DECEMBER 16, 2022

Todd Larson
Planning Manager
City of Ramsey
7550 Sunwood Dr NW
Ramsey, MN 55303

RE: SITE PLAN, PRELIM/FINAL PLAT, EASEMENT VACATION APPLICATIONS
ATHLETIC DOME– RAMSEY, MN

Todd,

On behalf of the Anoka Ramsey Athletic Association, ISG is submitting a Site Plan, Preliminary Plat, Final Plat and Easement Vacation application for the vacant property north of Highway 10, west of Ferret Street NW. The area consists of the parcels identified as:

1. **Parcel ID:** 29-32-25-14-0015
   Parcel Address: 14622 FERRET ST NW, Ramsey, MN 55303
   Parcel Size: 8.57 Acres

2. **Parcel ID:** 29-32-25-14-0005
   Parcel Address: 14650 FERRET ST NW, Ramsey, MN 55303
   Parcel Size: 4.31 Acres

These parcels are owned by the Anoka Ramsey Athletic Association and were recently rezoned to the E-3 district.

PROJECT DESCRIPTION

The proposed development is for the Anoka Ramsey Athletic Association's indoor athletic dome, with a potential clinic and restaurant use on the site as well. At this time, the site plan application is specific to the athletic dome, and the other uses would proceed with separate site plan approvals at the time of their development. The plan is to mass grade the site with this initial development and make it pad-ready for the other uses. Construction is planned for the athletic dome to start in April with the opening of the facility in November 2023.

The athletic dome will generally be open 7 days a week, with the weekdays open from around 2:00 pm – 10:00 pm and the weekends open from 7:00 am – 11:00 pm. There will be around 2 full-time employees and 6 part-time employees, with many youth sports volunteers. The peak season is from November-April.

The proposed athletic dome will be a year-round facility consisting of a ~ 175,500 sq ft dome (1.5 turf fields and 8 rubberized multipurpose courts). There will be a 3,698 sq ft support building housing the dome access, lobby, toilets, office, and emergency vehicle access. The primary purpose of the facility will be that of a sports practice/training facility. There may be occasional tournaments or large gatherings/shows in the dome. The dome will have limited spectator seating of 336 seats.

The dome will be Type II-B construction and classified as an A-4 occupancy. It will have a maximum occupancy of 636. The Dome will not have a fire suppression system. The support building will have a fire suppression system. Refer to the code analysis for a complete presentation of code compliance.

Entrance to the site will be from Ferrett Street. There will be 135 parking spaces. Overall, during the development of the dome and support building, 46.1% of the site will be impervious area, resulting in 53.9% as open/green space. An assumed additional 1.51 acres of impervious space will be generated during future phases which results in an ultimate impervious percentage of 63.7%, 36.3% pervious area.

Stormwater will be collected via structures and pipes and directed to four infiltration basins. One on the west side of the site will be used for a portion of the dome which may be expanded or placed underground as future development occurs. Stormwater for the parking lot and the rest of the dome will be directed to the three western.

The Preliminary Plat and Final Plat application are to combine the two lots into one. Additionally, an easement vacation request is included to vacate a portion of existing utility and drainage easements to allow for development on the site. The Final Plat shows that there will still be an easement on the entire perimeter of the site to adequately accommodate the existing and proposed utilities.

VARIANCE REQUEST

The proposed athletic dome will be 78 -ft tall at the highest point. Because the height limit of the E-3 zone district is 65-ft, we are requesting a height variance. Please see the sheet AS-2 Elevations Variance Area to show the portion of the top of the dome that exceeds the height limitation and the proportional area in scale to the overall dome. Article II, Division 2, Section 117-53(b)(2)(a) in the City Code provides the review criteria for a variance request. Following are the review criteria with a statement on how this variance request addresses each criterion:

A. In considering all requests for a variance and in taking subsequent action, the city staff, the board and the council shall make a finding of fact that the proposed action will not:

1. *Impair an adequate supply of light and air to adjacent property.*

   Response: There will be no impairment to the supply of light and air to the adjacent properties. The athletic dome complies with building setbacks and a 13-ft increase in height for the rounded portion of the dome top does not pose any encroachment issue of air or light to adjacent properties. Adjacent to the south is Highway 10. No shadowing will occur from the additional dome height to the south. To the west of the dome is a large portion of the subject site where there will be a future support clinic and restaurant building and therefore the dome does not encroach to any adjacent property to the west. To the north of the dome is the parking lot, and therefore the adjacent properties to the north are far enough away from the dome that they will not be impacted by the requested height increase. Directly to the east of the site is the local street, and the closest lot across the street is far enough to not be impacted either by the requested height increase.

2. *Unreasonably increase the congestion in the public street.*

   Response: The request for a height variance for the athletic facility will not impact traffic. While a height variance for most buildings is associated with an additional floor space and more people, the height for a

dome does not increase the number of people coming to the building. Rather, the height is necessary for athletic practice operations.

3. *Have the effect of allowing any uses prohibited in the applicable zoning district, permit a lesser degree of public health, safety, and general welfare protection than established by this chapter, or permit standards which are lower than those required by state law.*

   Response: The proposed use is permitted within the zone district and granting a height variance does not permit a lesser degree to the public health, safety or welfare.

4. *Increase the danger of fire or endanger the public safety.*

   Response: The increased height request does not increase the danger of fire or to the public. Our team has met with the city building division and will be conducting operations and designing the facility to comply with the building code.

5. *Unreasonably diminish or impair established property values within the neighborhood, or in any way be contrary to the intent of this chapter.*

   Response: The proposed facility and the height variance request would not negatively impact or impair property values in the area. On the contrary, this type of facility has a proven history of revitalizing local business and supporting economic development in the local community.

6. *Violate the intent and purpose of the comprehensive plan.*

   Response: The increased height request does not violate the intent and purpose of the comprehensive plan. A height variance is critical to the design and function of this dome. By granting a height variance, this proposed design will then become viable and will allow the development application to proceed. The athletic training facility will be an asset to the community, offering a gathering place for youth, families and adult athletes to train in athletics. This supports goals of community-building, health and wellness and economic development.

7. *Violate any of the terms or conditions of subsection (b)(2)b of this section.*

   Response: A height variance would not violate an of the terms or conditions in subsection (b)(2)b.

A check for the application fees and escrow was mailed to the city on 12/9/22. Enclosed with the application submittal for review are the following documents:

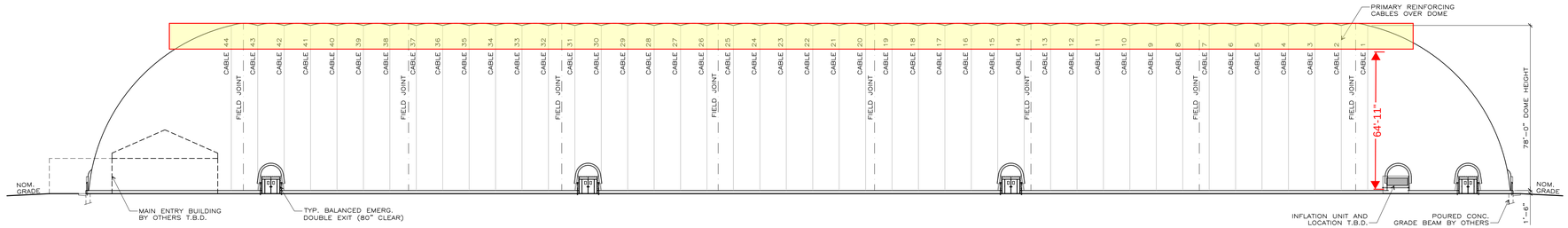
1. Land Development Application
2. LRRWMO Application
3. Connexus Authorization
4. Title Report
5. Vesting Deed
6. Code Analysis
7. Site/Civil Plans
8. Rendering

9. Exterior Elevations – Dome
10. Exterior Elevations – Support Building
11. Traffic and Parking Impact Letter
12. Stormwater Report
13. Preliminary Sketch Plat
14. Final Plat
15. Easement Vacation Exhibit A
16. Easement Vacation Exhibit B
17. Elevations – Variance exhibit

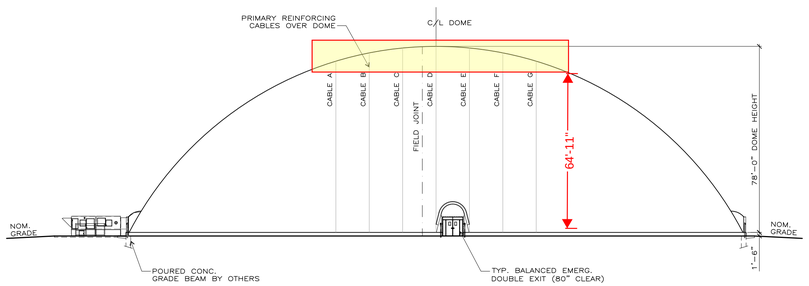
Please contact me at 952.426.0699 or via email at Andrea.Rand@ISGInc.com with any questions or if there is any additional information I can provide in support of this project.

Sincerely,

Andrea Rand, AICP
Project Coordinator

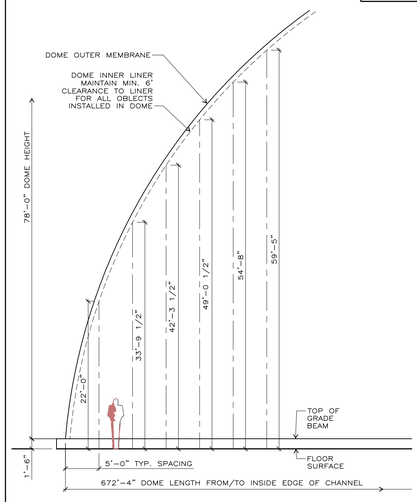


1 / AS2 **SIDE ELEVATION**
SCALE : 1"=30'-0"

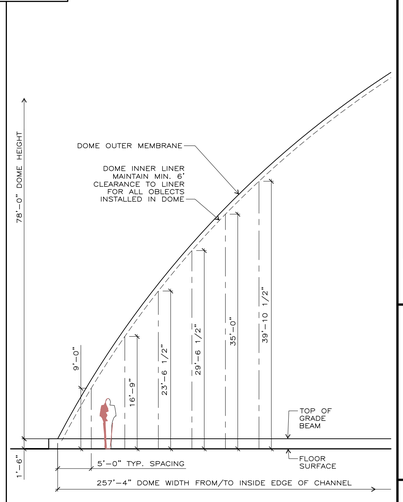


2 / AS2 **END ELEVATION**
SCALE : 1"=30'-0"

NOTE:
GRID HEIGHTS SHOWN ARE APPROXIMATE



3 / AS2 **APROX. DOME PROFILE AT END**
SCALE : 3/32"=1'-0"



4 / AS2 **APROX. DOME PROFILE AT SIDE**
SCALE : 3/32"=1'-0"

GENERAL NOTES:

1. DESIGN LOADS:

i) THIS STRUCTURE IS AN AIR SUPPORTED STRUCTURE IN WHICH THE FABRIC IS SUPPORTED BY INTERNAL PRESSURE. THE INTERNAL PRESSURE IS MONITORED DAILY BY THE OWNER AND IS INCREASED PRIOR TO HIGHER WINDS OR TO SNOWFALLS, AS DIRECTED IN THE OWNER'S MANUAL, IN ORDER TO PROVIDE REQUIRED RESISTANCE TO THE WEATHER LOADS.

ii) WIND : IN ACCORDANCE WITH 2015 IBC AND 2016 ASCE-7.
- 110 MPH (ULT). EXPOSURE C. PRESSURE DISTRIBUTION TO 2016 ASCE 7.
- RISK CATEGORY II. MAXIMUM OCCUPANCY IN DOME < 300

iii) INTERNAL DESIGN PRESSURE :
- INTERNAL DESIGN PRESSURE IS : 9.36 PSF (1.80" W.C.). THIS IS REQUIRED IN ORDER TO MAINTAIN STRUCTURAL INTEGRITY DURING WEATHER EVENTS.
- DURING NON-WEATHER EVENTS, THE OWNER MAY REDUCE THE INTERNAL PRESSURE, AT THEIR OWN DISCRETION. MINIMUM INTERNAL PRESSURE IS : 3.9 PSF (0.75" W.C.).
- STANDBY SET FOR 0.12 kPa (2.6 PSF, 0.5"W.C.) FOR THE "ON" VALUE.

iv) SNOW :
- GROUND SNOW 50PSF
- SNOW IMPORTANCE FACTOR Is=1.1, SNOW EXPOSURE FACTOR Ce=0.9, THERMAL FACTOR Ct=0.85
- DOME WILL SHED SNOW DUE TO CURVATURE OF MEMBRANE, INTERNAL PRESSURE AND HEAT. SNOW STARTS TO MELT ON CONTACT, THEN AS IT ACCUMULATES, A LAYER OF MELTWATER FORMS BETWEEN THE SNOW AND THE MEMBRANE SURFACE ALLOWING THE ACCUMULATED SNOW TO SLIDE OFF.
- SNOW TO BE MANUALLY REMOVED BY OWNER IF EXTREME CONDITIONS EXIST (ASCE 55-16 6.11)
- SNOW TO BE REMOVED FROM ALL SIDES OF DOME BY OWNER AFTER EVERY SNOWFALL
- IF SNOW IS FORECAST, THE OWNER MUST HAVE PERSONNEL AVAILABLE TO MONITOR DOME OPERATION DURING THE SNOW EVENT.

v) DEAD LOAD : SELF WEIGHT OF DOME, INSULATION AND CABLES

2. STRUCTURAL:

ALL WORK SHALL CONFORM TO THE APPLICABLE CODES, LOCAL REGULATIONS AND AUTHORITIES HAVING JURISDICTION.

THE ENGINEER SHALL BE GIVEN 48 HOURS MINIMUM NOTICE BY THE CONTRACTOR FOR ALL REQUIRED INSPECTIONS OF FOUNDATION, REINFORCING STEEL, STRUCTURAL STEEL AND FRAMING.

THIS SET OF DRAWINGS REPLACES ALL PREVIOUS DRAWINGS.

ALL SITE DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY. NO CHANGES SHALL BE MADE WITHOUT WRITTEN APPROVAL BY THE ENGINEER.

ALL SURFACES OF STRUCTURES DIRECTLY EXPOSED TO THE INTERIOR OF THE AIR STRUCTURE SHALL BE DESIGNED TO WITHSTAND A MINIMUM OF 30 PSF, OF AIR PRESSURE.

FABRIC STRESS RELIEF CABLES ABOVE OPENINGS IN THE PRIMARY MEMBRANE SHALL BE DESIGNED AS CATENARY SPANS OF STEEL CABLE, SELECTED AND SUPPLIED BY YEADON FABRIC STRUCTURES IN ACCORDANCE WITH THE FABRIC STRESS CALCULATIONS PROVIDED BY THE ENGINEER FOR THIS PROJECT.

THIS AIR STRUCTURE HAS BEEN DESIGNED USING CSA DOCUMENT CSA S367-12 AND ASCE 55-16 AS GUIDES.

3. EXCAVATION AND BACKFILL:

SOIL CONDITIONS SHALL BE REPORTED TO THE ENGINEER AT THE TIME OF EXCAVATION AND AT HIS DISCRETION THE ENGINEER MAY REQUIRE FURTHER SOILS INVESTIGATION, OR MODIFICATIONS TO THE GRADE BEAM DESIGN.

REMOVE ALL TOP SOIL AND DELETERIOUS MATERIAL FROM BENEATH ALL STRUCTURE COMPONENTS.

USE ONLY ENGINEER APPROVED COMPACTED FILL TO RAISE GRADES WHERE REQUIRED BENEATH STRUCTURES.

COMPACT ALL GRANULAR FILL TO 98% SPDD. COMPACTION TESTING SHALL BE CARRIED OUT BY A QUALIFIED GEOTECHNICAL CONSULTANT PRIOR TO INSTALLATION OF ANY STRUCTURES SUPPORTED ON FILL.

SLOPE ALL GRADES AWAY FROM THE AIR STRUCTURE AND IT'S COMPONENTS.

PROTECT EXCAVATIONS AND GRADE BELOW SLABS FROM FROST PENETRATION BY PROPER USE OF STRAW, THERMAL BLANKETS AND TARPS.

4. CONCRETE:

ALL CONCRETE AND REBAR SHALL CONFORM TO ACI CODE 318-LATEST EDITION.

CONCRETE STRENGTH SHALL BE 3000 PSI, 6% +/-1% AIR ENT. IN ALL CASES, UNLESS OTHERWISE SPECIFIED.

USE ONLY GRADE 60 (60,000 PSI) DEFORMED REBAR.

APPROPRIATE MEASURES SHALL BE TAKEN TO PROTECT CONCRETE FROM EXCESSIVE EVAPORATIVE WATER LOSS AND ENSURE PROPER CURING.

ALL CONCRETE SHALL BE TESTED BY AN ACI CERTIFIED CONCRETE TESTING LABORATORY.

USE HIGH FREQUENCY VIBRATION TO PLACE ALL CONCRETE.

APPROPRIATE MEASURES SHALL BE TAKEN TO PROTECT CONCRETE FROM EXPOSURE TO FREEZING TEMPERATURES FOR AT LEAST (7) DAYS FOLLOWING CONCRETE PLACEMENT.

PROVIDE GROUT CLEANED RUBBED FINISH IN ACCORDANCE WITH ACI 301-10 FOR ALL FORMED CONCRETE SURFACES EXPOSED TO VIEW.

ENSURE 2" MINIMUM COVER FOR ALL REBAR IN FORMED CONCRETE, 3" MINIMUM COVER FOR CONCRETE POURED AGAINST SOIL.

PROVIDE VERTICAL CONTROL JOINTS @ 20'-0" O.C. MAX. LOCATE MID DISTANCE BETWEEN CABLE ANCHORAGE. KEY EA. FACE 1" MIN AND CAULK. CUT EVERY OTHER HORIZ. BAR.

RE-BAR LAP/SPLICE LENGTHS:
#4 = 22"
#5 = 28"
#6 = 32"

5. ELECTRICAL NOTES:

(SEE ALSO ELECTRICAL DRAWINGS BY OTHERS ISSUED FOR THIS PROJECT)

EXITS:

THE CONTRACTOR SHALL PROVIDE (1) 277V/15A DEDICATED CIRCUIT FOR EMERGENCY LIGHTING ONLY AND ALL EMERGENCY LIGHTS SHALL BE POWERED BY THIS CIRCUIT.

POWER SUPPLY FOR EMERGENCY EXITS SHALL BE BROUGHT WITHIN 12" OF EACH EXIT DOOR OPENING AS LOCATED IN THE CONSTRUCTION DRAWINGS.

WHERE THE POWER SUPPLY IS RUN IN CONDUIT CAST INTO THE FOUNDATION GRADE BEAM, 10" CLEARANCE MUST BE PROVIDED BELOW FINISHED CONCRETE SURFACE TO AVOID CONTACT WITH ANCHOR BOLTS.

LIGHTING:

POWER SUPPLY FOR LIGHT FIXTURES SHALL BE BROUGHT TO RECEPTACLE BOXES AS LOCATED IN THE CONSTRUCTION DRAWINGS.

ELECTRICAL CONTRACTOR TO TRIM AND INSTALL PLUG ENDS ON EACH LIGHT CORD IN PROPER LOCATIONS.

VOLTAGE, AMPERAGE AND J-BOX LOCATIONS SHALL BE CONFIRMED BY THE CONTRACTOR TO YEADON FABRIC STRUCTURES, IN WRITING, PRIOR TO COMMENCEMENT OF ELECTRICAL WORK.

IT IS RECOMMENDED THAT LIGHTING CONTACTORS BE USED WITH REMOTE LOCATION SWITCHING AT A CONTROL POINT, LOCATED BY THE OWNER / DEVELOPER.

FOR SUSPENDED LIGHTING, EVERY EFFORT IS MADE TO ALIGN LIGHTS VERTICALLY AND HORIZONTALLY. DUE TO THE CURVATURES OF THE DOME AND THE DIFFERING LOCATIONS OF THE FIXTURES ON THE INDIVIDUAL PANELS, VARIATIONS IN HEIGHT AND HORIZONTAL ALIGNMENTS MAY OCCUR. OTHER FACTORS SUCH AS DOME PRESSURE MAY ALSO AFFECT THE LOOK AND ALIGNMENT OF THE FIXTURES.

6. MECHANICAL EQUIPMENT:

SEE MECHANICAL DRAWINGS (BY OTHERS) ISSUED FOR THIS PROJECT.

POWER SUPPLY FOR MECHANICAL EQUIPMENT SHALL BE BROUGHT TO LOCATIONS AS INDICATED ON THE CONSTRUCTION DRAWINGS. (NOTE: EQUIPMENT IS SUPPLIED WITH MAIN DISCONNECT).

VOLTAGE AND AMPERAGE REQUIREMENTS SHALL BE CONFIRMED BY THE CONTRACTOR TO YEADON FABRIC STRUCTURES IN WRITING, PRIOR TO COMMENCEMENT OF ELECTRICAL WORK.

THE ELECTRICAL CONTRACTOR SHALL COMPLETE ALL ELECTRICAL TERMINATIONS AND CONNECTIONS.

THE INFLATION UNIT IS SLIT IN SECTIONS FOR SHIPPING, FIELD ASSEMBLY REQUIRED. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR CONNECTING THE ELECTRICAL SPLITS ON THE SECTIONS.

ELECTRICAL CONTRACTOR SHALL TEST ROTATION PRIOR TO MANUFACTURER FACTORY STARTUP.

FOR PRESSURE SENSING TUBING, ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL 3/4" CONDUIT FROM CONTROL PANEL TO STUB UP IN BOX INSTALLED IN GRADE BEAM IN DOME INTERIOR, AND FROM CONTROL PANEL TO ATMOSPHERE, TO TERMINATE IN BOX WITH SCREENED VENT.

FOR BOTTOM DISCHARGE UNITS, ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL TEMPERATURE SENSORS IN THE DISCHARGE AND RETURN AIR DUCTS.

FOR REMOTE PC/MOBILE ACCESS, ELECTRICAL CONTRACTOR TO PROVIDE CONDUIT AND INSTALL ETHERNET CABLE FROM REMOTE PC LOCATION TO INFLATION UNIT.

OWNER TO PROVIDE IP ADDRESS AND PC CONNECTED AT TIME OF INSTALL FOR REMOTE ACCESS OPTION.

7. FABRIC SPECIFICATIONS:

SHELTER RITE	STYLE 8028	STYLE 9032
BASE TYPE FABRIC WEIGHT	POLYESTER (7.5 oz/yd²)	POLYESTER (10.0 oz/yd²)
FINISHED COATED WEIGHT ASTM D751	(28 +2/-1 oz/yd²)	(32 +2/-1 oz/yd²)
TONGUE TEAR ASTM D751	(8" x10" SAMPLE @ 12"/MIN.) (275/275 lbf)	(8" x10" SAMPLE @ 12"/MIN.) (300/300 lbf)
TRAPEZOID TEAR ASTM D4533	(85/85 lbf)	(100/100 lbf)
GRAB TENSILE ASTM D751	(700/700 lbf)	(840/840 lbf)
STRIP TENSILE ASTM D751 PROCEDURE B	(515/515 lbf/in)	(650/650 lbf/in)
ADHESION (MINIMUM) ASTM D751 DIELECTRIC WELD	(10 lbf/in)	(10 lbf/in)
HYDROSTATIC RESISTANCE ASTM D751 PROCEDURE A	(500 psi)	(500 psi)
DEAD LOAD MIL-T-52983E (MODIFIED) PARA 4.5.2.19	(2" SEAM, 4 HRS, 1" STRIP) (266 lbf @ ROOM TEMPERATURE) (133 lbf @ 160° F)	(2" SEAM, 4 HRS, 1" STRIP) (266 lbf @ ROOM TEMPERATURE) (133 lbf @ 160° F)
LOW TEMPERATURE ASTM D2136 1/8" MANDREL 4HRS	(LTC: PASS @ -40° F) (LTA: PASS @ -67° F)	(LTC: PASS @ -40° F) (LTA: PASS @ -67° F)

FLAME RESISTANCE
MEETS NFPA 701; CAN/ULC-S109; ASTM 6413-2 SECOND FLAMEOUT
REGISTERED BY CALIFORNIA FIRE MARSHAL (NO. F-10301); GB8824-2006;
ASTM E84 & ULC-S102 - FLAME SPREAD INDEX <25, SMOKE DEVELOPMENT RATING <450

YEADON®
575 9th ST. E., SUITE 50, MINNEAPOLIS MN. 55414
128 WOOLWICH ST, SUITE 201, GUELPH ONT. N1H 3V2

NO.	DESCRIPTION	DATE

REVISIONS:

SEAL:

PRELIMINARY
NOT FOR CONSTRUCTION

PROJECT:
ANOKA RAMSEY ATHLETIC ASSOCIATION MULTI SPORT DOME

PROJECT LOCATION:
RAMSEY, MN.

DRAWING:
ELEVATIONS GEN. NOTES

SCALE:
AS NOTED

DATE:
02/DEC/22

DRAWN BY:	APPROVED BY:
R.K./D.K.	D.K.
PROJECT NO.:	DWG. NO:
	AS-2