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Nova Classical Academy Facility Needs Analysis Report

FINAL REPORT, MARCH 6, 2024

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Section 1: Executive Summary

SECTION 1: EXECUTIVE SUMMARY

The Nova Classical Academy Facility Needs Analysis was initiated in the fall of 2023. Hay Dobbs Architects was retained to undertake the study through a competitive selection process. A space utilization analysis was conducted. The evaluation determined that the vast majority of the entire facility is utilized at, or above, state and national standards. This included classrooms, labs, academic support, administrative support and extracurricular facilities. The size and configuration of spaces was included in the analysis. A physical conditions assessment was not part of the analysis due to relatively young age of the current facility.

The analysis was conducted through the lens of the following assumptions:

- 1) *The current enrollment will remain stable for the foreseeable future*
- 2) *No growth in the total number of students is planned*
- 3) *There are no intentions to relocate the campus*
- 4) *There are no plans to fracture the campus into separate locations*
- 5) *The Classical Education Model and the Trivium will inform pedagogies*
- 6) *The building requires no major deferred maintenance investments*

Two online surveys were conducted to gain insights into opinions from the greater Nova Community. Survey participants included Students 16 years old or older, Parents, Teachers, Administrators, Staff and Stakeholders.

Six major facility needs themes came out in the surveys. Those include the desire for improved or more:

- **Gym/Court Space** for physical education, school functions, general use and organized athletics, along with associated locker rooms, training rooms, strength and conditioning, and storage spaces.
- **Performing Arts Space** including practice and performance space for Choral, Instrumental and Drama related activities.
- **Multi-Purpose/Commons Space** that can be used for teaching and learning as well as socializing, collaboration, and studying.
- **Academic Support Space** for tutoring, Special Education, counseling, and student collaboration. Additional uses included group study, private study, and library/media/research space.
- **Food Service/Lunchroom Space** including expanded food service options, more food serving and dining space, and quieter and more ample overall space.
- **Faculty Support Space** including meeting, office and collaborations space for teachers, counselors and staff, digital and physical work space, and proprietary storage space.

Programmatic space square footages were developed based on referenced standards in order to provide an idea of space need for each of the six focus areas. The potential spaces were used to provide cost estimates. The following synopsis provides a summary of potential costs for each facility focus area.

Gym/Court Space

New Gym and Auxiliary Space Total	23,100 sf (net)
Estimated Project Cost	\$9,609,600

Performing Arts Space

Performing Arts and Music Instruction/Practice Space Total	4,775 sf (net)
Estimated Music Instruction Space Project Cost	\$2,674,000
300 Seat Auditorium Space	16,000 sf
Estimated Auditorium Project Cost	<u>\$14,000,000</u>
Total Performing Arts Space Estimated Project Cost	\$16,674,000

SECTION 1: EXECUTIVE SUMMARY

Multi-Purpose/Commons Space

Additional Multi-purpose/Common Space Total (net)	2,550 sf (net)
Estimated Project Cost	\$1,428,000

Academic Support Space

Additional Academic Support Space Total (net)	900 sf (net)
Estimated Project Cost	\$504,000

Food Service/Lunchroom Space

Additional Food Service/Lunchroom Space	2,774 sf (net)
Estimated Project Cost	\$1,553,440

Faculty Support Space

Additional Faculty Support Space Total (net)	1,540 sf (net)
Estimated Project Cost	\$862,400

Sum of Project Estimates **\$30,581,565**

Note: Estimates exclude site work, environmental work, and other unknown costs such as real property costs.


Based on professional input and analysis, the quantity of space needs far exceeds the currently anticipated budget and space available for expansion. A strategic concept design effort is recommended to determine how to maximize the impact of selected new construction and/or renovation within the defined budget.

A strategic concept design may consider the following:

- What are the project priorities?
- Refinement of programmatic needs based on priorities, cost, and feasibility
- What are the existing conditions, and how does our proposed project fit into the existing site and building?
- What are the applicable zoning and building code parameters?
- What does the proposed facility program look like physically?
- What other considerations are there?
- Is the concept design project feasible?

Addressing these considerations will shape the concept design alternatives with the goal of achieving a preferred design that aligns with programmatic priorities and the project budget, to meet Nova Classical Academy's priorities, goals, and future needs.

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Section 2: Existing Conditions

SECTION 2: EXISTING CONDITIONS ANALYSIS SUMMARY

2.1 ANALYSIS SUMMARY - EXISTING SITE AND BUILDING

In the fall of 2023, an evaluation of the existing facilities and their use was conducted. The goal was to determine how and with what intensity facilities were currently being utilized, identifying opportunities to utilize under-used spaces, and to understand needs for additional space.

The methodology used was to relate the school's curricular schedule to the building floor plan, developing a "heat map" to show intensity of use. The heat maps showed that most spaces were well utilized.

While the analysis of the facility use was being conducted, the existing real property leased by Nova Classical Academy was reviewed. Site conditions were also considered. This examination looked at parcel boundaries and opportunities to expand the facility within the property. An existing ALTA/NSPS Land Title Survey, dated Sept. 2017, was reviewed, along with Ramsey County real property records and maps (online), and City of St. Paul, Victoria Park documents.

The academy facility parcels are within the City of St. Paul's T3 with Master Plan (T3M) - zoning district. The T3 district is a traditional neighborhood district, and a school is a permitted principal use within the zoning ordinance for the district. The primary parcel on which the existing school is located at 1455 Victoria Way, PID 142823210063, and is owned by Friends of Nova Classical Academy. Adjacent to the school to the west, an existing soccer field area lies on the primary parcel. This portion of the school property is envisioned to be further developed in the Victoria Park Master Plan developed by the City of St. Paul in 2013. The master plan graphic is included on the pages that follow for reference. The school is also bordered by Mercer St. to the north and Victoria Way on the south, which limit the school's expansion. To the east is an apartment building. Consequently, on the parcels owned by the Friends of Nova Classical Academy, the school has pushed the limits of its horizontal expansion on the primary parcel. The school building is constrained in every direction on the primary parcel.

Across the street from the school, separated by Mercer Way and Madison St., at 0 Otto Ave., an undeveloped triangular parcel, PID 142823210064, is available for expansion. This 1.14-acre parcel is owned by the Friends of Nova Classical Academy and is dedicated for school use. In this phase of analysis, further study of this parcel has not been conducted.

The existing 94,000 square-foot (sf) school building has two main areas, on the west there is a large one-story area called the commons that includes the Great Room, Gymnasium, a few classrooms, an office area, and related support spaces. To the east, there is a three-story school classroom wing connected through the Great Room and mezzanine. Each story generally houses one of the school divisions. Further discussion of space utilization is included in this section.

School division, floor

- School of Grammar (K-5), first floor.
- School of Logic (6-8), second floor.
- School of Rhetoric (9-12), third floor.

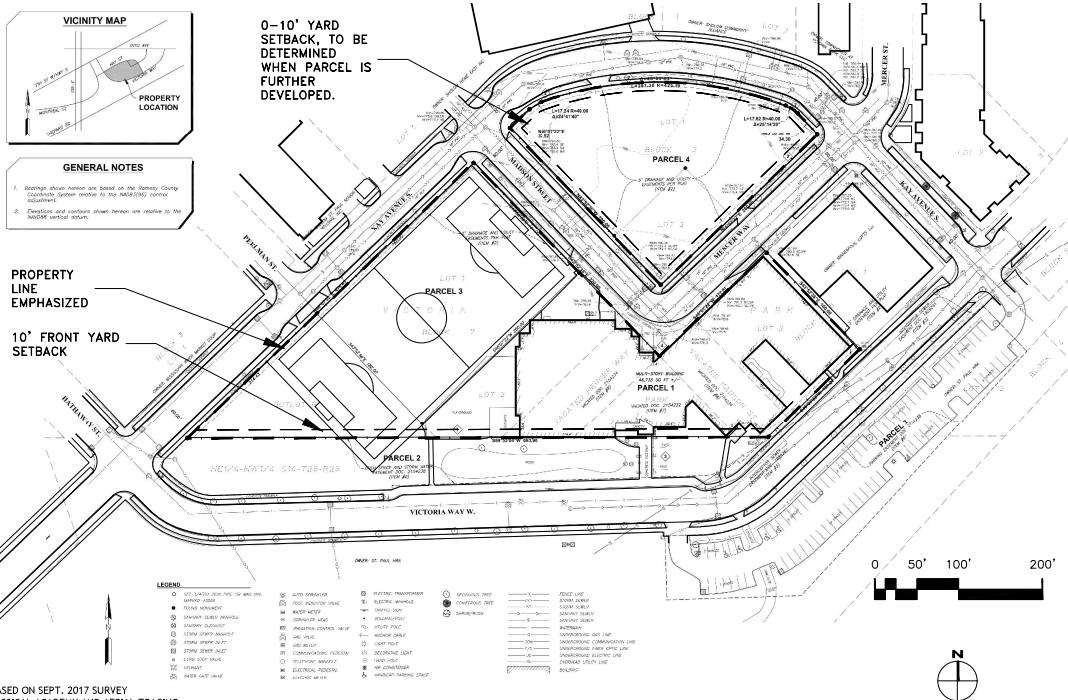
SECTION 2: EXISTING CONDITIONS ANALYSIS SUMMARY

2.2 EXISTING SITE

Existing School Location and Adjacent Properties (2023 Aerial)



Site Constraints



NOTE: BACKGROUND IS BASED ON SEPT. 2017 SURVEY FOR FRIENDS OF NOVA CLASSICAL ACADEMY AND AERIAL TRACING

DATE: 27 FEBRUARY, 2024
PROJECT NO.: 23008.001

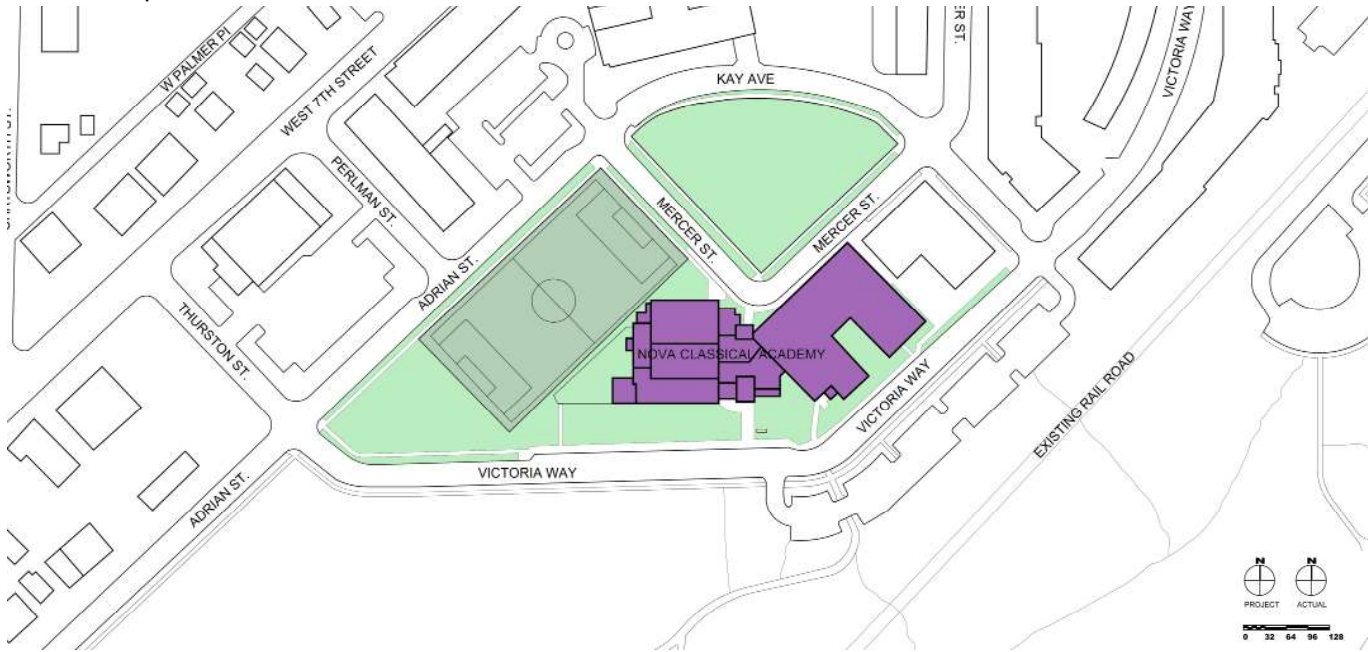
Nova Classical Academy
St. Paul, MN

SK. EXISTING SITE HAY DOBBS

SECTION 2: EXISTING CONDITIONS ANALYSIS SUMMARY

2.2 EXISTING SITE

School Footprint/Parcels



Victoria Park Master Plan (2013)

ACTIVE PARK

- GENERALLY DEFINED AS AREA NORTH OF RAIL ROAD TRACKS

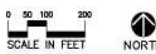
PASSIVE PARK

- GENERALLY DEFINED AS AREA SOUTH OF RAIL ROAD TRACKS

- WATER PLAZA/PARK ENTRANCE
- RECIRCULATING WATER TREATMENT
- COMMUNITY GARDENS
- NORTH PICNIC AREA
 - RESTROOMS
 - SHELTER
 - PLAY AREA/GLASSPAD
- 40 CAR PARKING LOT
- PARK ENTRANCE
- AMPHITHEATER
- OPEN WATER WETLAND
- PARK ENTRANCE
- HISTORIC QUARRY INTERPRETIVE OPPORTUNITY
- SHRUB CARR WETLAND
- EXISTING WETLAND
- BIRD HABITAT/MOIST SOIL CELLS
- HIGHLAND PARK ACCESS TRAIL



- DOWNTOWN ACCESS
- ENTRY SIGNS
- OVERLOOK WITH SEATING
- 60 CAR PARKING LOT
- SLEDDING BOWL
- RAVINE BRIDGE OVERLOOK
- CANOE/KAYAK STORAGE
- SOUTH PICNIC AREA
 - RESTROOMS
 - SHELTER
 - PLAY AREA
 - CANOE/KAYAK STORAGE
- GRP CANOE AND KAYAK DOCK
- MISSISSIPPI RIVER ACCESS TRAIL
- COMBINED BIKE/PED TRAIL WITH HISTORIC/INTERPRETIVE ELEMENTS
- RIVER SIDE GATHERING AREA
- NATIVE PRAIRIE PLANTING
- RESTING AREA
- FUTURE SHEPARD ROAD TUNNEL
- SAM MORGAN REGIONAL TRAIL
- EXPLORE ADA ACCESS TO VICTORIA PARK
- WATER CHANNEL DOWN BLUFF
- RECENT CROSBY REGIONAL PARK ACQUISITION AREA-TRAIL CONNECTION
- EXISTING TUNNEL UNDER SHEPARD RD.
- RIVER OVERLOOK
- CROSBY REGIONAL PARK TRAIL ACCESS

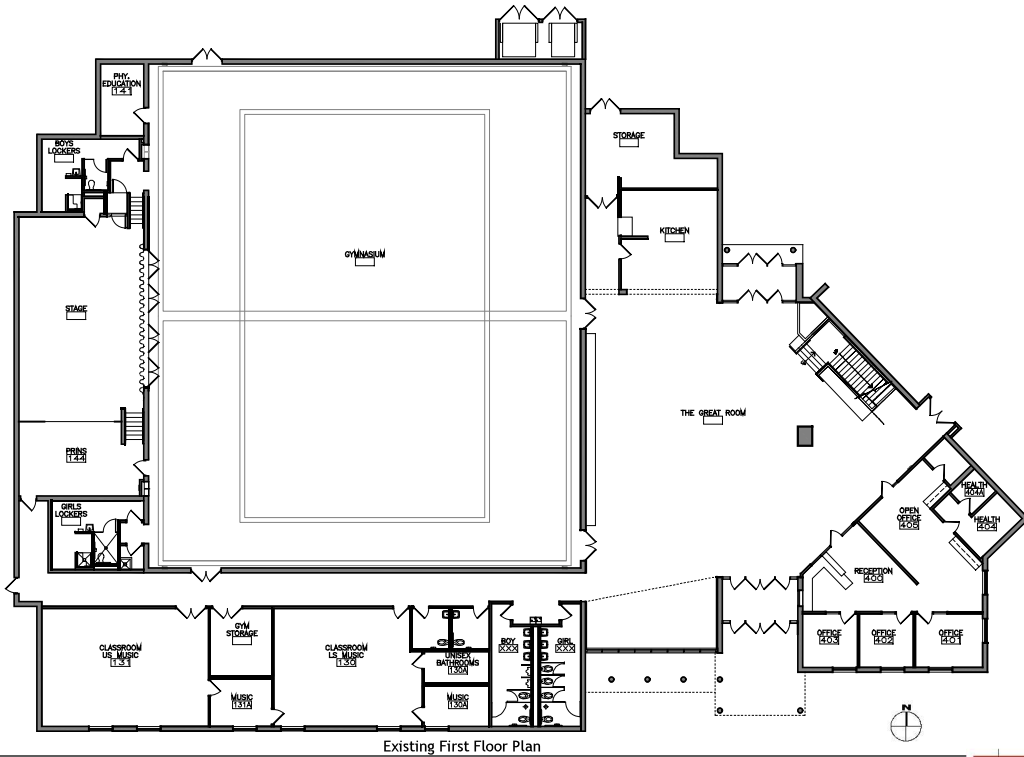


Victoria Park
design advisory committee
december 3, 2013- MEETING #9

Saint Paul Parks and Recreation
Project Manager: Don Ganser / Alice Wessler
Contact: 651.246.4433 / 651.266-9412
Email: Don.Ganser@stpaul.mn.us / Alice.Wessler@stpaul.mn.us

SECTION 2: EXISTING CONDITIONS ANALYSIS SUMMARY

2.3 EXISTING SCHOOL BUILDING



Existing First Floor Plan

Date: 24 October 2023
PROJECT NO.: 23008.001

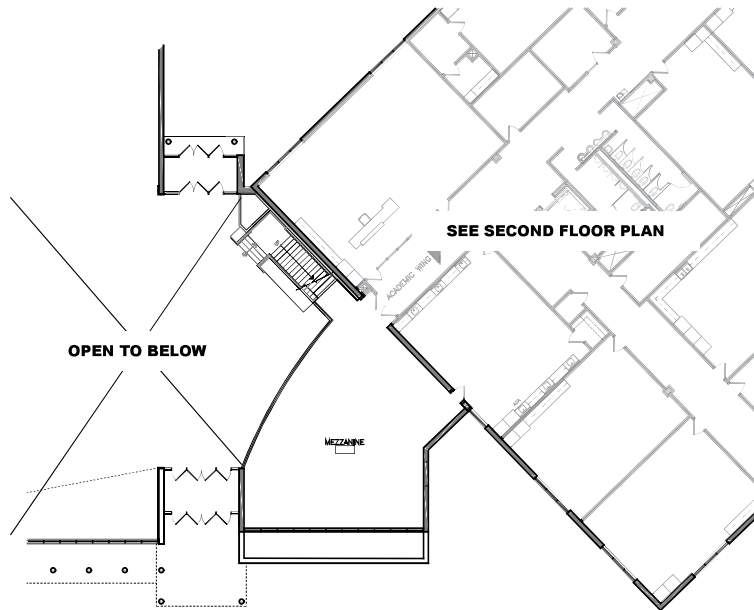
Nova Classical Academy

0' 4' 8' 16'

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SK: 1



Existing Mezzanine Floor Plan

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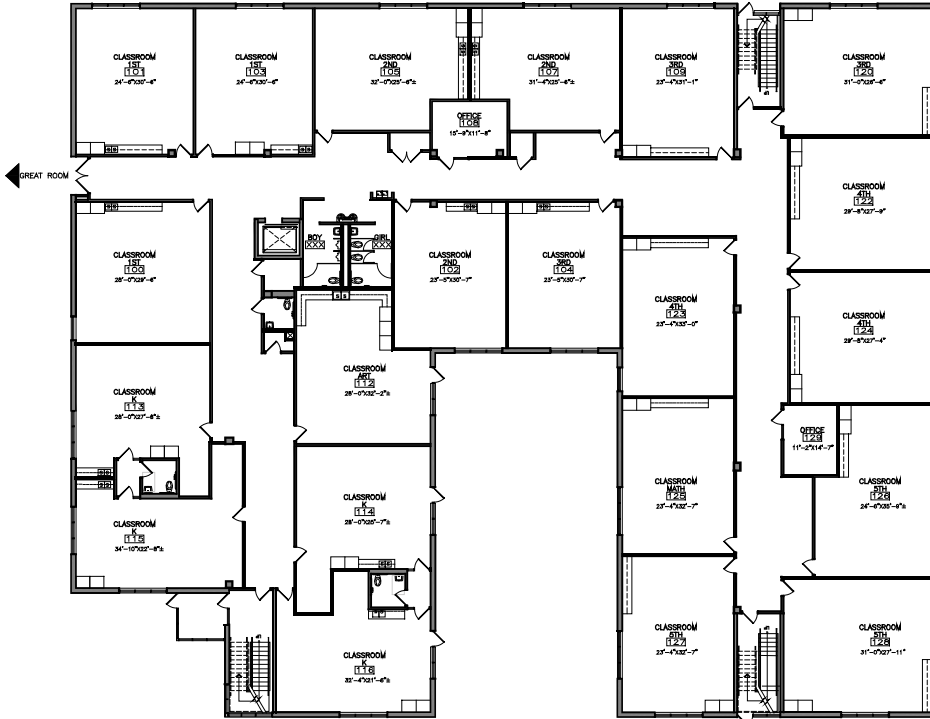
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SK: 2

**SECTION 2: EXISTING CONDITIONS
ANALYSIS SUMMARY**

2.3 EXISTING SCHOOL BUILDING

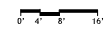


Existing First Floor Plan

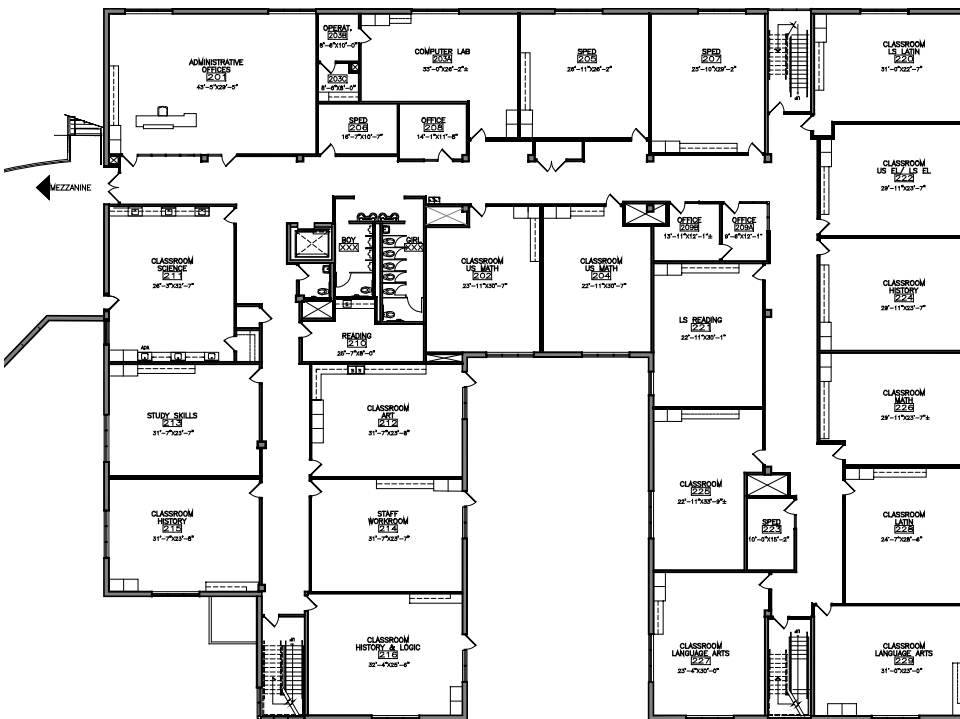
Date: 24 October 2023
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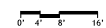


Existing Second Floor Plan

Date: 24 October 2023
PROJECT NO.: 23008.001

Nova Classical Academy

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SK: 4

SECTION 2: EXISTING CONDITIONS ANALYSIS SUMMARY

2.3 EXISTING SCHOOL BUILDING



Existing Third Floor Plan

Date: 24 October 2023
PROJECT NO.: 23008.001

Nova Classical Academy

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0' 4' 8' 16'

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SK: 5

SECTION 2: EXISTING CONDITIONS ANALYSIS SUMMARY

2.4 ANALYSIS SUMMARY - ENROLLMENT DATA AND SPACE UTILIZATION

For the 2023-2024 school year there are 1,035 students enrolled at Nova Classical Academy in grades K-12. The number of students enrolled at the school is not anticipated to fluctuate significantly in the foreseeable future. The school offers ScholarZone: a before-and after-school care program to students in Kindergarten through grade five in the school building. In addition to its curricular program, Nova Classical Academy also provides a variety of extra-curricular programs including: Baseball, Basketball, Biology Club, Chess Club, Choirs and Vocal Ensembles, Cross Country, Debate, Drama Club, Fencing Club, Fencing Team, Film Club, First Lego Robotics League, Golf Club, Junior First Lego Robotics League, Hockey (Boys and Girls co-ops), Knightly News, Mad Science Club, Mock Trial, Model UN, One Act Plays, Ski and Snowboard Club, Soccer, Tennis Club, Theater, Track and Field, Volleyball, Yoga Club, and Young Rembrandt's Art Club. Not all programs utilize the school building.

Programmatic space utilization mapping of the facility indicate only the primary curricular use of each space within the building. Space utilization heat maps indicating room utilization for the school day (periods 1-7; 7.5 hours/day, 35 hours/week) are included on the following pages. The maps show that the vast majority of the school facility is utilized at, or above, state and national standards.

The building focus areas that were identified as major facility needs from the surveys are evaluated further as follows.

A. GYM/COURT SPACE

Building Areas Utilized for Gym/Court Space

Existing Gymnasium: The 9,451 sf gymnasium is able to be divided into two practice gym areas by a curtain divider. The gym is striped for basketball and volleyball. There are telescopic folding bleachers for spectators. It is used primarily for required curricular physical education, but it is also used as a multi-purpose space, gathering space, events space, school assemblies, graduation, art shows, STEM night, MCA testing, picture day, choir performances/concerts, for Scholar Zone, and other uses. During the school day, for physical education, one side of the gym is used by the Upper School for 300 min./school day; the other side of the gym is used by the Lower School for 240 min./school day. That is approximately a 60% utilization rate for physical education. It is used as a multi-purpose space, gathering space, events space, for required curricular physical education, school assemblies, graduation, art shows, STEM night, MCA testing, picture day, choir performances/concerts, and for Scholar Zone.

Athletic Competition Use

Athletic Competition rules are governed by the National Federation of State and High School Associations (NFHS) and the Minnesota State High School League (MSHSL). The single competition court complies with the dimensional requirements set forth by the NFHS and MSHSL.

The current facility is comprised of a single competition court that is used for all in-season Nova Classical Academy hosted indoor athletic competitions including:

- High School (Varsity) Girls Basketball
- High School (JV) Girls Basketball
- High School (C) Girls Basketball
- Middle School (7/8) Girls Basketball (Limited Schedule)
- Middle School (5/6) Girls Basketball (Limited Schedule)
- High School (Varsity) Boys Basketball
- High School (JV) Boys Basketball
- High School (C) Boys Basketball
- Middle School (7/8) Boys Basketball (Limited Schedule)
- Middle School (5/6) Boys Basketball (Limited Schedule)
- High School (Varsity) Girls Volleyball
- High School (JV) Girls Volleyball
- High School (C) Girls Volleyball
- High School (C2) Girls Volleyball

(Continued on next page.)

SECTION 2: EXISTING CONDITIONS ANALYSIS SUMMARY

2.4 ANALYSIS SUMMARY - ENROLLMENT DATA AND SPACE UTILIZATION

A. GYM/COURT SPACE CONTINUED

Middle School (5/6) Girls Volleyball (Limited Schedule)
Middle School Boys Volleyball (newly adopted by MSHSL) 2024
High School Boys Volleyball (newly adopted by MSHSL) 2024

- There are no men's, women's or gender neutral locker room facilities for Referees
- There is no athletic training room for student athletes
- There are no locker room facilities for student athletes (*current facilities include 1 toilet, 1 shower and 1 lavatory with 8' of benches and approximately 12 small lockers. They are too small for team use and therefore not used*).
- There is a single scoreboard where 2 scoreboards or more are typical.
- There is undersized bleacher seating for spectators
- There is no formal concessions or ticketing spaces

Athletic Practice Use

As previously described, the current facility is comprised of two cross courts (two stations) for practice use. These two courts (stations) are configured perpendicular to the single competition court. Only the two practice courts, or the single competition court, can be used simultaneously. Additionally, there is a retractable batting cage on the north end of the space that when lowered and in-use precludes full use of the north court (station).

The two practice courts (stations) are used for the following practices:

High School (Varsity) Girls Basketball
High School (JV) Girls Basketball
High School (C) Girls Basketball
Middle School (7/8) Girls Basketball (Limited Schedule)
Middle School (5/6) Girls Basketball (Limited Schedule)
High School (Varsity) Boys Basketball
High School (JV) Boys Basketball
High School (C) Boys Basketball
Middle School (7/8) Boys Basketball (Limited Schedule)
Middle School (5/6) Boys Basketball (Limited Schedule)
High School (Varsity) Girls Volleyball
High School (JV) Girls Volleyball
High School (C) Volleyball
High School (C2) Volleyball
Middle School (5/6) Girls Volleyball (Limited Schedule)
High School Boys Baseball (JV/V)
Middle School Track and Field
High School Track and Field
Spring and Summer Basketball Camps
Spring and Summer Volleyball Camps
Middle School Summer Strength and Conditioning
High School Summer Strength and Conditioning

- There is no athletic training room for student athletes
- There are no locker room facilities for student athletes (*current facilities include 1 toilet, 1 shower and 1 lavatory with 8' of benches and approximately 12 small lockers. They are too small for team use and therefore not used*).
- There are no strength and conditioning facilities
- There is inadequate storage for athletic equipment

Architectural Analysis

The current gym/court space is undersized to serve the entire K-12 student population, as noted above.

SECTION 2: EXISTING CONDITIONS ANALYSIS SUMMARY

2.4 ANALYSIS SUMMARY - ENROLLMENT DATA AND SPACE UTILIZATION

B. PERFORMING ARTS SPACE

Building Areas Utilized for Performing Arts

The two music classrooms house the required curricular music program. The facilities are well used, yet there is no formal performing space for performing arts, such as an auditorium, so performances are held in the gymnasium or off-site at suitable venues. Several spaces accommodate the extra-curricular Drama program. The stage is a flex space and is also used as needed curricular storage. The Occupational Therapist works on the stage during school days M-Th. Fridays it is used all day by DAPE. It is used for robotics every Saturday and for Drama up to 5 nights a week for practices.

Performing Arts Facilities Space and Use Data

Classroom 130	760 sf	Music
Classroom 131	760 sf	Music

Architectural Analysis:

There is the minimal space provided to meet curriculum requirements; however, the current performing arts space is undersized to serve the entire K-12 student population.

C. MULTI-PURPOSE/COMMONS SPACE

Building Areas Utilized as Multi-Purpose/Commons Space

Multi-purpose/Commons space	Great Room (see also sub-section 2.5)	1,966 (minus egress)
Multi-purpose/Commons space	Mezzanine	1,371 (minus egress)
Multi-purpose/Commons space	Exhibition hall (Rooms 302/304)	1,269 sf
Gender Neutral Restroom(s)	Two - near Great Room	

*Note: Several other areas are used as multi-purpose/commons spaces as their secondary use, but since they are listed elsewhere with a primary use other than multi-purpose/commons space, they aren't included here.

The Exhibition Hall is primarily used as a seminar hall where students can sit in a large circle for discussions as well as to give and listen to speeches/presentations with their classroom peers. It is also used infrequently as a meeting/presentation space for the Nova Classical community. i.e. Information nights, Board Meeting, etc. It is used as a quiet testing or tutoring space when it is available.

The mezzanine is primarily used for Scholar Zone M-F 7:30 - 8:30 am & 3:40 - 5:30 pm. During the school day, it is used for lunch 12:00 - 1:30 pm. It is also used for pull out tutoring or small group work during the day.

The Great Room is used for breakfast and lunch (food service) and for group gatherings.

Architectural Analysis

Current multi-purpose/commons space available within the school is undersized to serve the entire K-12 student population.

D. ACADEMIC SUPPORT SERVICES SPACE

Building Areas Utilized for Academic Support Services

Stage	1,110 sf
SPED Classrooms 205, 207, 309, 323, 325	3,086 sf
SPED Office 208	168 sf
SPED Small Group 206, 223	328 sf
Tutoring	Other spaces utilized, when available
Student Services - SW/Guidance	None

(Continued on next page.)

SECTION 2: EXISTING CONDITIONS ANALYSIS SUMMARY

2.4 ANALYSIS SUMMARY - ENROLLMENT DATA AND SPACE UTILIZATION

ACADEMIC SUPPORT SERVICES SPACE CONTINUED

The stage is a flex space and is also used as needed curricular storage. The Occupational Therapist works on the stage during school days M-Th. Fridays it is used all day by DAPE. It is used for robotics every Saturday and for Drama up to 5 nights a week for practices.

Tutoring services occur in empty classrooms and the exhibit hall, as well as the mezzanine and other areas, where available.

Architectural Analysis

Current academic support space available within the school is undersized to serve the entire K-12 student population. In particular, there is need for gender neutral toilets, tutoring, and counseling space.

E. FOOD SERVICE/LUNCHROOM SPACE

Current Food Service/Lunchroom Space

The food service serving and dining area is located in the Great Hall, and kitchen and storage areas are adjacent to it. Tables/benches are generally folded and stored along the walls in the Great Room when not in use. The facility has catered prepared meals delivered to the school for breakfast and lunch. The food service operates under a category 2 license issued by Minnesota Department of Health. Nova's hot-lunch program offers vegetarian and pork-free meals.

Food Service Facilities Space and Use Data

Multi-purpose/Commons space**	Great Room	1,966 sf (minus egress)
Multi-purpose/Commons space**	Mezzanine	1,371 sf (minus egress)
Kitchen	415 sf*	
Kitchen Storage/Receiving	401 sf*	

*The kitchen and support areas for food service were not reviewed/evaluated for this report, other than for square footage.

**See also in multi-purpose/commons space

Number of students enrolled at school	~1,035 students
Number of students per lunch period	Varies - 80-250
Number of lunch periods	8
Number of lines per lunch period	2
Length of lunch period	20 minutes
Avg. for all students to go through lines	5-7 minutes
Remaining time for all students to eat	15-17 minutes
Breakfast program average students	170-200
Number of lines for breakfast	1
Length of breakfast service	25 minutes
Avg. for all students to go through lines	Less than 2 minutes
Remaining time for all students to eat	Varies, but students may obtain a breakfast pass to finish eating in class.

Architectural Analysis:

Current food service/lunchroom is under-sized to optimally serve the entire K-12 student population. There is need for additional serving and dining area, as well as other kitchen/storage areas.

F. FACULTY SUPPORT SPACE

Current Faculty Support Space Building Areas

Work/production/printing areas	Rooms 214, 310, 405	1,315 sf
Lounge	None	
Staff Toilet	1/floor	
Meeting/Collaboration	Room 201, Exhibition Hall, if available	
Storage	Storage closets/cabinets - varies	

(Continued on next page.)

SECTION 2: EXISTING CONDITIONS
ANALYSIS SUMMARY

2.4 ANALYSIS SUMMARY - ENROLLMENT DATA AND SPACE UTILIZATION

FACULTY SUPPORT SPACE CONTINUED

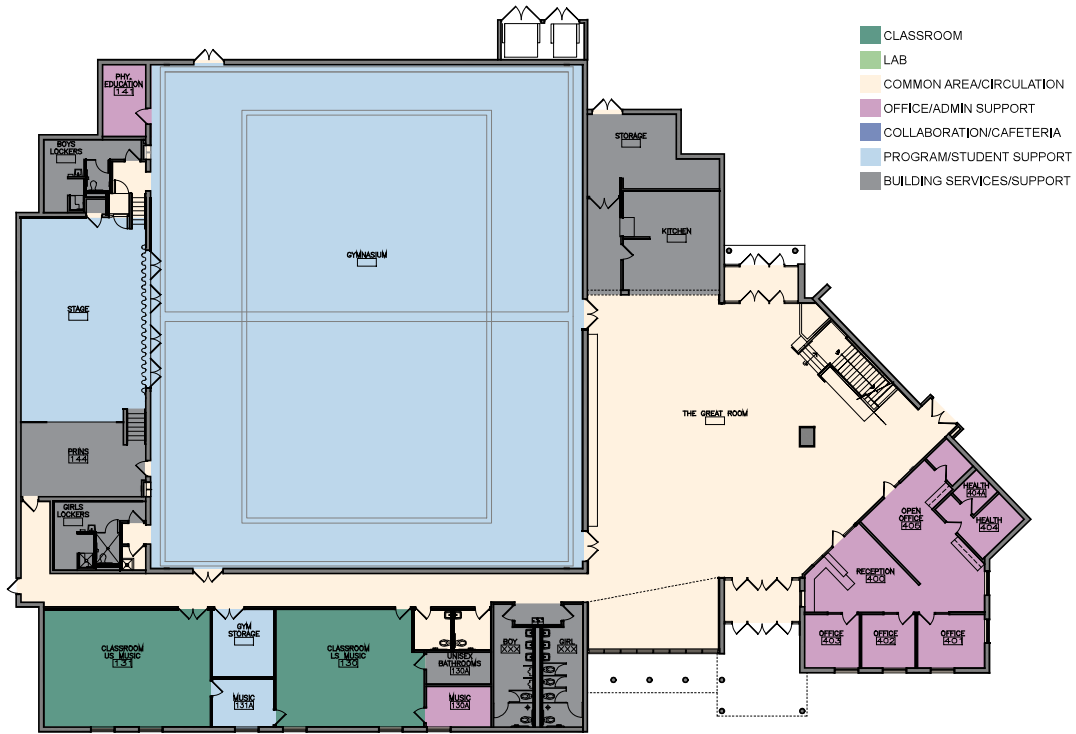
Lower School Counselors/SW	Office 403	127 sf
Upper School Counselors/SW/Guidance Offices	Office 306	Offices are provided for most administrative staff, teachers have desks in their classrooms and or office space generally, but several staff persons are lacking adequate office space.

Architectural Analysis:

Current faculty support is under-sized to optimally serve the school faculty. There is need for Faculty Collaboration Space with dedicated rest rooms, additional storage in some areas, and office/desking areas.

SECTION 2: EXISTING CONDITIONS ANALYSIS SUMMARY

2.5 PROGRAMMATIC MAPPING



Existing First Floor Plan - Use Diagram

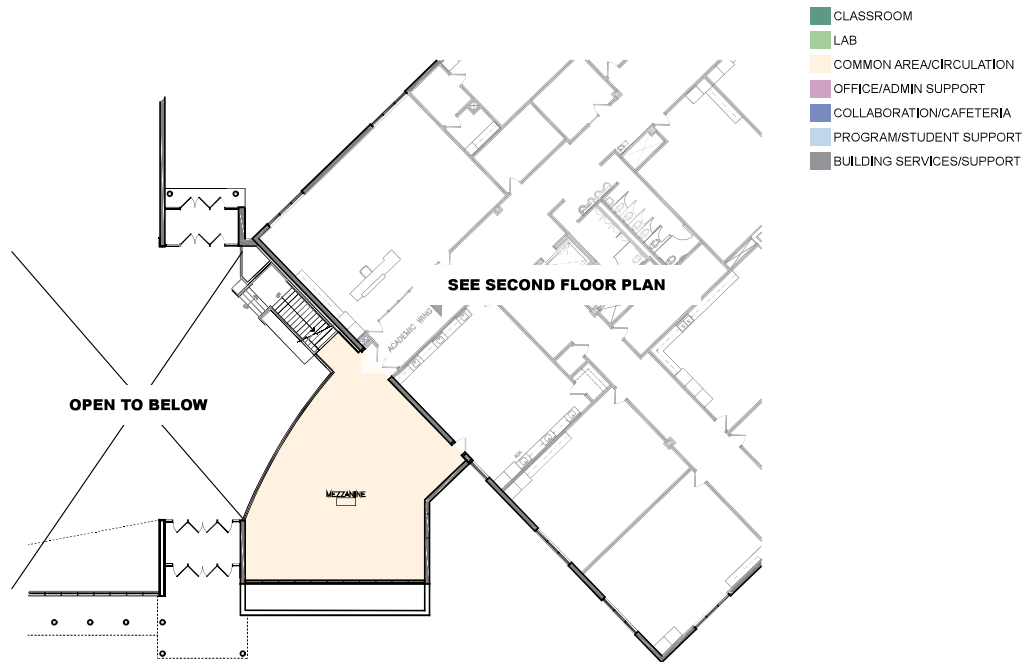
Date: 24 October 2023
PROJECT NO.: 23008.001

Nova Classical Academy

0' 4' 8' 16' HAY DOBBS

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SK: 6



Existing Mezzanine Floor Plan - Use Diagram

Date: 24 October 2023
PROJECT NO.: 23008.001

Nova Classical Academy

0' 4' 8' 16' HAY DOBBS

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SK: 7

SECTION 2: EXISTING CONDITIONS ANALYSIS SUMMARY

2.5 PROGRAMMATIC MAPPING



Existing First Floor Plan - Use Diagram

Date: 24 October 2023
PROJECT NO.: 23008.001

Nova Classical Academy

0' 4' 8' 16' HAY DOBBS

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SK: 8



Existing Second Floor Plan - Use Diagram

Date: 24 October 2023
PROJECT NO.: 23008.001

Nova Classical Academy

0' 4' 8' 16' HAY DOBBS

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SECTION 2: EXISTING CONDITIONS ANALYSIS SUMMARY

2.5 PROGRAMMATIC MAPPING



Existing Third Floor Plan - Use Diagram

Date: 24 October 2023
PROJECT NO.: 23008.001

Nova Classical Academy

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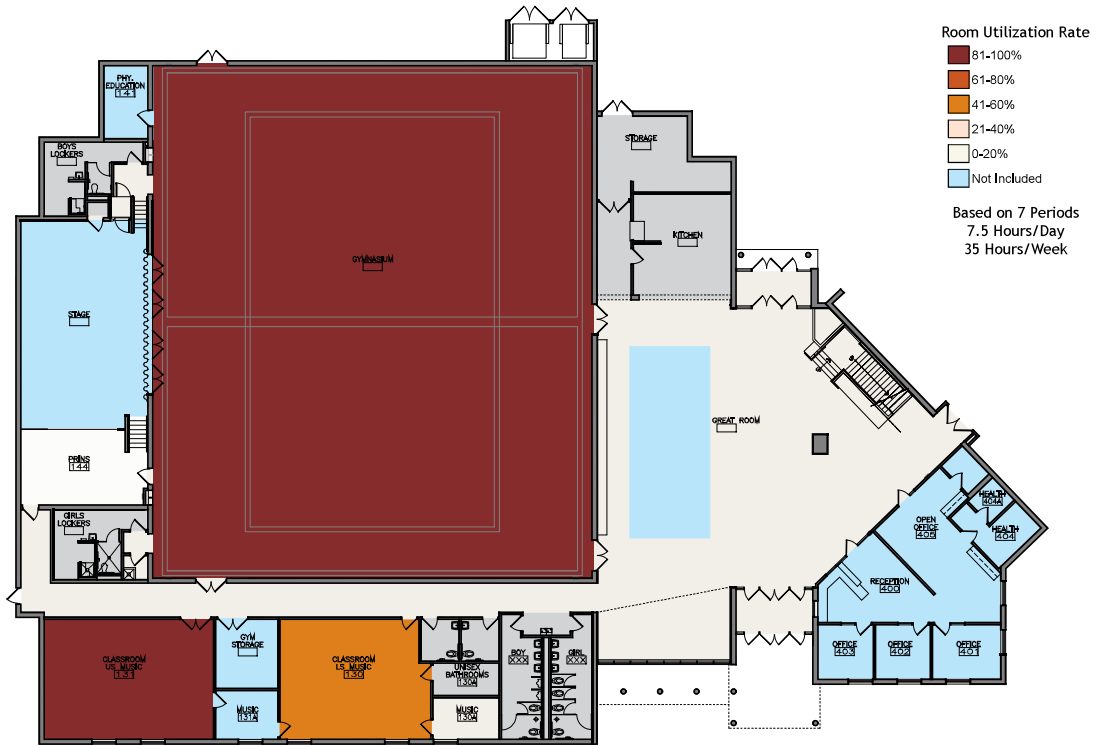
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SECTION 2: EXISTING CONDITIONS ANALYSIS SUMMARY

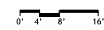
2.6 SPACE UTILIZATION MAPPING



Existing First Floor Plan - Utilization Diagram

Date: 1 November 2023
PROJECT NO.: 23008.001

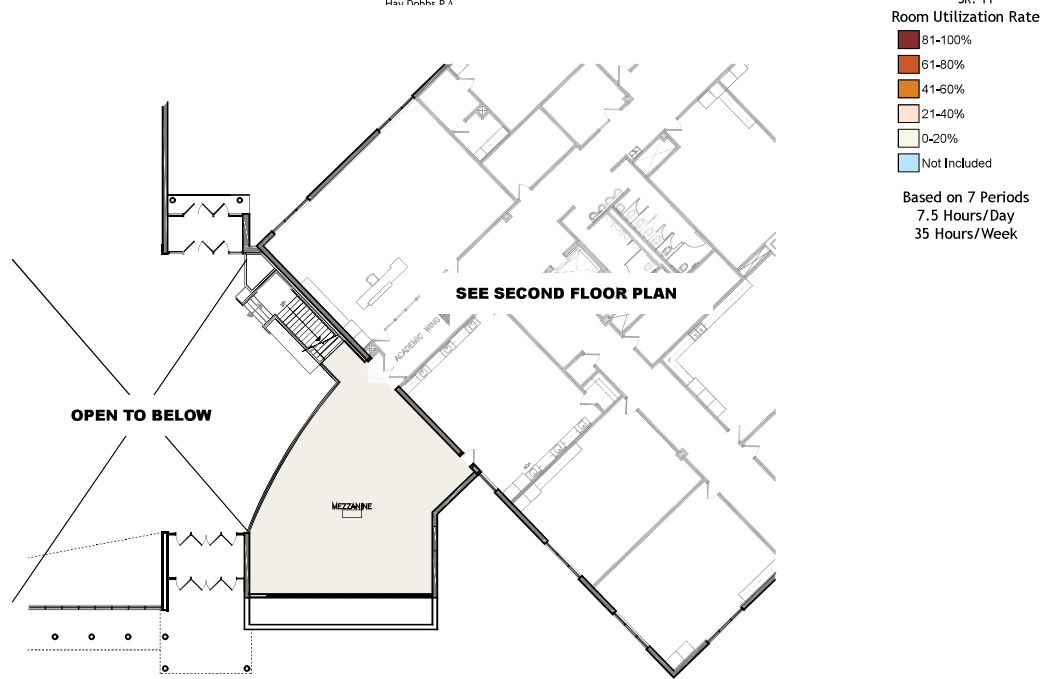
Nova Classical Academy



HAY DOBBS

Hay Dobbs P.A.

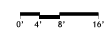
SK: 11



Existing Mezzanine Floor Plan - Utilization Diagram

Date: 1 November 2023
PROJECT NO.: 23008.001

Nova Classical Academy



HAY DOBBS

Hay Dobbs P.A.

SK: 12

SECTION 2: EXISTING CONDITIONS ANALYSIS SUMMARY

2.6 SPACE UTILIZATION MAPPING



Date: 1 November 2023
PROJECT NO.: 23008.001

Nova Classical Academy

0' 4' 8' 16' HAY DOBBS

Hay Dobbs P.A.

SK: 13



Date: 1 November 2023
PROJECT NO.: 23008.001

Nova Classical Academy

0' 4' 8' 16' HAY DOBBS

Hay Dobbs P.A.

SK: 14

SECTION 2: EXISTING CONDITIONS ANALYSIS SUMMARY

2.6 SPACE UTILIZATION MAPPING



Existing Third Floor Plan - Utilization Diagram

Date: 1 November 2023
PROJECT NO.: 23008.001

Nova Classical Academy

0' 4' 8' 16'

HAY DOBBS

Hay Dobbs P.A.

SK: 15

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Section 3: Findings

SECTION 3: FINDINGS

3.1 GYM/COURTS SPACE

SURVEY FINDINGS

The results of the online surveys indicate a very strong desire for expanded or new gym/court space.

There was sentiment as follows:

- Gym/court space should accommodate a variety of athletic/fitness activities, school activities, and other uses.
- It is needed to avoid conflicts between school sports/athletics and other activities, to provide athletics for younger students that can't participate now due to lack of space, to support currently offered sports practices and/or training, and to allow student athletes to practice at reasonable times instead of before school or into the evening.
- To a lesser degree, gym/court space is needed to provide facilities comparable to the schools in the Skyline Conference and other schools and for hosting competition events.

ARCHITECTURAL ANALYSIS

The current gym/court space is undersized to serve the entire K-12 student population.

GUIDELINES

Elementary Schools:

Physical Education/Sports	Gymnasium (2 Stations)	6,000 sf - 8,000 sf (sf = square feet)
Physical Education/Sports	Adaptive Physical Education	500 sf
Physical Education/Sports	Storage	300 sf/station

Middle Schools:

Physical Education/Athletics	Gymnasium (2 Stations)	12,000 sf - 14,000 sf
Physical Education/Athletics	Multipurpose/Auxiliary Gym	1,700 sf
Physical Education/Athletics	Weights/Fitness	2,000 sf
Physical Education/Athletics	Adaptive Physical Education	500 sf
Physical Education/Athletics	Physical Education Locker Rooms	1 sq ft/Student Capacity
Physical Education/Athletics	Athletic Locker Rooms	1,000-1,500 sf
Physical Education/Athletics	General Storage	300 sf /station
Physical Education/Athletics	Athletic Storage	600-800 sf
Physical Education/Athletics	Spectator Seating	8 sf/person (open bleachers)

High Schools:

Physical Education/Athletics	Gymnasium (2 Stations+)	12,000 sf - 14,000 sf
Physical Education/Athletics	Multipurpose/Aux./Comp. Gyms	3,200 sf - 7,500 sf
Physical Education/Athletics	Weights/Fitness	2,000 - 4,000 sf
Physical Education/Athletics	Physical Education Locker Rooms	1 sq ft/Student Capacity
Physical Education/Athletics	Athletic Locker Rooms	1,000-3,000 sf
Physical Education/Athletics	General Storage	300 sf /station
Physical Education/Athletics	Athletic Storage	1,000-1,200 sf
Physical Education/Athletics	Spectator Seating	10 sf/person (open bleachers)
Physical Education/Athletics	Training Room	200-400 sf
Physical Education/Athletics	Laundry	200 sf

The Nova facility houses K-12 students (all of the above categories). Based on these guidelines there should be approximately 8 or more gymnasiums (stations) to serve the entire student body. However, it can be assumed that there can be accommodations for sharing of space since K-12 occupy the same building. If we halve the recommended number we can assume a need of 4+ stations to properly serve the entire student population. Most of the supporting spaces do not currently exist or are undersized.

3.1 GYM/COURTS SPACE

Sources:

- Facility Planning for Physical Education, Recreation, and Athletics; American Alliance for Health, Physical Education, Recreation and Dance; 2013.
- Design for Outdoor Learning; School Planning and Management, March 2014.
- Accessible Outdoor Recreation Areas Manual 1997-1998; Minnesota Department of Education.
- Guide For Planning School Construction Projects in Minnesota, Minnesota Department of Education, November 2018.

POTENTIAL COSTS

To properly serve the K-12 student population there are additional space needs of approximately **23,100 sf**. This is based on the addition of the following spaces and their corresponding sizes:

Gymnasium (2 Stations)	14,000 sf
Multipurpose/Aux. Gym	1,700 sf
Weights/Fitness	2,000 sf
Physical Education Locker Rooms	800 sf
Athletic Locker Rooms	1,400 sf
General Storage	600 sf
Athletic Storage	1,200 sf
Spectator Seating	1,000 sf
Training Room	200 sf
Laundry	200 sf

Total (net)	23,100 sf
Estimated Construction Cost	\$7,392,000 (\$320/sf)
Estimated Project Cost	\$9,609,600 for expanded/new gymnasium space

Estimate Notes (typical of all subsequent estimates in this section):

1. Project Cost estimate includes: Direct Construction Costs, General Conditions for the Construction Contract, and Design Fees.
2. No analysis has been conducted to fit such a space on site. Estimates exclude site work.
3. Costs do not include unknown potential costs such as legal costs, real property costs, environmental costs, hazardous materials costs, zoning permits, demolition, and other costs unknown at this time.

SECTION 3: FINDINGS

3.2 PERFORMING ARTS SPACE

SURVEY FINDINGS

The results of the online surveys indicate a very strong desire for expanded and/or new performing arts space.

Feedback indicated:

- Performing arts space for theatre, band, and music can be shared/flexibly used, and it needs instrument (and other) storage.
- The strongest preference was for a formal auditorium, while a black-box type of flex space also had a high preference.
- The audience size that was written most often by survey respondents as suitable was one that would accommodate between 350-500 people.

ARCHITECTURAL ANALYSIS

Current performing arts spaces are undersized to serve the entire K-12 student population.

GUIDELINES

Square footage: The variety of music classes and group sizes requires a more specific breakdown of music spaces. Plan square footage for the maximum desirable group size, not current enrollments. Adequate ceiling heights are necessary to provide a satisfactory listening environment, regardless of class size. Source: Minnesota Department of Education. Guide For Planning School Construction Projects in Minnesota, Minnesota Department of Education, November 2018.

Elementary Schools

Music Education	Program/Function	60-75 Students
Music Education	Instrumental	2,000-2,500 sf
Music Education	Choral	1,500-1,800 sf

High Schools and Middle Schools

Music Education	General Music Classroom	1,000 sf for 25-35 students
Music Education	Storage	Varies
Music Education	Instrument Repair	75 sf
Music Education	Practice Rooms	60-400 sf (1 to 15 students)
Music Education	Music Lab / Recording	950 - 1,000 sf
Music Education	Music Library	150-200 sf (per 150 students)
Music Education	Office/Lesson Studio	100-200 sf per teacher

POTENTIAL COSTS

To properly serve the K-12 student population there are additional space needs of approximately **4,774 sf**, minimally, for performing arts programs. Since a performance space is expressed by the survey respondents, information regarding probable costs of an auditorium are also included. The costs estimates below are based on the addition of the following spaces and their corresponding sizes:

Studio/Classroom K-12	2,000 sf
Storage	1,400 sf
Instrument Repair	75 sf
Practice/Lessons	150 (one room; up to 6 students)
Music Lab / Recording	950 sf
Office/Lesson Studio	200 sf (2 rooms)

Total (net)	4,775 sf
Estimated Music/Inst. Construction Cost	\$1,528,000 (\$320/sf)
Est. Music/Inst. Space Project Cost	\$2,674,000

300 Seat Auditorium Space	16,000 sf (gross) *to include rest rooms and other necessary support areas
Estimated Aud. Construction Cost	\$8,000,000 (\$500/sf)
Estimated Aud. Project Cost	\$14,000,000

Performing Arts Comb. Est. Proj. Cost	\$16,674,000
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3.3 MULTI-PURPOSE/COMMON SPACE

SURVEY FINDINGS

There is a desire for additional multi-purpose/commons space indicated by the surveys.

The results of the online surveys reflect that a multi-purpose/commons space refers to a space that can be used for teaching and learning as well as socializing and studying, but less flexibility for other uses, by the Nova Classical Academy community.

There is possible overlap in the space planning area indicated by survey respondents with the academic support spaces in the following section. The spaces listed below can also accommodate academic support space for student collaboration and/or tutoring.

ARCHITECTURAL ANALYSIS

Current multi-purpose/commons spaces are undersized to serve the entire K-12 student population.

GUIDELINES

Elementary Schools

Large Group	10-12 sf/student
Team Learning	1,200-1,800 sf
Small Group/Conference/Office	150-200 sf

Middle Schools

Large Group	15 sf/student
Team Learning	1,500-2,000 sf
Small Group/Conference/Office	150-200 sf

High Schools

Large Group	15 sf/student
Team Learning Areas	1,500-2,000 sf
Small Group/Conference	150-200 sf

All Schools

Gender Neutral Restroom(s)	Recommended; not required by code. An adult changing station may be required per code.
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Sources:

Minnesota Department of Education. Guide For Planning School Construction Projects in Minnesota, Minnesota Department of Education, November 2018.

Minnesota Department of Education. A Toolkit for Ensuring Safe and Supportive Schools for Transgender and Gender Nonconforming Students, September 25, 2017.

POTENTIAL COSTS

To properly serve the K-12 student population there are additional space needs of approximately **2,550 sf**. This is based on the addition of the following spaces and their corresponding sizes:

Multi-Purpose/Commons Spaces	Large Group	300 sf (2 rooms)
Multi-Purpose/Commons Spaces	Team Learning Area	1,500 sf
Multi-Purpose/Commons Spaces	Small Group/Conference	150 sf x 3 (3 separate rooms)
Academic Support Space	Shared Gender Neutral Restrooms	224 sf (two GN/1 incl. ACS)*

*Note: Gender neutral restrooms are not required by code, but additional are recommended. An adult changing station may be required.

Total (net)	2,774 sf
Estimated Construction Cost	\$887,680 (\$320/sf)
Estimated Project Cost	\$1,553,440

SECTION 3: FINDINGS

3.4 ACADEMIC SUPPORT SPACE

SURVEY FINDINGS:

The results of the online surveys indicate a desire for expanded and/or new academic support space. Feedback indicated: Academic support space means space for tutoring, Special Education, student collaboration space, and space for counseling. There is some overlap in this definition to the definition respondents preferred for multi-purpose/commons space in regard to space to be used for teaching, learning, and studying. For that reason, space for student collaboration space is not reflected below, but is included in multi-purpose/commons space planning section that proceeds this section.

ARCHITECTURAL ANALYSIS:

Current academic support space is undersized to serve the entire K-12 student population.

GUIDELINES

Square footage: Using the survey respondents definition of academic support space types, the following guidelines apply for space planning: Source: Minnesota Department of Education. Guide For Planning School Construction Projects in Minnesota, Minnesota Department of Education, November 2018.

Elementary/Middle/High Schools

Academic Support Space	Student services/guidance	1,000-4,400 sf/60-75 Students*
*Depending upon the school, size, and staffing levels.		
Academic Support Space	Special Education Classroom	450 sf / (5-8 students)
Academic Support Space	Special Education Classroom/Lab	800-1,200 sf
Academic Support Space	Special Education Work Area / Storage	Adequate for use
Academic Support Space	Tutoring	Recommended by MDE

POTENTIAL COSTS

To properly serve the K-12 student population there are additional space needs of approximately **1,124 sf**. This is based on the addition of the following spaces and their corresponding sizes:

Academic Support Space	Student services/guidance	300 sf
Academic Support Space	Special Education Classroom	450 sf
Academic Support Space	Special Education Quiet Space/Conf.	150 sf
Academic Support Space	Tutoring	See 3.3 small group learning

Total (net)	900 sf
Estimated Construction Cost	\$288,000 (\$320/sf)
Estimated Project Cost	\$504,000

3.5 FOOD SERVICE/LUNCHROOM

SURVEY FINDINGS:

The Nova Classical Academy community survey respondents requested improvements to the food service/lunchroom space.

- Respondents requested more time to get through the lunch line, more time to eat, and less noise.
- Write-ins included expanding the lunch menu, having stations instead of lines, and adding vegetarian/healthy options.

ARCHITECTURAL ANALYSIS:

Current food service/lunchroom is under-sized to optimally serve the entire K-12 student population. There is need for additional serving and dining area, as well as expanding kitchen storage and adding a kitchen office area.

GUIDELINES

Elementary/Middle/High Schools

Provide 3,070-7,700+ square feet for a kitchen, serving line, storage, office, receiving and holding, and other spaces, in addition to student and staff dining spaces. Providing spaces for food preparation, meal service, and dining varies greatly depending upon the type of food service system, the number of menus, serving lines, and lunch periods, table and seating arrangements, and the ages and number of students served in each lunch period. Source: Minnesota Department of Education. Guide For Planning School Construction Projects in Minnesota, Minnesota Department of Education, November 2018.

<u>Function /Activity</u>	<u>Space Needed</u>
Cafeteria Dining Space	12-16 sf/student
Student Circulation Space	30% of dining space
Serving Kitchen Only	250-1,800 sf
Serving Line	800-1,000 sf
Dry Food Storage	200-700 sf
Refrigerated Storage	130-750 sf
Chemical/Soap Storage	50-160 sf
Freezer	350-450 sf
Pot and Pan Washing	75-150 sf
Dishtray Washing	100-400 sf
Recycling, Laundry	100-200 sf
Receiving and Holding	300-450 sf
Office	50-160 sf

MDH Guidance: Menu and food flow determine the type of equipment you are required to have. Minimally, food service areas shall have the following - a hand washing sink, a dishware washing sink/dishwasher, a separate mop sink area, food receiving/storage (freezers, fridges, and shelving), food hot-holding equipment/heating appliances, and preparation/serving spaces, and waste disposal areas, as needed, and meeting all MDH requirements. A restroom is required but may be within a reasonable distance from the kitchen.

CDC Guidance: Provide students with at least 20 minutes once they are seated (seat time) to enjoy their meal and socialize.

Source: Making Time for School Lunch, US Dept. of Health and Human Services, CDC, September 11, 2019

POTENTIAL COSTS

To optimally serve the K-12 student population additional space needs are recommended of approximately **1,750 sf**. This is based on the addition of the following spaces and their corresponding sizes:

Expanded Dining/Serving Space	1,750 sf
Kitchen Storage/Office Space	500 sf
Total (net)	2,250 sf
Estimated Construction Cost	\$787,500 (\$450/sf)
Estimated Project Cost	\$1,378,125

SECTION 3: FINDINGS

3.6 FACULTY SUPPORT SPACE

SURVEY FINDINGS

The results of the online surveys indicate a desire for expanded and/or new faculty support spaces.

Feedback indicated:

The faculty support space needs are well distributed including: Faculty work/production space – digital tools, oversize printers, printers/copiers, laminators, general layout and workspace; faculty lounge space, faculty classroom items, storage for faculty/staff personal items, faculty collaboration space, meeting rooms for teachers, staff, or counselors, and offices for teachers, staff, or counselors. Write-in comments often expressed the need or interest in a faculty break room with a dedicated faculty rest room.

ARCHITECTURAL ANALYSIS

Current faculty support is under-sized to optimally serve the school faculty to serve the students. There is need for a lounge/collaboration space with dedicated rest rooms, additional storage in some areas, and office/desk areas.

GUIDELINES

The Minnesota Department of Education recommends the following essential elements to consider for teacher/staff spaces: Square footage: 50 square feet for a planning workstation, and 100-150 square feet for an office or for other spaces for intermittent staff, teacher aides, and volunteers. Plan for 10-20 square feet per teacher and staff member for conference, kitchenette, storage, and printing and copying spaces. Provide groups of teachers with common or shared planning workstations or office spaces to improve staff communications, team planning, and the use of resource materials. An all-staff dining / break room needs to be large enough to provide seating for 20-25% of the staff and have adequate power for appliances, and adjacent M/W privacy toilets. Provide planning workstation and office spaces for teachers and staff to plan and prepare teaching materials, store equipment and materials, provide access to a phone, and to have a computer with high-speed Internet access, printer, and copy machine.

Elementary/Middle/High Schools

Faculty Support Space	Work/production/printing areas	
Faculty Support Space	Lounge/Collaboration	15 sf/person
Faculty Support Space	Restrooms (2) GN or M/F	240 sf (120 sf ea) - not code req'd
Faculty Support Space	Storage	150-250 sf/Learning station
Faculty Support Space	Offices/Desk areas	50-150 per para/teacher

Source: Guide For Planning School Construction Projects in Minnesota, Minnesota Department of Education, November 2018.

POTENTIAL COSTS

To properly serve the K-12 student population there are additional space needs of approximately **1,540 sf**. This is based on the addition of the following spaces and their corresponding sizes:

Faculty Support Space	Lounge/Restrooms	600 sf/240 sf
Faculty Support Space	Storage	Add to new/remodeled spaces
Faculty Support Space	Additional Offices	150 (add 2 off.), 400 add open off.

Total (net)	1,540 sf
Estimated Construction Cost	\$492,800 (\$320/sf)
Estimated Project Cost	\$862,400

3.7 COST SUMMARY

Estimated Combined Project Cost	\$30,581,565
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