purposes will be located in the ground floor core entry adjacent to the FIP.

The system will be configured to provide capability for announcements on area basis. Warden Intercommunication Points (WIP) will be provided to enable communication between occupants/fire brigade personnel in the event of an emergency.

Horn type speakers will be installed in plantroom areas and flush / surface mounted speakers throughout other spaces and ground floor areas.

The system will provide the following:
- Informative voice alert and evacuate information to the building occupants. This information will be communicated in accordance with a managed evacuation strategy.
- Building public address and facilities for an operator to announce emergency evacuation procedures.
- Means of intercommunication between fire-fighting personnel.

8.4.10 Portable Extinguishers

Portable fire extinguishers will be installed to provide special risk protection against potential ignition sources in accordance with AS 2444, the BCA and as required by the Fire Authority.

Portable fire extinguishers will be certified as meeting the requirements of AS/NZS 1841.1 and AS 1841.5.
Portable Fire Extinguishers

Risk	Minimum Rating and Classification	Minimum Size	Location
Electrical Switchboards	2A 20B(E) DP	4.5 kg	Adjacent to switchboard.
Electrical Switch rooms	2A 40B(E) DP	4.5 kg	External to and adjacent to entry door
Plant Rooms	2A 40B(E) DP	4.5 kg	External to and adjacent to entry door.
Kitchen	2A 40B(E) DP	4.5 kg	Adjacent to cooking line

9 HYDRAULIC SERVICES

9.1 Overview

The Hydraulic Services to the project will comprise:
- Potable water supply
- Hot water and cold water reticulation
- Sanitary plumbing and drainage
- Roof drainage and rainwater
- Natural gas service

9.2 Standards

Key standards and codes governing the hydraulics system design and installation include:
- AS 3500.1: – Plumbing and drainage-Water services
- AS 3500.2: – Plumbing and drainage-Sanitary plumbing and drainage
- AS 3500.3: – Plumbing and drainage-Stormwater drainage
- AS 3500.4: – Plumbing and drainage-Heated water services
- SA Water Tradewaste requirements
- The institute of Plumbing Australia ‘‘Selection and sizing of copper tubes for water piping systems’’

9.3 System Description

9.3.1 Potable water supply

Existing water meter on Norfolk street site boundary. Size and location of existing water meter to be confirmed with SA Water. Allow for new 50 mm water supply connection and water meter. This new connection shall interconnect onto the water supply to the existing building.

The domestic water supply shall serve the building amenities, canteen, mechanical services and all fixtures requiring water supply.

Tapware and mixers are to be provided to end-user requirements including touchless tapware for the toilets and amenities

9.3.2 Hot water

Hot water systems will be provided for the building to serve the amenities and the canteen. The system will consist of gas hot water units.

Thermostatic mixing valves shall be provided in each toilet to provide temperature-controlled water where necessary.

9.3.3 Sanitary plumbing and drainage

There is a SA Water 150 mm sewer located in Norfolk street and has a 150 mm branch connection to the existing basketball stadium building. SA Water archive as constructed drawing indicates a sewer depth of 3.89 m in Norfolk Road. The level of the sewer connection point on the Norfolk road boundary is unknown but is typical at 450 mm level above the street sewer.

Based on the assumptions below fixtures can be installed up to approximately 160m distance from the connection point:

- Site survey levels are not available but based on the assumption of a level site
- Sewer connection point depth of 3.5m at the boundary
- On site drainage pipe grade of 1.65%

- Start of drainage pipe 750 mm below FFL.

Preliminary assessment would indicate that the length of sewer drainage pipe required to the new building will be close to the maximum allowed. Allowance has therefore been made for an onsite sewer pump station.

The following will be required for the detail sewer design:

- Site survey of levels
- On site check of existing sewer connection invert
- Layout of new fixtures and equipment to be connected to the sewer

It is understood the Canteen will not incorporate the preparation of food and therefore a grease arrestor has not been allowed for (subject to final canteen layout).

9.3.4 Roof Drainage

Site stormwater drainage by the civil engineer.

9.3.5 Gas

Existing authority gas main on Norfolk Road but no supply to the existing building.

Allow for new natural gas supply connection and meter at the Norfolk street boundary.

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NDY QA SYSTEM

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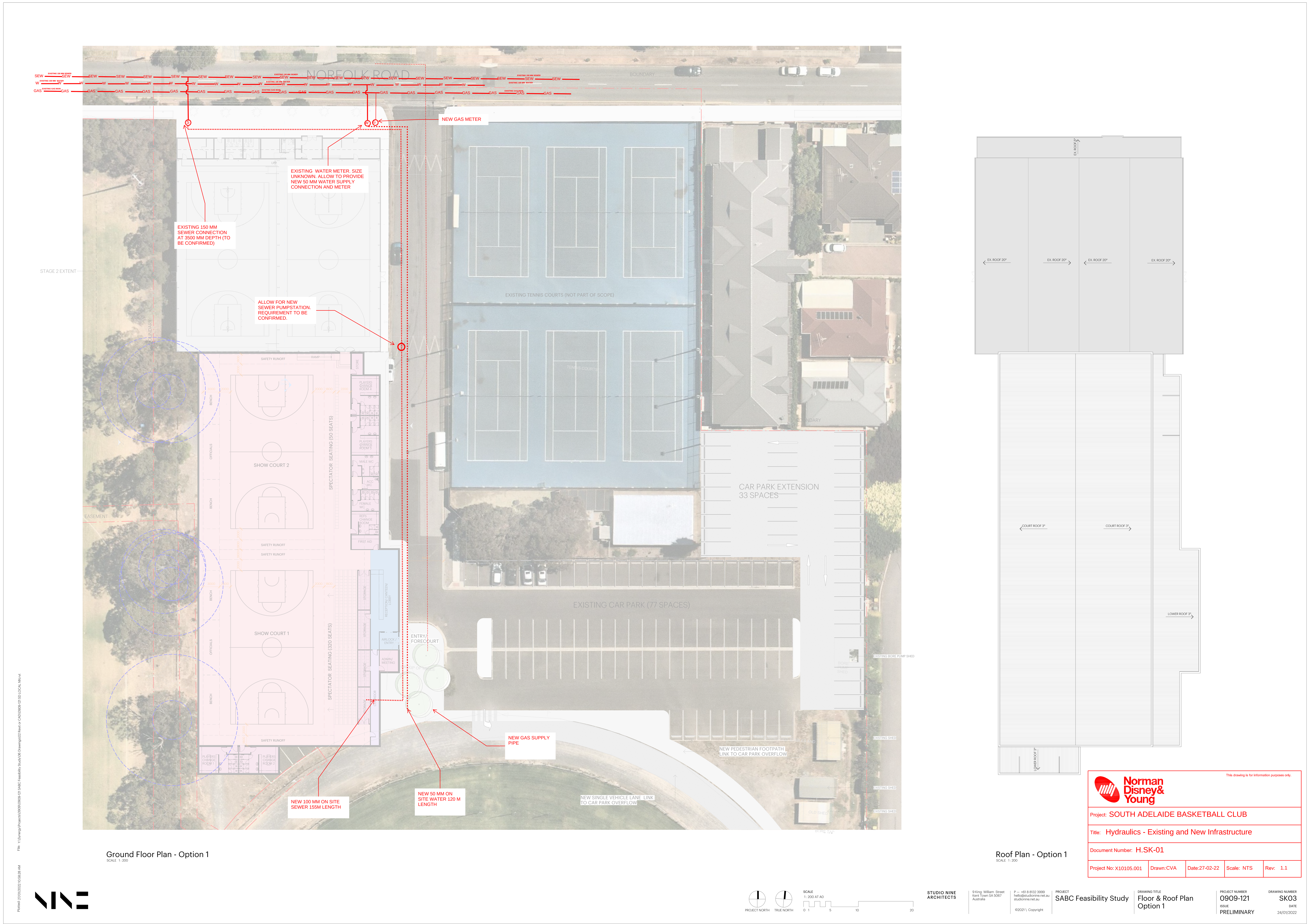
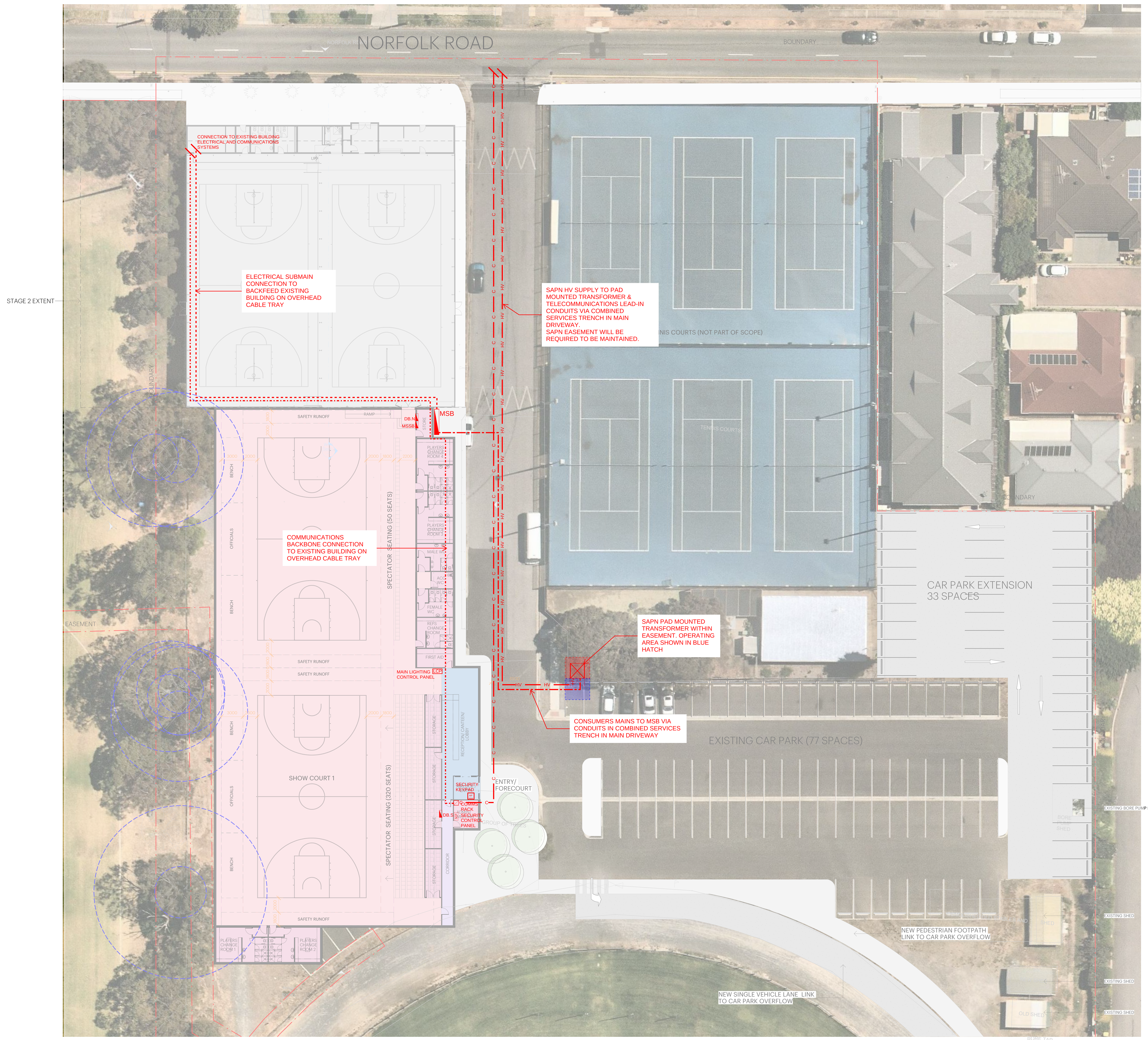
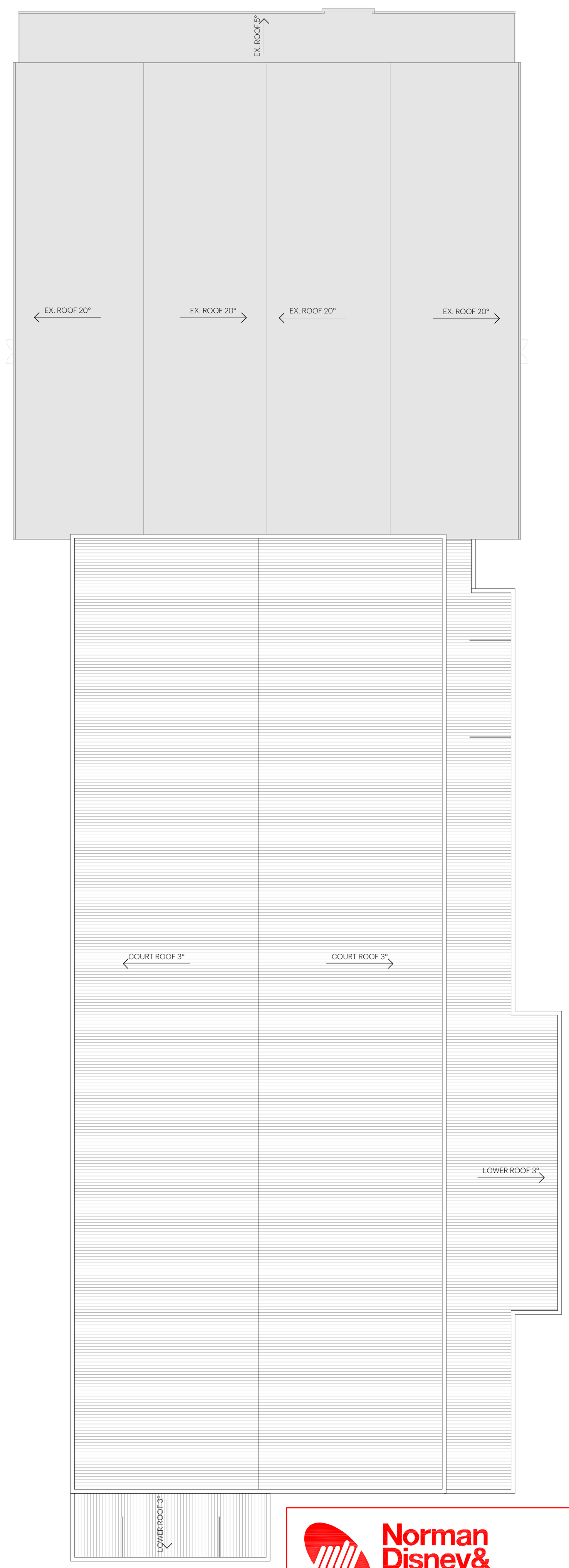

NORFOLK ROAD
NEW GAS METER
EXISTING WATER METER. SIZE UNKNOWN. ALLOW TO PROVIDE NEW 50 MM WATER SUPPLY CONNECTION AND METER
EXISTING 150 MM SEWER CONNECTION AT 3500 MM DEPTH (TO BE CONFIRMED)
ALLOW FOR NEW SEWER PUMPSTATION. REQUIREMENT TO BE CONFIRMED.
STAGE 2 EXTENT
EXISTING TENNIS COURTS (NOT PART OF SCOPE)
CAR PARK EXTENSION 33 SPACES
SHOW COURT 2
SHOW COURT 1
SPECTATOR SEATING (50 SEATS)
SPECTATOR SEATING (320 SEATS)
EXISTING CAR PARK (77 SPACES)
ENTRY FORECOURT
NEW GAS SUPPLY PIPE
NEW PEDESTRIAN FOOTPATH LINK TO CAR PARK OVERFLOW
NEW SINGLE VEHICLE LANE LINK TO CAR PARK OVERFLOW
NEW 100 MM ON SITE SEWER 155M LENGTH
NEW 50 MM ON SITE WATER 120 M LENGTH
Ground Floor Plan - Option 1
Roof Plan - Option 1
Norman Disney& Young
Project: SOUTH ADELAIDE BASKETBALL CLUB
Title: Hydraulics - Existing and New Infrastructure
Document Number: H.SK-01
Project No: X10105.001
Drawn: CVA
Date: 27-02-22
Scale: NTS
Rev: 1.1
STUDIO NINE ARCHITECTS
SABC Feasibility Study
Floor & Roof Plan Option 1
0909-121
PRELIMINARY
SK03



Ground Floor Plan - Option 1



Roof Plan - Option 1
SCALE 1 : 200

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Project: SOUTH ADELAIDE BASKETBALL CLUB

Title: Electrical - Existing and New Infrastructure

Document Number: E.SK01

Project No: X10105.001	Drawn:JW	Date:27-02-22	Scale: NTS	Rev: 1.0

NINE

PROJECT NORTH TRUE NORTH

SCALE 1 : 200 AT A0
0 1 5 10 20

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PROJECT
SABC Feasibility Study

DRAWING TITLE
Floor & Roof Plan Option 1

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Site Plan
SCALE 1: 500

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Title: Electrical - Carpark Lighting				
Document Number: E.SK02				
Project No: X10105.001	Drawn: JW	Date: 27-02-22	Scale: NTS	Rev: 1.0

PROJECT NORTH
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PROJECT: SABC Feasibility Study
DRAWING TITLE: Site Plan
PROJECT NUMBER: 0909-121
DRAWING NUMBER: SK02
ISSUE: PRELIMINARY
DATE: 24/01/2022

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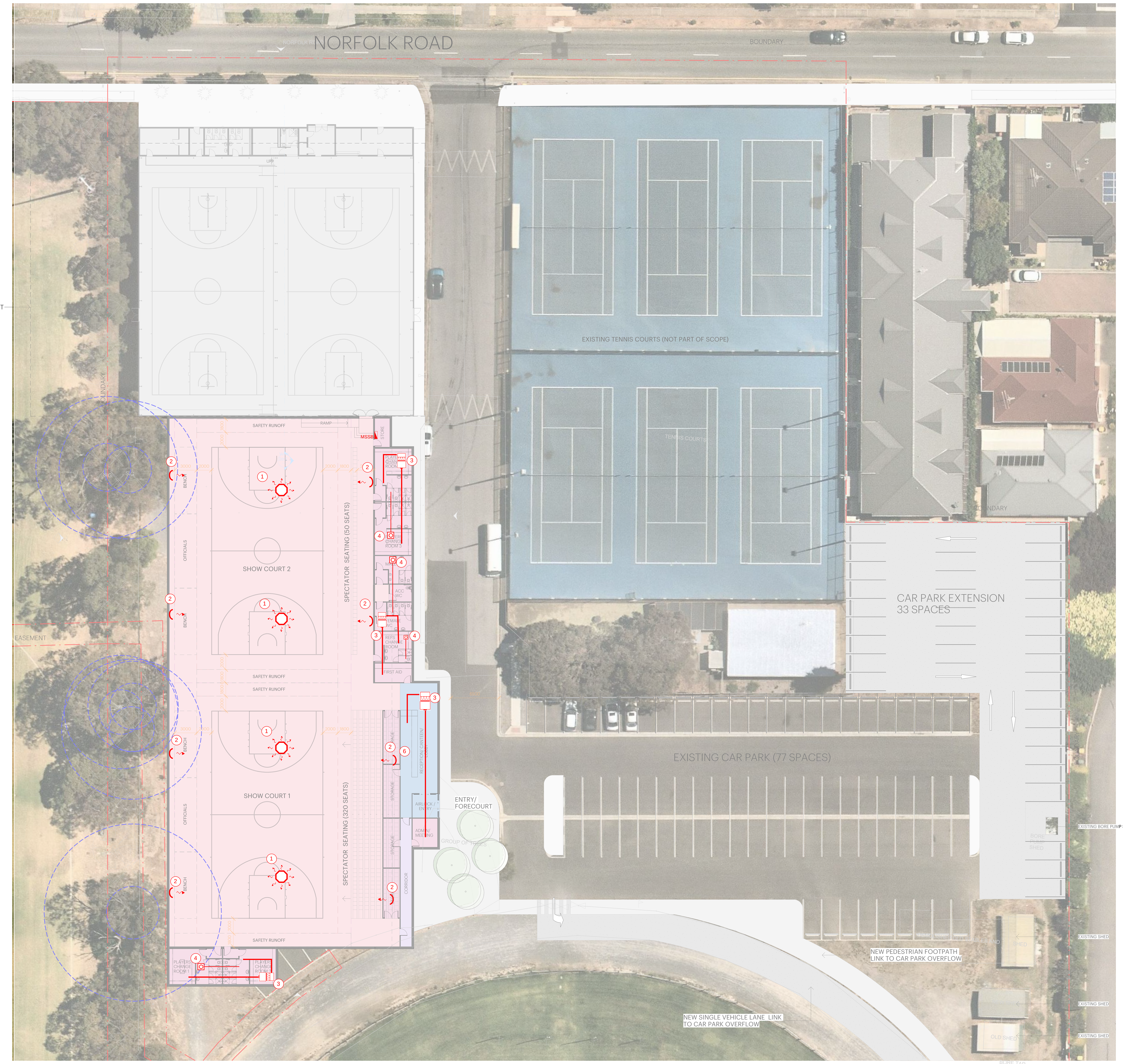
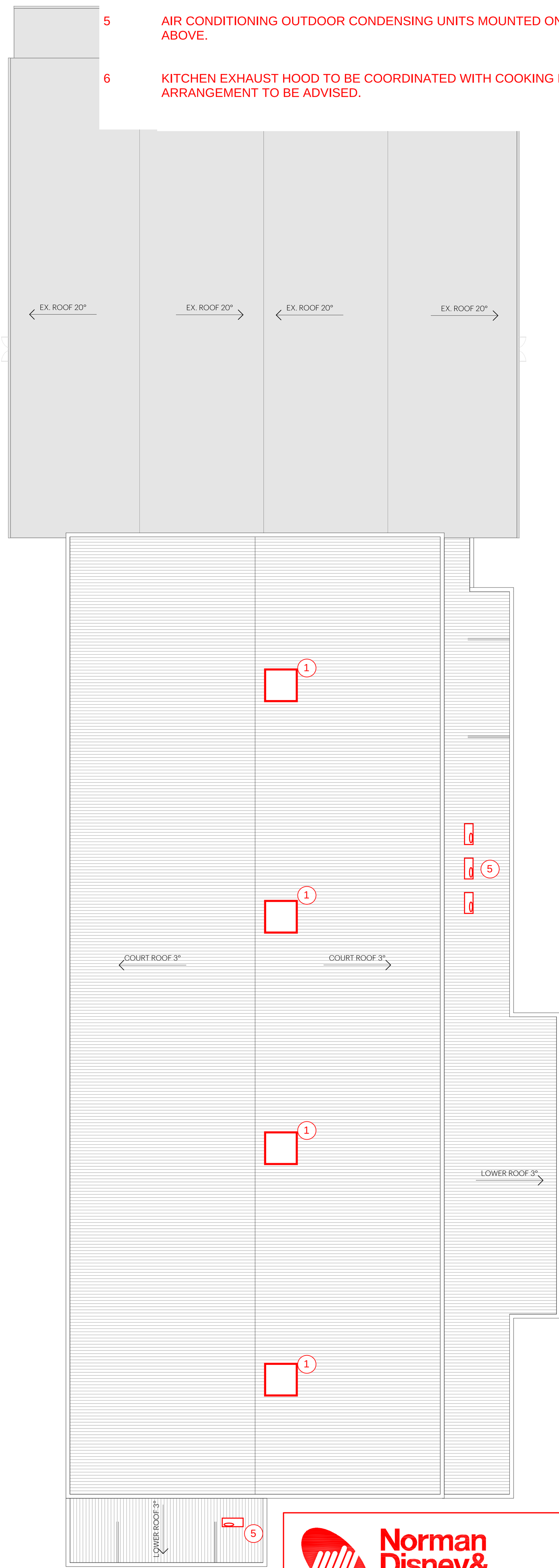


Ground Floor Plan - Option 1



Roof Plan - Option 1

DESCRIPTION NOTES

1 ROOF MOUNTED EVAPORATIVE COOLERS WITH EXPOSED DUCTWORKS DROPPERS AND GRILLES IN SPACE BELOW

2 WALL MOUNTED RADIANT GAS HEATERS (TBC)

3 DUCTED REVERSE CYCLE AIR CONDITIONING SYSTEMS WITHIN CEILING SPACE (600mm DEPTH REQUIRED).

4 TOILET EXHAUST SYSTEMS DUCTED TO ROOF MOUNTED FAN DISCHARGING ABOVE

5 AIR CONDITIONING OUTDOOR CONDENSING UNITS MOUNTED ON LOWER ROOF ABOVE.

6 KITCHEN EXHAUST HOOD TO BE COORDINATED WITH COOKING EQUIPMENT ARRANGEMENT TO BE ADVISED.

Norman Disney& Young

This drawing is for information purposes only.

Project: SOUTH ADELAIDE BASKETBALL CLUB

Title: Mechanical - New Infrastructure

Document Number: M.SK01

Project No: X10105.001	Drawn:LT	Date:27-02-22	Scale: NTS	Rev: 1.0

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PROJECT
SABC Feasibility Study

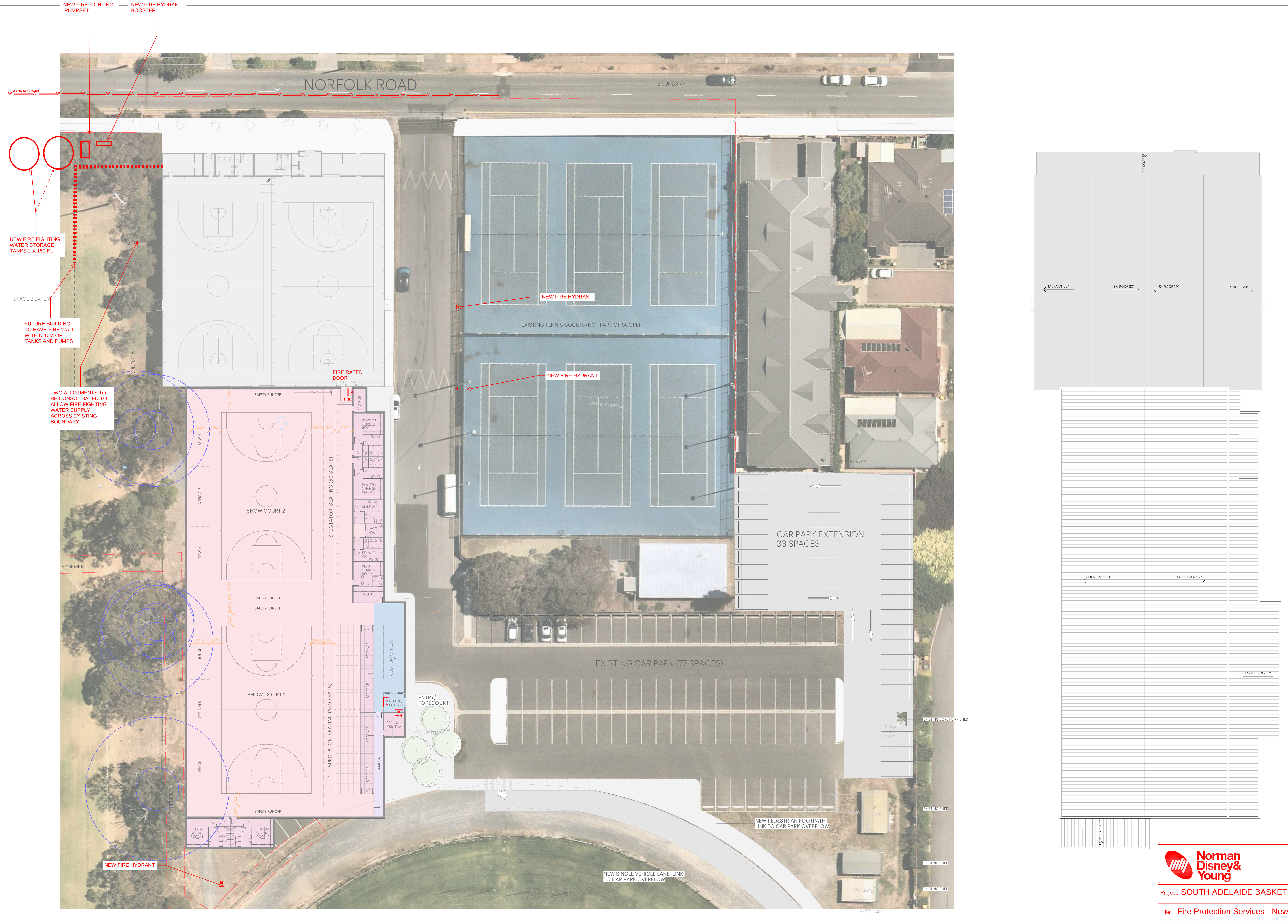
DRAWING TITLE
Floor & Roof Plan
Option 1

PROJECT NUMBER
0909-121

DRAWING NUMBER
SK03

ISSUE
PRELIMINARY

DATE
24/01/2022



Ground Floor Plan - Option 1
SCALE 1:200

Roof Plan - Option 1
SCALE 1:200

Norman Disney& Young

This drawing is for information purposes only.

Project: SOUTH ADELAIDE BASKETBALL CLUB	
Title: Fire Protection Services - New Infrastructure	
Document Number: F.SK-01	

Project No: X10105.001	Drawn: CVA	Date: 27-02-22	Scale: NTS	Rev: 1.0

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SABC Feasibility Study

DRAWING TITLE
Floor & Roof Plan
Option 1

PROJECT NUMBER
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ISSUE
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DRAWING NUMBER
SK03

DATE
24/01/2022

Appendix RLB

SOUTH ADELAIDE BASKETBALL CLUB FACILITY

CONCEPT ESTIMATE

Rider Levett Bucknall

STAGE 1

GFA: Gross Floor Area
Rates Current At January 2022

Ref	Location		GFA m²	GFA $/m²	Total Cost $
1	**Stage 1**				
1A	Building Works		2,451	2,813	6,895,671.35
1B	Site Works & Landscaping				1,065,522.62
1C	Carpark, Roads & Pavements				1,448,806.03
		1 - Stage 1	**2,451**	**3,839**	**9,410,000.00**
ESTIMATED NET COST			**2,451**	**3,839**	**9,410,000.00**
MARGINS & ADJUSTMENTS					
Construction Contingency					470,000.00
Professional Fees incl. Statutory Fees					990,000.00
Escalation to completion - assumed 2024		7%			760,000.00
ESTIMATED TOTAL COST			**2,451**	**4,745**	**11,630,000.00**

SOUTH ADELAIDE BASKETBALL CLUB FACILITY

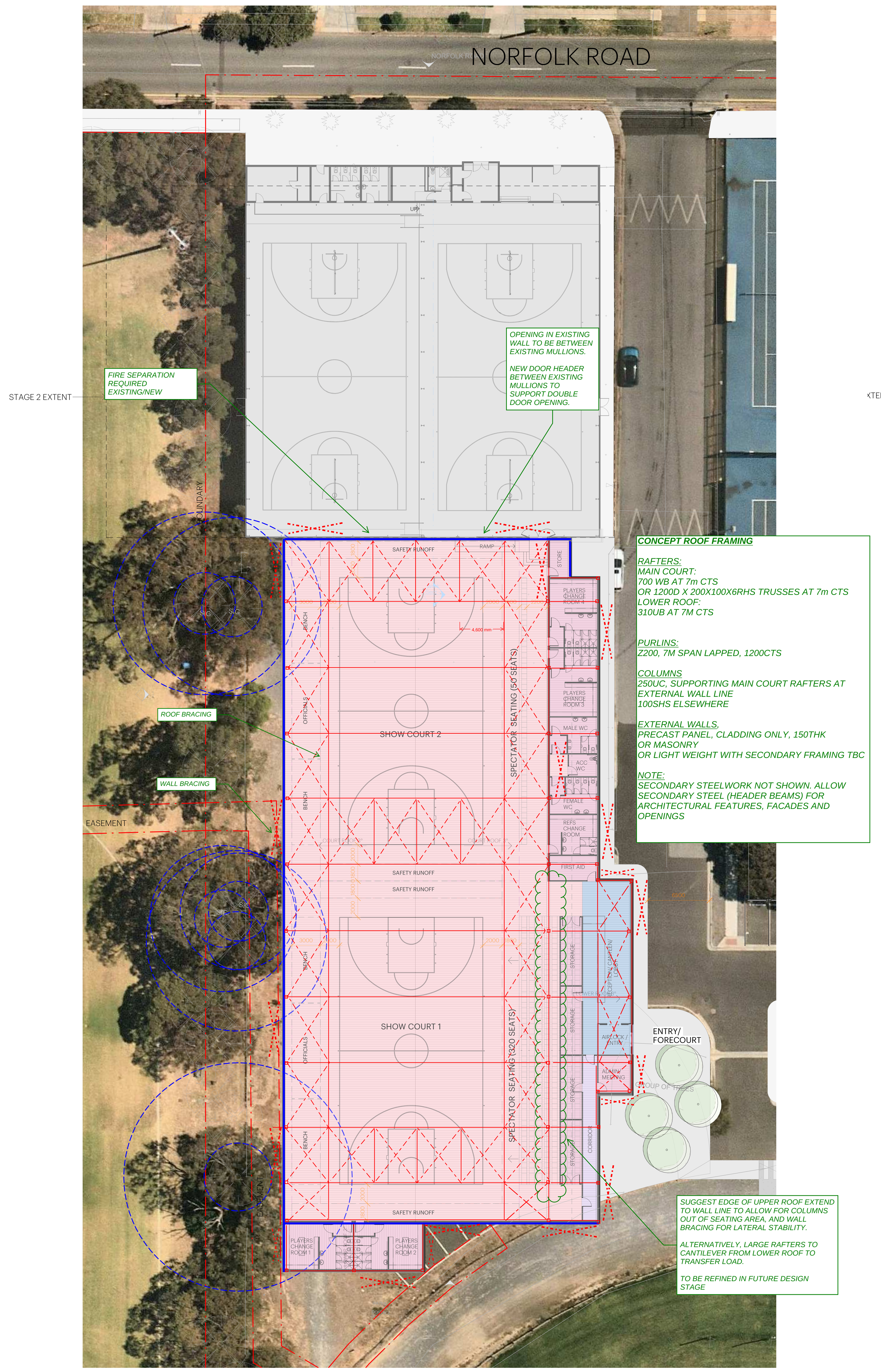
CONCEPT ESTIMATE

STAGE 2

GFA: Gross Floor Area
Rates Current At January 2022

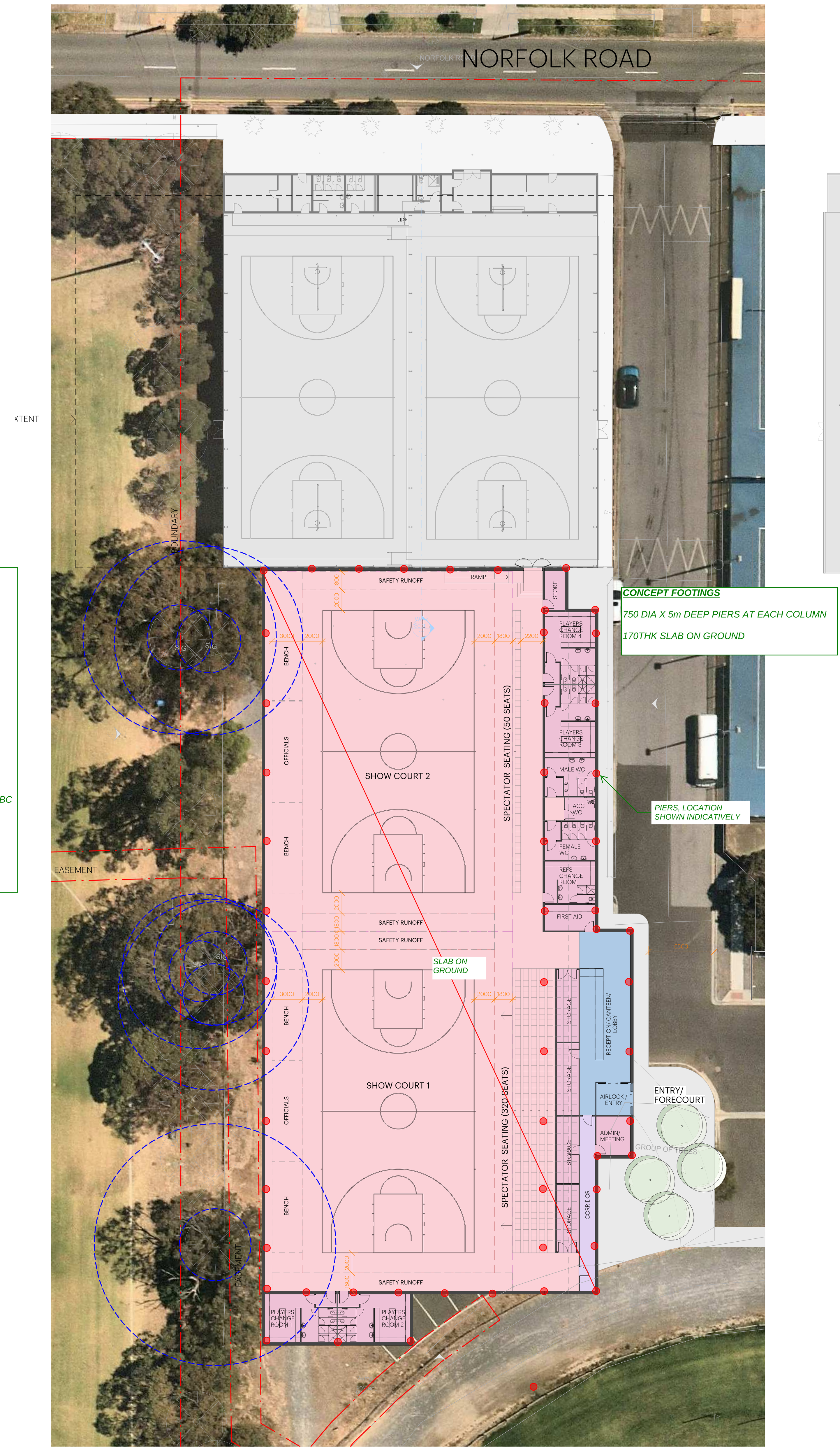
Ref	Location		GFA m²	GFA $/m²	Total Cost $
2	**Stage 2**				
2A	Building Works				5,217,454.36
2B	Site Works & Landscaping				522,545.64
		2 - Stage 2			**5,740,000.00**
ESTIMATED NET COST					**5,740,000.00**
MARGINS & ADJUSTMENTS					
Construction Contingency					290,000.00
Professional Fees incl. Statutory Fees					600,000.00
Escalation to completion - assumed 2032		30%			1,990,000.00
ESTIMATED TOTAL COST					**8,620,000.00**

Appendix Jack Adcock Consulting

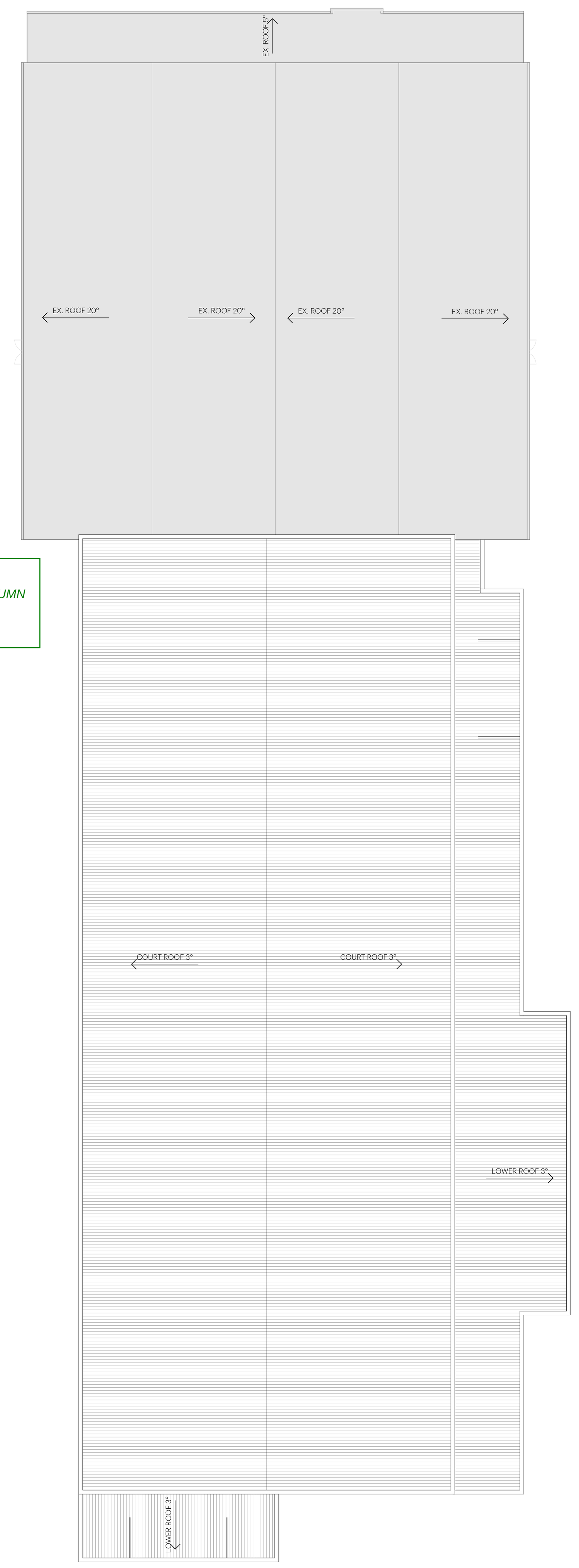


CONCEPT ROOF PLAN

Ground Floor Plan - Option 1
SCALE 1 : 200



CONCEPT FOOTING PLAN



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SCALE 1 : 200

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PROJECT	DRAWING TITLE	PROJECT NUMBER	DRAWING NUMBER
SABC Feasibility Study	Floor & Roof Plan Option 1	0909-121	SK03
		ISSUE	DATE
		PRELIMINARY	24/01/2022

Appendix Cirqa

MARION BASKETBALL STADIUM REDEVELOPMENT NORFOLK ROAD, MARION

TRAFFIC AND PARKING REPORT

CIRQA™

DISCLAIMER

DOCUMENT CONTROL

Report title:	Marion Basketball Stadium Redevelopment – Norfolk Road, Marion Traffic and Parking report
Project number:	21615
Client:	Studio Nine Architects
Client contact:	Nick Ng

Version	Date	Details/status	Prepared by	Approved by
V1	27 Jan 22	For submission	TAW	BNW
V1.1	27 Jan 22	Minor adjustment	TAW	BNW

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1. INTRODUCTION

CIRQA has been engaged to provide design and assessment advice for the proposed redevelopment of the Marion Basketball Stadium at Norfolk Road, Marion. Specifically, CIRQA has been engaged to provide advice in respect to traffic and parking aspects of the proposal.

This report provides a review of the subject site, the proposed development, its access and parking provisions and the associated traffic impact on the adjacent road network. The traffic and parking assessments have been based upon plans prepared by Studio Nine Architects (project no. 0909-121, drawing no. SK02 & SK03, dated 24 January 2022, refer Appendix A).

2. BACKGROUND

2.1 SUBJECT SITE

The Marion Basketball Stadium is located within the Marion Sports Precinct adjacent Norfolk Road, Marion. The site is bound to the north by Norfolk Road, residential dwellings and Jasmine Avenue to the east, Sturt Road to the south, and residential dwellings and Christina Street to the west.

The Planning and Design Code identifies that the site is located within a Recreation Zone, with the following overlays applicable:

- Airport Building Heights (regulated) – All structures over 110 metres;
- Advertising near Signalised Intersections;
- Hazards (Flooding);
- Hazards (Flooding – General);
- Major Urban Transport Routes;
- Prescribed Wells Area;
- Regulated and Significant Tree; and
- Traffic Generating Development.

The Marion Sports Precinct comprises a number of sporting facilities and playing fields, accommodating a number of sports including Australia Rules Football (AFL), Cricket, Soccer, Lawn Bowls, Croquet, Tennis and, relative to the subject redevelopment, Basketball.

The Basketball Stadium is located on the northern side of The Precinct, between the tennis and soccer facilities (with AFL/Cricket facilities to the south). It is

understood that vehicle access to the basketball stadium and tennis club is solely provided via an access on Norfolk Road. Similarly, with parking demands generated by these uses accommodated within the shared parking area (directly adjacent these facilities). Parking demands associated with all other sporting facilities are understood to be accommodated within other parking areas throughout The Precinct (with vehicle access provided via Sturt Road and Jasmine Avenue).

As noted above, the basketball stadium and tennis facilities are serviced by a shared parking area with a combined total of 147 parking spaces. Vehicle access to this parking area is provided directly via Norfolk Road, where all turning movements are accommodated.

Figure 1 illustrates the location of the subject site with respect to the adjacent road network.

Figure 1 – Location of the subject site with respect to the adjacent road network

2.2 ADJACENT ROAD NETWORK

Norfolk Road is a local road under the care and control of City of Marion. Adjacent the site, Norfolk Road comprises a single traffic lane in each direction. On-street parking is permitted on the northern side of Norfolk Road, outside of 'No Stopping' parking controls (applicable from 6:00 pm to 11:00 pm, Monday to Friday). Full-time 'No Stopping' restrictions apply on the southern side of Norfolk Road, enforced by yellow linemarking. Sealed footpaths are provided on both sides of Norfolk Road, accommodating both pedestrian and bicycle movements. Bicycle movements are also accommodated on-street under a standard shared arrangement. The default urban speed limit of 50 km/h applies on Norfolk Road.

Jasmine Avenue is a local 'no through' road under the care and control of the City of Marion. Adjacent the site, Jasmine Avenue comprises an 8.0 m wide carriageway (approx.) accommodating two-way traffic movements. Unrestricted on-street parking is accommodated on both sides of Jasmine Avenue. Sealed footpaths are provided on both sides of Jasmine Avenue, accommodating both pedestrian and bicycle movements. Bicycle movements are also accommodated on-street under a standard shared arrangement. The default urban speed limit of 50 km/h applies on Norfolk Road.

Sturt Road is an arterial road under the care and control of the Department for Infrastructure and Transport (DIT). Adjacent the site, Sturt Road comprises two traffic lanes and a bicycle lane in each direction (operational from 7:30 am to 9:00 am, and 4:30 pm to 6:00 pm, Monday to Friday). Outside of bicycle lane operational hours, unrestricted on-street parking is permitted. Sealed footpaths are provided on both sides of Sturt Road, accommodating both pedestrian and bicycle movements. Traffic data obtained from DIT indicates that this section of Sturt Road has an Annual Average Daily Traffic (AADT) volume in the order of 39,000 vehicles per day (vpd), of which approximately 3.0% are commercial vehicles. A 60 km/h speed limit applies on Sturt Road.

2.3 PUBLIC TRANSPORT

Public bus services operate regularly in the vicinity of the subject site. Bus stops are located directly adjacent the subject site on both sides of Sturt Road (high-frequency 'Go Zone' bus stops), with additional stops located on nearby Finniss Street. These stops are serviced by the following bus routes:

- Route 300, 300H, 300J – Suburban Connector;
- Route 320 – Aberfoyle Hub to Marion Centre Interchange;
- Route 600, 601 – Old Reynella Interchange to Marion Centre Interchange;
- Route 600A – Old Reynella Interchange/Marion Centre Interchange to Aberfoyle Hub;

- Route 600B – Aberfoyle Hub/Marion Centre Interchange to Blackwood Interchange;
- Route 601A – Marion Centre Interchange to Aberfoyle Hub;
- Route 601B – Old Reynella Interchange to Blackwood Interchange;
- Route 640 – Marino to Marion Centre Interchange;
- Route 681 – Hallett Cove Beach Station to Flinders University;
- Route 720, 720H – Old Reynella Interchange to City;
- Route 971 (School Service) – Mitcham Girls High School to Marion Centre Interchange;
- Route 982 – Sacred Heart Senior College to St Marys;
- Route 996 – Marion Centre Interchange to Blackwood High School;
- Route G10 – Marion Centre Interchange to Blair Athol;
- Route INDSTA – Marion Centre Interchange to Bedford Interchange;
- Route M44 – Marion Centre Interchange to Golden Grove Interchange;
- Route M44C – Marion Centre Interchange to City;
- Route M44T – Marion Centre Interchange to Tea Tree Plaza;
- Route N10 (after midnight Saturday) – Marion Centre Interchange to City;
- Route N21 (after midnight Saturday) – City to Aberfoyle Hub;
- Route W90 – Marion Centre Interchange to Paradise Interchange; and
- Route W90M – Marion Centre Interchange to Marden.

3. PROPOSED DEVELOPMENT

The proposal comprises the redevelopment (extension) of the Marion Basketball Stadium over two (2) stages. Stage 1 comprises the extension of the existing stadium to the south to provide two (2) additional courts with an indoor seating capacity for 370 spectators. The Stage 1 proposal will comprise a total floor area in the order of 2,550 m^2. Stage 2 of the redevelopment comprises the refurbishment of the existing stadium, resulting in a minor increase to the existing floor area to the west (an additional 550 m^2 of floor area). No additional courts are proposed as part of Stage 2.

The Stage 1 component of the redevelopment will be constructed to the south of the existing stadium, resulting in the reconfiguration of the existing shared parking area. Upon completion of the redevelopment, the shared parking area will comprise 112 parking spaces (33 of which will be provided within an extension to the existing parking area).

While no dedicated parking spaces for use by people with disabilities have been nominated on the concept plans, at least three (3) parking spaces shall be provided within the parking area (for use by both the basketball and tennis facilities).

A further 127 parking spaces are proposed to be provided within an overflow parking area located immediately east of The Precinct's primary oval. The overflow parking area would be accessed via a one-way internal connection around the outside edge of the oval (accommodating southbound movements from the primary shared parking area to the overflow parking area only), located on the existing (now redundant) hardstand area. The general design of the internal connection is considered satisfactory (noting it's propose use) however will require further development (to ensure turning manoeuvres can be appropriately accommodated) during design development of the project.

Egress movements from the overflow parking area are proposed via a new access directly via Jasmine Avenue.

Pedestrian connectivity between the shared basketball/tennis facility's parking area and the overflow parking area would be provided directly adjacent the proposed vehicle connection.

All new parking areas and roadways shall comply with the requirements of the Australian/New Zealand Standards for "*Parking Facilities Part 1: Off-street car parking*" (AS/NZS 2890.1:2004) and "*Parking Facilities Part 6: Off-street parking for people with disabilities*" (AS/NZS 2890.6:2009) in that:

- regular parking spaces shall be 2.5 m wide and 5.4 m long (or 4.8 m long with 0.6 m overhang);
- disabled parking spaces shall be 2.4 m wide and 5.4 m long (with an adjacent shared space of the same dimension);
- parking aisles shall be at least 5.8 m wide;
- two-way circulation roadways shall be at least 5.5 m wide (with an additional 0.3 m clearance provided on both sides);
- one-way circulation roadways shall be at least 3.0 m wide (with an additional 0.3 m clearance provided on both sides);
- a 1.0 m end-of-aisle extension shall be provided beyond the last parking space in a parking aisle;
- a turn-around bay shall be provided at the end of a blind parking aisle;
- 0.3 m clearance shall be provided to all objects greater than 0.15 m in height; and

- pedestrian sightlines will be provided at the site's property boundary.

The primary vehicle access to the shared parking area will remain via the existing crossover on Norfolk Road. The overflow parking area is proposed to have direct access on Jasmine Avenue via a new two-way crossover, as well as utilise an existing crossover via connectivity to an existing parking area (associated with the Bowling Club). The general parking area configuration will facilitate forward ingress and egress movements by all vehicles.

3.1 SERVICE/COMMERCIAL VEHICLE ACCESS

It is understood that commercial vehicles currently infrequently access to shared basketball/tennis club parking area (both service vehicles and small buses). The proposed concept design of the parking area will generally facilitate such movements throughout the parking area, enabling such vehicles to be drive to and from the site in a forward direction. Consideration will however need to be given to turning radii and potential impacts to parking provisions during further development of the parking area design.

4. PARKING ASSESSMENT

4.1 CAR PARKING

The Planning and Design Code identifies a parking requirement of 4.5 spaces per 100 m^2 of total floor area for 'indoor recreation facilities'. Based upon a floor area of 2,550 m^2, Stage 1 of the proposal will have a theoretical requirement for in the order of 115 parking spaces.

Taking into account the loss of 35 parking spaces associated with the extended footprint of the basketball stadium (i.e. occupying existing parking spaces), a total of 150 parking spaces will be required in order to satisfy the parking requirements of the Planning and Design Code and retain the site's 'status quo' parking provisions.

However, the application of the aforementioned rate to the proposal is considered onerous whilst the basketball stadium is operating under typical 'non-event' scenarios. This is due to the large areas of open space (and circulation areas) located throughout the facility.

Based upon parking surveys undertaken by CIRQA, it has been identified that the use basketball courts for local matches (i.e. non-league events) typically generate peak parking demands in the order of 32 spaces per court whilst in use. On the basis of two (2) additional basketball courts, the Stage 1 proposal would require in the order of 64 parking spaces. Factoring in the loss of parking spaces, in the order of 100 spaces would be required in order to retain the 'status-quo'.

The provision of an overflow parking area capable of providing in the order of 127 parking spaces, is therefore considered appropriate to accommodate anticipated demands.

It should be emphasised that the above assessment retains (and actually increases) parking provisions available for use by adjoining clubs whilst the basketball stadium is in use. As such, the site's proposed parking provisions are not considered to be impacted upon by the proposed Stage 1 redevelopment.

With regard to Stage 2, given that no additional basketball courts are proposed, based upon the surveyed parking demand rate identified above, no additional parking spaces would be required.

In reality, it is likely that basketball stadium will operate with a number of efficiencies by the introduction of additional courts. Notwithstanding, further assessment would be required to be undertaken as part of the future development application(s).

With regard to events, it is noted that the stadium will have a seating capacity for up to 370 spectators. During such events, it is not expected (nor would it be common) that other basketball courts within the stadium would be in use. As such, it is considered appropriate to analyse an event as a 'standalone' occurrence within the stadium.

Assuming one (1) court being used and a full capacity of 370 spectators, based upon a rate of one (1) space per five (5) seats (as is commonly applied to large-scale seated venues), the basketball stadium is forecast to require in the order of 106 parking spaces whilst operating under 'event' circumstances. As with the typical operation of the Stage 1 development, such parking requirements will be readily accommodated on-site within the shared and overflow parking areas, without impacting upon parking provisions (beyond that of what would be currently available) associated with other clubs within the Marion Sports Precinct.

4.2 BICYCLE PARKING

The Planning and Design Code identifies a bicycle parking rate of 1 space per 4 employees plus 1 space per 200 m^2 of gross leasable floor area for visitors, for indoor recreation facilities. Based upon this rate, the proposed Stage 1 redevelopment would require 13 visitor spaces, while the Stage 2 redevelopment would require three (3) visitor spaces.

With regard to staff, the number of employees anticipated to associated with the Marion Basketball Stadium is unknown. As such, determination of the number of

bicycle parking spaces required to be associated with the proposal (based upon the Planning and Design Code) cannot be determined.

However, due to the nature of the proposal (i.e. a Council-owned community facility), it is not expected that a significant number of staff would be permanently based on-site (staff would primarily be associated with the operation of the facility during matches/events). As such, it is considered that in the order of two (2) bicycle parking spaces is sufficient to facilitate bicycle parking demands associated with staff during the facility's operation.

Based upon the above, it is considered that in the order of 18 bicycle parking spaces should be provided in order to satisfy anticipate demands, as well as meet the requirements of the Planning and Design Code (further analysis of staff bicycle parking requirements should be undertake during the planning approval phase of the project).

5. TRAFFIC ASSESSMENT

The RTA's "*Guide to Traffic Generating Developments*" (the RTA Guide), and its subsequent updates, are commonly used documents when determining the traffic generation associated with development projects. However, the RTA Guide does not identify a traffic generation rate relevant to 'indoor recreation facilities' or 'community facilities'. It does note however that recreation facilities should be based upon an 85th percentile approach.

Based on a review of available surveys undertaken at similar recreation facilities, peak hour traffic generation rates in the order of 20 to 25 trips per court have previously been recommended for assessment of basketball facilities (including allowance for overlap between consecutive matches). On this basis and assuming full occupancy of all two (2) new courts, in the order of up to 50 additional peak hour trips could be generated by the proposed redevelopment.

Such movements would be distributed via Norfolk Road in the peak hour prior to the commencement of operation of the stadium, with movements distributed approximately 50/50 between Norfolk Road and Jasmine Avenue during the peak hour at the end of the stadium's use. The additional vehicle movements generated would be unlikely to result in significant traffic impact on either Norfolk Road or Jasmine Avenue. Furthermore, the (design level) peak traffic generation associated with the site would typically occur mid-evening or on weekends and would be outside of the peak commuter periods on the adjacent roads when additional capacity is available.

6. SUMMARY

The proposal comprises the redevelopment of the Marion Basketball Stadium to provide an additional two (2) basketball courts with a seated spectator capacity of 370 persons as part of Stage 1. A future Stage 2 (comprising the refurbishment of the existing stadium) may also occur, albeit will be subject to further analysis and assessment.

The proposal will comprise the reconfiguration of the existing shared parking area, resulting in a minor decrease to its capacity (a loss of 35 parking spaces). However, an additional overflow parking area (capable of providing in the order of 127 parking spaces) will be provided to compensate for the loss as well as accommodate additional demands forecast to be associated with the proposal.

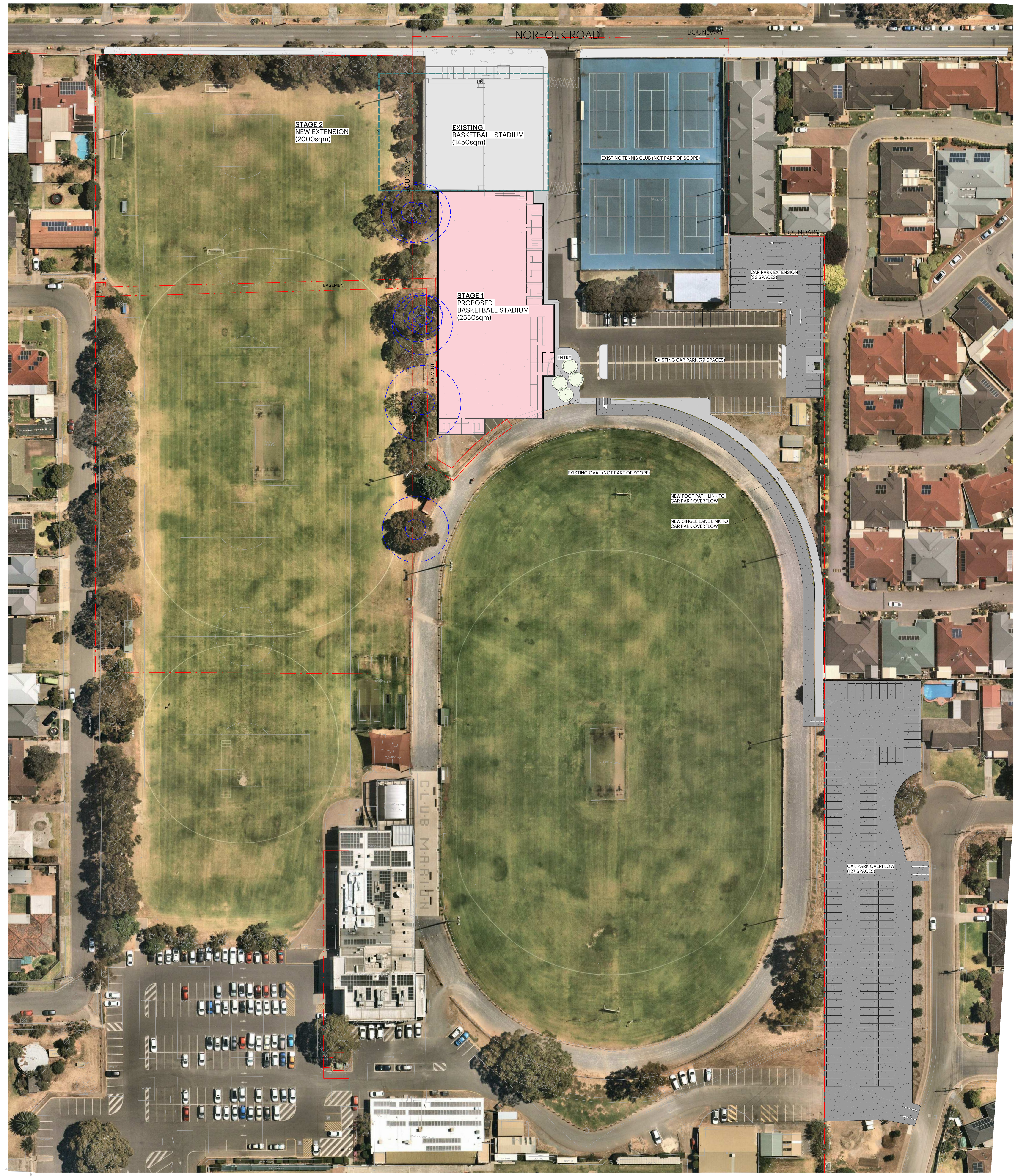
Based upon surveyed demand data, the available parking provisions (inclusive of overflow parking area) are considered to be adequate to accommodate additional demands associated with the proposal, as well as demands associated with the adjoining tennis club (including offset for the loss of spaces).

Design of the reconfigured parking area shall be reviewed prior to construction to ensure compliance with relevant Australian Standards, and to ensure appropriate vehicle manoeuvring area is available. Similarly, in the order of 18 bicycle parking spaces shall also be provided to support the future development.

The redevelopment will also result in an increase to the site's traffic generation (distributed via both Norfolk Road and Jasmine Avenue). However, the additional traffic forecast to be generated is not considered significant, nor is it expected to occur during the peak period associated with the adjacent road network. As such, the additional traffic generated by the site is expected to be readily accommodated.

APPENDIX A

PLANS PREPARED BY STUDIO NINE



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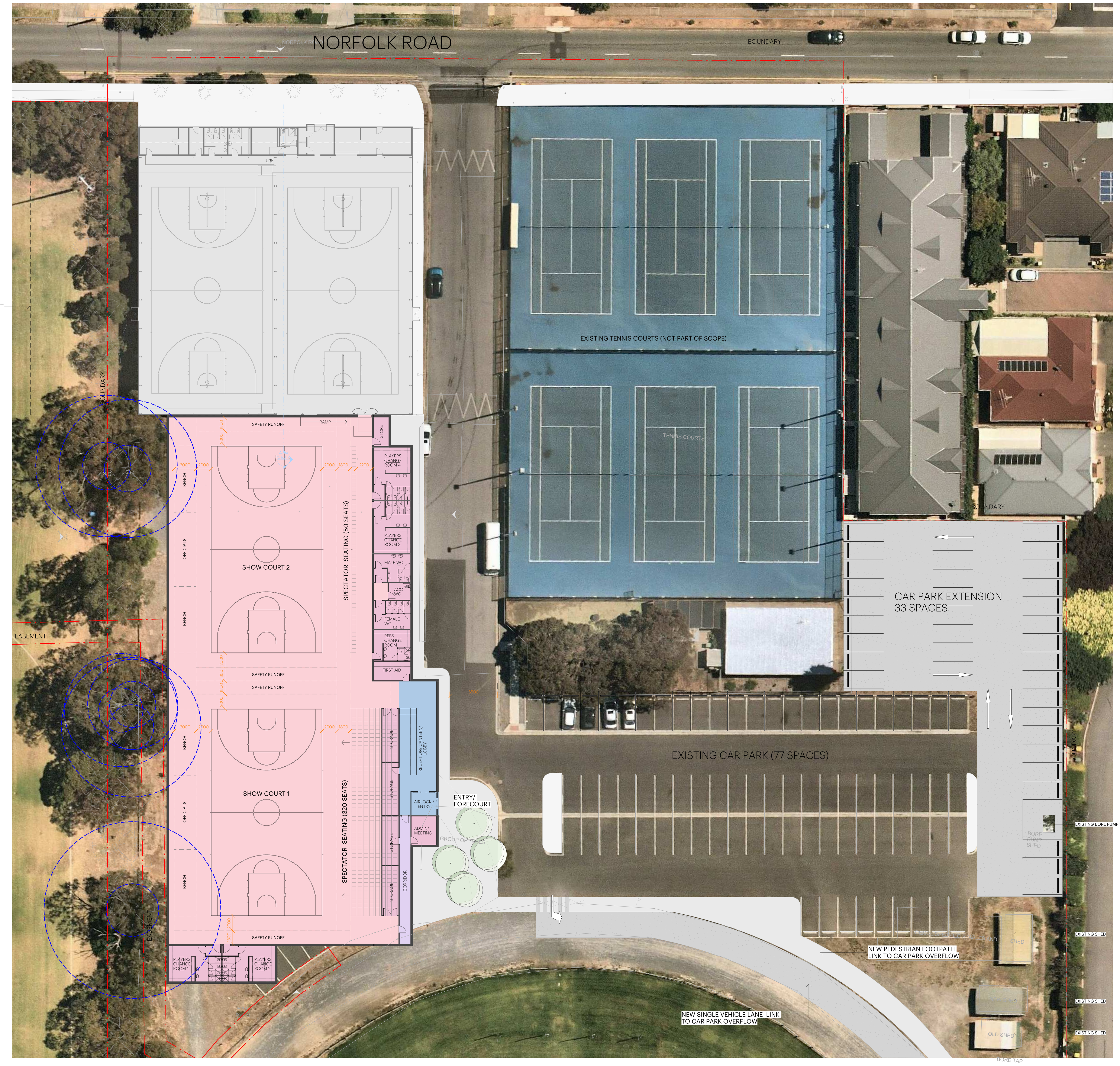

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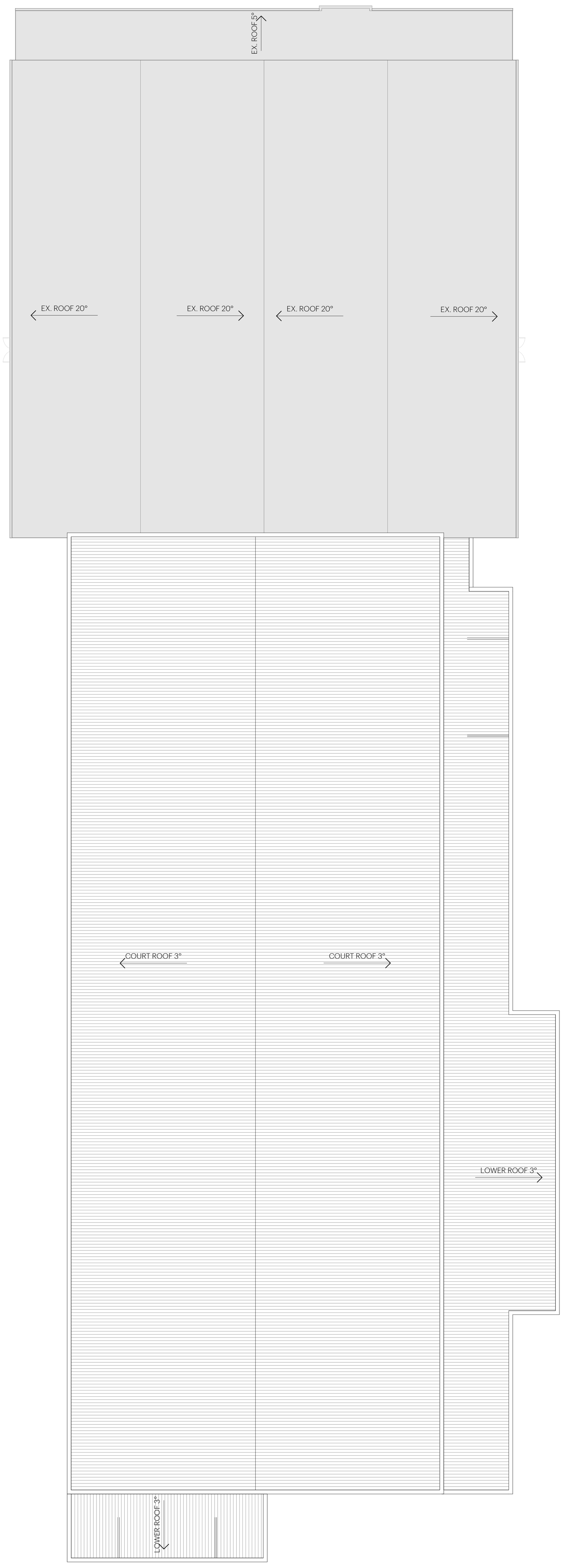

Roof Plan - Option 1
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SABC Feasibility Study	Floor & Roof Plan Option 1	0909-121	SK03
		ISSUE: PRELIMINARY	DATE: 24/01/2022

Thank you.