ILLUSTRATIVE VIEW OF NEW SHELTER BUILDING

Nova Classical Academy Expansion and Renovation Schematic Design Narrative

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Prior to the Schematic Design Phase, Nova Classical Academy completed a Facility Needs Analysis with Hay Dobbs assistance (through a competitive selection process) in the fall of 2023. 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.

As part of that analysis, a space utilization study 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

Additionally, 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.

PRELIMINARY PROGRAM

PRELIMINARY PROGRAM

In response to the needs identified within the Facility Needs Analysis and through numerous working group meetings, the following preliminary program for the building addition was developed, to inform schematic design:

Multi-Purpose/Gym/Court/Shelter Space	
New Gym/Auxiliary Space Total (first floor)	7,600 sf (net)
Mezzanine Strength Area	1,100 sf (net)
Multi-Purpose/Gym/Court/ Shelter Support Space	
Toilet and Shower Rooms	850sf (net)
Office (Mezzanine)	400 sf (net)
Mechanical/Storage/Circulation	850 sf (net)
Academic Support (office) Space	
Offices *includes open office/workstation areas	1,900 sf (net)
Meeting Areas	1,200 sf (net)
File Storage	155 sf (net)
Building Support Space (non shelter areas)	
Storage & Mechanical	255 sf (net)
Toilets	150 sf (net)
Locker rooms	700 sf (net)
Circulation (includes skyway)	3,800 sf (net)
Total Addition Areas	**18,960 (net)**

Alongside the addition areas, this project includes the renovation of select spaces within the existing Nova Classical Academy to address key facility needs and accommodate the connection to the addition via skyway.

Performing Arts Support Space (Mezzanine Adjacent to Stage)	
Renovate existing Storage/Office area near stage	400 sf (net)
Construction of new mezzanine	400 sf (net, additional)
Student Support/Meeting Space	
Renovate 2nd Floor suite for Tutoring & OT	700 sf (net)
Reconfigure & Renovate Ex-Hall	1,300 sf (net)
Office Space	
Renovate 1st floor Admin/additional entrance from vest.	300 sf (net)
Circulation Space	
Renovation on 2nd Floor to connect to Skyway	500 sf (net)
Total Renovation Areas	**3,600 sf (net)**

GENERAL CONSTRUCTION SYSTEMS

The new facility will consist of an 13,343 sf footprint building with two stories; a skyway will connect it to the existing school building. The parcel being developed is 1.14 acres. The building is considered by zoning as an accessory building to the primary existing building.

The existing school building on the adjacent lot across Mercer Way has an approximately 46,200 sf footprint, and includes approximately 90,000 total sf on two and three floors.

9,327 of the total building footprint sf houses an ICC500 compliant storm shelter containing public toilets showers, offices, and utility spaces. This portion of the building footprint also includes a small (1,600 sf +/-) mezzanine. The total Occupiable Shelter Area is calculated at approximately 9,500 sf.

For the purposes of estimation:

- All work and materials shall conform to Minnesota Statutes, chapter 326B governing building codes and shall meet the requirements of current National, State and Local Codes and Ordinances, in every respect. This requirement shall not relieve the Contractor from meeting the requirements of Drawings and Specifications that may be in excess of all Codes and Ordinances and not contrary to them.
- This Narrative provides design guidance to assist Contractors with bidding. This is not Intended as direction to build from.

Applicable Codes (at time of SD Report)

Code Title	*Edition*
Minnesota State Building Code	2020
Minnesota Commercial Energy Code	2024
ANSI/ASHRAE/IES Standard 90.1	2016
Minnesota Accessibility Code	2020
Minnesota Mechanical and Fuel Gas Code	2020
Minnesota Electrical Code	2020
Minnesota Plumbing Code	2020
Minnesota State Fire Code	2020
ICC-500 Standard for the Design & Construction of Storm Shelters	2014
Minnesota Elevator and Related Devices Code	2020

Building Code Overview

OCCUPANCY CLASSIFICATION:

Educational - Group E: Educational Group E occupancy includes, among others, the use of a building or structure, or a portion thereof, by six or more persons at any one time for educational purposes through the 12th grade. In accordance with 303.1.3 - a room or space used for assembly purposes that is associated with a group E occupancy is not considered a separate occupancy.

CONSTRUCTION TYPE: IIB

Building Element	*Required Rating*
Primary structural frame	0 hours
Bearing walls:	
Exterior	0 hours
Interior	0 hours
Nonbearing walls and partitions:	
Interior	0 hours
Floor construction and associated secondary members	0 hours
Roof construction and associated secondary members	0 hours

Building will be fully sprinklered per IBC Section 903.3.1.1, NFPA 13

SCHEMATIC DESIGN NARRATIVE

SITE DEVELOPMENT:

Environmental

The site being developed is a partially remediated site containing contaminated soils, water, and vapors. All work to be competed in strict conformance with MPCA approvals. The following environmental controls are anticipated:

- Excavation/disturbance lower than elevation 774 (per survey elevation) may need to be observed by an environmental engineer/scientist, pending further study and RAP approval by the MPCA.
- Slab will have a vapor barrier and a vapor mitigation system (SSDS). It is not yet known if a passive or active system is required (pending additional testing).
- Excavated soils are anticipated to be able to be suitable for reuse on-site as backfill from an environmental standpoint (assuming it is above the 1' of engineered fill over geotextile membrane encapsulating consolidated metals contaminated soils). See geotechnical report for additional information.
- Construction dewatering is anticipated to be discharged to the sanitary sewer, if applicable. Groundwater was observed during geotechnical sampling completed September 30, 2024 at a approximately 777 feet based on survey and Phase 1 ESA elevations. See geotechnical report for additional information.
- Further study of the site is required prior development. The following items are anticipated based on the proposal included in the appendix, from Braun Engineering: An update to the Phase 1 ESA, additional environmental investigation, a Vapor Response Action Plan Preparation (VRAP), and preparation of a Proposed Actions Letter on behalf of Nova Academy to obtain a new site specific No Association Determination (NAD) for construction and future use of the proposed building addition. Review and approval of the VRAP will be required by the MPCA and permits will be required.
- The MPCA requires work plan approval, due to existing environmental covenants, for all subgrade disturbances 6'-0" above the geotextile barrier/cap of the consolidated contaminated soils.
- All work to meet all requirements stated in the existing and anticipated new NAD pending MPCA RAP approval.

Civil Site

- See full Civil Engineering narrative in the appendix.
- See Civil Drawings for utility information, stormwater BMPs, and general site improvements, in the appendix.

General Site Development

- An approximate finish floor elevation of 790.0 for the new building addition is anticipated.
- A parking lot with bus parking for 10 buses is planned.

Stormwater and Erosion Control

- See environmental narrative above for site constraints.
- Provide all erosion control measures and coordinate work the City of St. Paul; if 1 acre or more is disturbed by construction, secure a Construction Stormwater Permit from the MPCA. Provide maintenance and supervision of installations in accordance with erosion and stormwater permits.
- Remove trees, topsoil and other materials as indicated. Provide clean fill and compact as necessary for new building.

Site Utilities

- Sanitary sewer connection options are available along Mercer Way.
- A shallow stormwater basin is proposed to address stormwater requirements. It will have an overflow outlet to the storm sewer. Storm sewer is available near Mercer Way and Kay Ave.
- Domestic Water and Fire Service: Water services are stubbed to the property off Mercer Street.
- Gas and Electric services are to be coordinated with the utility, well in advance of construction. A small electrical transformer is located near the corner of Mercer Way and Kay Ave. It is not currently known if that may be utilized for the new facility.

BUILDING SYSTEMS OVERVIEW

Structural Systems

- See full Structural Engineering narrative in the appendix.
- See Structural Engineering marked up drawings in the appendix.

Footings and Foundations
- Conventional reinforced concrete strip and spread footings are generally anticipated

Roofs
- Roof structural system at the shelter is anticipated to be 42" deep precast double-tees with 6" concrete topping
- Other building area will be a 30KSP joist @ 4'-0" O.C. with a 1.5 roof deck.

Floors
- Storm shelter to be a 6" reinforced slab on grade
- Mezzanine and other building area at 2nd floor to be 8" conc. plank floor with 2" non-structural topping
- Other building area 1st floor slab to be a 4" fiber-reinforced slab

Walls
- Precast walls (see added notes below)
- 14" architectural panels at storm shelter and 6" solid precast panels supporting the mezzanine
- Other building area 12" precast walls and HSS5x5 steel columns and wide flange beams

Exterior Systems

Exterior wall construction

1) Load bearing precast (shelter areas):
- 8" structural wythe with additional reinforcing as needed to meet ICC-500 capacity requirements
- 3" rigid insulation
- 3" finish (architectural wythe)

2) Load bearing precast (non-shelter areas):
- 8" structural wythe
- 3" rigid insulation
- 3" finish (architectural wythe)

3) Cold formed steel, non-bearing, metal panel clad (skyway, south-east stair, and portions of east elevation):
- 5/8" Gypsum board on interior face, with vapor retarder layer
- 6" Cold formed steel framing, 24" O.C., typical, fill cavities with batt insulation
- 5/8" Fiberglass mat gypsum sheathing
- 2 1/2" thick rigid insulation, minimum R-Value 12.5, continuous
- Large format metal panels (dri-design or ACM type panels, on thermally broken sub-framing system)

4) Below grade foundation walls
- Provide continuous extruded polystyrene rigid insulation, 2" thick, from top of slab to top of footing,
- Provide prefinished sheet aluminum flashing and insulation cover at top of insulation.

Roof Construction

1) Low slope roof assemblies (shelter area):
- Precast double tees with topping (see structural)
- Roof vapor retarder 40 mil min. composite, self-adhering sheet product consisting of a layer of rubberized asphalt membrane with 5 mil UV resistant poly film with skid resistant surface, Class I, perm rating no greater than 0.02.
- Polyisocyanurate insulation, with a top layer of sloped polyisocyanurate insulation, 1/8" per foot, sloped to drains. Depth of continuous insulation to achieve an overall roof assembly insulation R value not less than R 30.0.
- Solar-ready roof
- Fully adhered EDPM roofing system, internally reinforced.
- Prefinished aluminum flashings and copings as required.

2) Low slope roof assemblies (non-shelter areas):
- Hollow core plank or steel joists with corrugated deck (see structural)
- 5/8" roof sheathing (for use with corrugated deck)
- Roof vapor retarder 40 mil min. composite, self-adhering sheet product consisting of a layer of rubberized asphalt membrane with 5 mil UV resistant poly film with skid resistant surface, Class I, perm rating no greater than 0.02.

- Polyisocyanurate insulation, with a top layer of sloped polyisocyanurate insulation, 1/8" per foot, sloped to drains. Depth of continuous insulation to achieve an overall roof assembly insulation R value not less than R 30.0.
- Fully adhered EDPM roofing system, internally reinforced.
- Prefinished aluminum flashings and copings as required.

Fenestration

1) Windows

Thermally broken aluminum storefront system with one-inch insulated glazing with low-E coating. U-factor not more than 0.34 for fixed units.

2) Entrance systems

Thermally broken aluminum storefront system with one-inch insulated glazing with low-E coating. U-factor not more than 0.34 for fixed units, U-factor not more than .63 for entrance doors.

3) Exterior service doors:

Hollow metal door and frame. Doors to be fully insulated. Flush design, U-factor not more than 0.63, Doors to be 16 gauge, extra-heavy duty and frames to be 14 gauge.

4) Shelter rated doors (for use at full perimeter of shelter)

Hollow metal door and frame. Doors and frames to be listed in compliance with ICC-500 - 2014. Steelcraft Palladin series or equivalent.

5) Tubular Daylighting Devices (for use at shelter roof assembly)

Solatube SolaMaster 750 DS with ICC-500 - 2014 compliant label

6) Through wall louvers (for use at all shelter mechanical duct/hvac, and natural ventilation locations)

- Ruskin 500XP Series, ICC-500 - 2015 compliant louver system for all louvers in shelter
- Shelter natural ventilation louvers to recieve:
  - Automatic dampers designed to fail into the open position in a storm event
  - Decorative, protective screens to cover interior damper units
  - Exterior detail screen as illustrated on elevations at low louvers

Glazing

1) Exterior glazing

1" insulated glazing, typical. Provide in sufficient U-Value to meet storefront system minimum U-Values, provide tempered or laminated panes at locations required by code.

Interior Systems

Typical interior walls

1) Cold formed steel, non-bearing

- 5/8" Gypsum board, painted finish
- Cold formed steel framing, 16" O.C., typical, fill cavities with batt insulation
- 5/8" Gypsum board (abuse resistant at corridor side of walls), painted finish

2) Precast Concrete, bearing

8" non-insulated precast concrete wall, painted finish

3) CMU Masonry, non-bearing

8" nom. concrete masonry, painted finish

Casework

1) Solid Surface countertops

Provide quartz type solid surface countertops at all countertops illustrated (office, toilets, etc.) with apron, back and side splashes

2) Solid plastic toilet partitions

Provide solid plastic toilet partitions as illustrated

3) Plastic Laminate cabinets

Provide premium grade, frameless, flush overlay, high pressure plastic laminate cabinets (base and upper) as shown.

4) Solid Surface Shower inserts

Provide solid surface shower pans and wall panels at all new shower locations.

Typical interior openings

1) Wood Doors in hollow metal frames see drawings for type, size and configuration

- 14 Gauge frames, full welded profile, knockdown frames are not acceptable.
- Solid core, wood veneer doors, unless noted otherwise

2) Hollow Metal window frames, borrowed lites, and side lites

16 Gauge frames, full welded profile, 1/4" glazing, unless noted otherwise

3) Interior storefront

2" x 4" nom. aluminum interior storefront system for floor to ceiling glazed areas, 1/4" glazing, unless noted otherwise

4) ICC-500-2014 rated coiling shutters

Provide storm-rated coiling shutters at locker rooms as shown on plans - McKeon SafeSpace 500 Series or similar

Glazing

1) Interior glazing

1/4", provide tempered or laminated safety glazing where required by code.

Door hardware

1) Typical hardware

- Mortise lock/latchsets at all locations with keying to match Owner's existing keying system
- Closers and hold opens at all corridor doors
- Closers at all exit doors, and those anticipated to receive high traffic
- Panic devices at all corridor and egress doors

2) Storm shelter door hardware

Hardware as required by storm rated door manufacturer to achieve ICC-500 rating.

3) Electrified hardware & Card Readers

- Provide electrified hardware at all main exterior doors (shelter doors to the north at exit only)
- Provide electrified hardware at doors at each end of skyway and at entrance to office suites and large meeting area
- Ensure hardware and card readers are compatible with existing building systems

Floor Finishes

1) Typical Office type spaces

24" x 24" and/or 9" x 36" modular carpet tiles

2) Toilet/locker/shower areas

Ceramic Tile

3) Typical circulation type spaces

Polished concrete with applied sealer

4) Typical mechanical/storage type spaces

Sealed concrete

5) Gymnasium/Multipurpose/Shelter floor

Mid-Tier Vinyl sports flooring, Omnisports Active+ or similar

6) Vestibules

Walk off Mat Carpet Tiles: Basis of design: Shaw Contract Group, Steppin' Out Collection, Entrée. Provide straight vinyl base.

Wall Finishes

1) Typical Gypsum board walls

- Finish all walls to Level 5 finish

- Semi-Gloss latex paint finish

2) Typical cementitious wall (precast/CMU)

- Semi-Gloss pre-catalyzed epoxy finish

3) Toilet areas

- Larger format porcelain wall tiles (12x24 or larger), full height of walls

4) Mechanical and custodial spaces.

- Fiber Reinforced Plastic (FRP) wall panels: Basis of Design Product: Nudo, FiberLite® FRP Wall Panels

Ceiling Finishes

1) Typical acoustical tile

- Ceiling height to be 10'-0" a.f.f.
- 24" x 24" Ceiling Tiles (Armstrong Cirrus or similar), 15/16" Standard, white grid.

2) Gypsum board ceiling

- To be used as ceiling in locker rooms, toilet areas, and where indicated on plan
- 5/8" Gypsum board on suspended metal framing system
- All light fixtures in gypsum ceiling to be mud-in fixtures

3) Soffits at entrances

- Suspended metal soffit panels of similar system to metal panel clad wall system

4) Acoustical materials

- Provide allowance for decorative panel arrays in Mezzanine and southern edge of Shelter area, see plans.

Accessories/Equipment

1) Signage

- Provide all interior signage, including code required ADA signage, room identification signage, pictograms
- Provide allowance for 8" high cast aluminum lettering at each building entrance
- Provide allowance for 6'-0" high wall graphic at upper wall of mezzanine in Shelter.
- Provide allowance for graphic panels as noted on building elevations.
- Provide exterior building and parking signage.

2) Gymnasium Equipment

- Wall mounted, power folding, backstop system, see plans and elevations. All backboards to be rectangular, glass.
- Wall padding at each hoop location, 6'-0" high, and 14'-0" in length. Cut out as required for louvers.
- Ceiling mounted, power folding, volleyball standards and net system, and all required accessories
- Ceiling mounted, power retracting, divider curtain, see plan for locations, solid vinyl with mesh upper

3) Metal Lockers

- Metal athletic lockers in locker rooms off of shelter area, see plans and elevations
- 2 tier metal lockers to match existing color in 3rd floor locker area, see plans and elevations

4) Locker Room Benches

- Solid hardwood benches on cantilevering steel brackets following locker layout, see plans.

5) Markerboards

- DEKO Acrylic marker boards. Provide 2 – 5'-0" high x 6'-0" long units in each of the meeting rooms.

MECHANICAL. ELECTRICAL & PLUMBING SYSTEMS

- Mechanical, Electrical and Plumbing Contractors shall coordinate with the construction team to seal all roof and wall penetrations and to maintain the integrity of all assemblies and vapor barriers.
- Design shall comply with the latest edition of the Minnesota Energy Code, ASHRAE 90.1 or IECC. Verify with Architect.

Mechanical Systems

Design Conditions:

- The project shall be designed to 86°F DB/72°F WB for summer temperatures and -17°F for winter temperatures.
- All occupied spaces that have cooling shall be designed to 75°F cooling
- All occupied spaces shall be designed to 72°F for heating.
- All unoccupied spaces shall be maintained above 55°F for heating.
- Thermostats on cooling equipment shall be capable of scheduling daily and weekly setbacks.
- Cooling set-point during unoccupied periods shall be 85°F.

Duct Sizing:

- Pressure drop
  - Low Pressure Systems 0.08" per 100 equiv. Feet
  - Transfer Ducts 0.05" per 100 equiv. Feet
- Velocity Criteria
  - Low Pressure Systems 1200 FPM
  - Ducted Returns 1000 FPM
  - Transfer Ducts 500 FPM

<u>Ventilation, Cooling and Heating System</u>

RTU w/Gas Heat/CX Cool w/VAV Reheat

Provide vibration isolated roof curbs.
This system will have VAV boxes for 16 zones.
Units shall have gas heating and electric DX cooling.

Provide one or more appropriately sized multi-zone rooftop unit to serve the following spaces, divided into 16 zones:

- Shelter - Main Shelter Zone 1(or stand-alone RTU if more cost efficient, unit cannot be located on shelter roof)
- Shelter - Women's Toilets and Showers
- Shelter - Men's Toilets and Showers
- Shelter - Common and Support Spaces
- Shelter - Mezzanine
- Shelter - Office
- Skyway
- 2nd Floor Offices (2 Offices/Zone)
- 1st Floor Open Office/Files
- 1st Floor Office
- Meeting Rooms (1 Zone per Floor - Meeting)
- Locker Rooms (1 each)
- Common and Support Spaces

RTU/VAV Controls

- Provide a DDC energy management system for central control of the RTUs and associated VAV boxes.
- Reheat System - Provide VAV boxes with electric re-heat coils.
- Provide differential pressure switches that produce a binary output upon a loss of flow in a duct or pipe.
- Provide a "Three-phase voltage monitor" which will automatically shut down all controlled three-phase equipment in the event of a phase loss, phase unbalance, phase reversal, or under voltage condition in the building power system. All devices involved in monitoring, communicating and processing the "Shut Down Command" shall have un-interruptible power supplies.

Sound Control:

- Suggested ASHRAE Noise Criteria (NC) Levels:
- Conference Spaces NC 25-30
- Staff Offices NC 30-35
- Corridors and Lobbies NC 30-35

Preliminary Equipment sizing:

<u>Loads</u>

- Cooling 400 SF / ton
- Heating 20-30 Btu/h / SF
- Provide vibration isolated roof curbs. These units shall have gas heating and electric DX cooling.
- RTUs serving classrooms shall have duct silencers on supply and return mains, and integral ERV's.

Storm Shelter Ventilation Dampers

- Storm shelter motorized dampers (see building elevation for preliminary size and quantity) shall be fail-open dampers and shall open on power failure or when the Storm Ventilation keyed switch is turned to "Storm Ventilation". Control Contractor to provide keyed switch.

Storm Shelter Mechanical Penetrations

- At all mechanical penetrations through the storm shelter perimeter (roof, walls, etc.) that is located above grade, the opening must be protected with an ICC-500 labelled protective device. Provide ICC 500 rated louvers at Storm Shelter Ventilation locations on the east and west building elevation, and at duct penetrations from the AHU (both return and supply). Provide 'cyclone' type vent stacks or protective steel cover elbows for all penetrations through the shelter envelope exceeding 2 1/6" inches in diameter.

Common Systems

Vestibules, Stairs and Exit Corridors

- All lobbies, vestibules and other spaces with exterior doors, except the East Vestibule, will be heated with an electric fan forced heater. Provide minimum 5 KW heater for main entry vestibule. Coordinate wall-mounting or ceiling-mounting locations with architect and other trades.
- The East Vestibule will be heated by an electric cabinet unit heater.

Public Toilet & Locker Rooms

- The public toilet(s) & Locker Rooms shall each have a dedicated exhaust fan ducted to the exterior providing 1 cfm/sq.ft. of exhaust or code required minimum. This room shall be provided with makeup air as required by code. The exhaust fans shall be controlled via occupancy/vacancy sensor.

Plumbing

- Provide new water service for plumbing and sprinkler system. Plumbing system shall not be extended above grade until inside shelter footprint.
- Where plumbing lines (both sprinkler and domestic) extend beyond the extent of the shelter envelope, provide automatic shut-off solenoids with controls required to sense a water line break in the host building. When a break is sensed, the solenoid valve shall close automatically to shut off the host building and protect water pressure within the shelter.
- Extend the sanitary sewer service from the site to the interior of the building. Coordinate exact location, size and invert with the Civil Engineer's documents.
- Natural gas service shall be brought in by the gas company. A gas meter, located outside, shall be provided. Provide gas piping from appropriate meter to all gas fired equipment.
- Sump pumps for the building foundation drain tile shall be provided as needed to lift ground water up to the storm drainage system.
- Provide a high efficiency gas fired domestic water heating system. Provide a domestic hot circulation system. Provide combustion air and exhaust flue up to the roof for the water heaters.
- Provide Code approved insulated piping for the domestic water system.
- If pressure and flow criteria from the city water system cannot meet the demand, provide a domestic water booster system package with variable frequency drive duplex pumps.
- Include a hydropnuematic storage tank, shock tank and all related accessories.
- Provide equally spaced exterior wall hydrants around the perimeter of the building.
- Provide Code approved plumbing fixtures for the entire facility. Water closets shall be wall mounted with a concealed flush valve system complete with infrared actuating sensor. Lav's shall be fastened to the counters to prevent tampering and removal. Lav faucets shall be hands free, infrared actuated. Coordinate type and color with Architect.
- Provide vented waste stand pipes to receive indirect condensate waste from all condensate producing equipment.

- Provide start-up and training for maintenance personnel.

Fire Sprinkler System

- Fire sprinkler system shall be a Performance Based Specification issued by Engineer.
- The Contractor for the fire sprinkler design and installation shall be a qualified Fire Sprinkler Contractor regularly engaged in this type of work. Contractor shall be certified with the National Institute of Certified Engineering Technicians. (NICET level IV).
- Fire sprinkler system shall be installed as per latest NFPA and Local Codes.
- If pressure and flow criteria from the city water system cannot meet the demand, provide a fire pump.
- See note in Plumbing systems regarding Fire Sprinkler piping and automatic shut off solenoid.

Automatic Temperature Control

- All heating and cooling equipment other than electric heaters will be tied into the existing building automation system for remote monitoring and control.
- Temperature control devices shall be located in offices or other spaces not occupied by students. Where not practical, temperature adjustment shall be limited to 3 degrees of setpoint. In shelter area devices to be covered by a protective metal wire housing.

Electrical Systems

Power Distribution

- One 120/208 volt, 3-phase, 4-wire service shall provide power to the building. Verify with Local Utility
- Service shall be sized to allow for future expansion. Refer to Architectural Plans.
- Provide a dedicated 100 amp, 3-phase panel for the cafeteria equipment. Make connections from panel to equipment.
- Feeders larger than #2 AWG shall be aluminum.
- Feeders shall be sized to comply with the 2024 Minnesota Commercial Energy Code and 2023 National Electric Code for maximum voltage drop requirements.

Power

General

- Make connections to mechanical equipment described in the Mechanical portion of this narrative.
- Provide control per 2024 Minnesota Commercial Energy Code (including daylight zones, occupancy/vacancy control of outlets and lighting, etc.)

Exterior

- At all exit doors and within 25 feet of mechanical equipment, provide a weatherproof GFI receptacle on a dedicated exterior GFI circuit.
- At common area gas meter, provide weatherproof receptacle dedicated for Utility telemetering equipment.

Interior

- Near all electrical distribution equipment and within 25 feet of mechanical equipment, provide a GFI receptacle.
- Provide a convenience receptacle at the entry doors of support rooms and areas, such as Mechanical, Electrical and Storage Rooms. Receptacles shall be GFI where required by Code.
- Provide a receptacle in Vestibules.
- Offices shall be provided with a receptacle on each wall, no more than 12-feet apart.
- In Gymnasium, provide a receptacle on each wall no more than 25- feet apart.
- In corridors, provide receptacles for cleaning no more than 40-feet apart.
- Outlet height shall be 18" AFF, unless mounted above countertop.
- Rough in for future scoreboards at two walls in the gymnasium/shelter space

Lighting

General

Fixtures shall be provided to comply with recommended IES illumination levels, Local Codes and State Codes. The following are guidelines for various areas in the Project.

- Assume ceiling reflectivity of 70%, walls 50% and floors 15% in finished areas, and 50% reflective ceiling, 35% wall, 15% floors in unfinished areas.
- Provide additional fixtures as required to properly illuminate all areas.
- LED light fixture color temperature shall be 3500K.

Area Footcandle Level (minimum maintained)

- Commons 40
- Corridor 40
- Mechanical/Electrical Room 10
- Shelter - Fitness Areas/Mezzanine 50
- Lockers 40
- Offices/Conference/Meeting Rooms 50
- Restrooms/Showers 30
- Storage/Support 10
- Vestibule 40
- Workroom/Files 40

Exterior Lighting

- Design shall comply with City requirements, using photometric drawings and consulting with City as required to obtain approval.
- Provide pole mounted fixtures for Parking Lot, Driveway and Area Lighting.
- Concrete bases for pole fixtures in landscaped areas shall extend above finished grade no more than 8 inches and in parking areas no less than 36 inches above finished grade.
- Maximum pole height, including base, shall not exceed 25 feet or Local Code Authority maximum, whichever is less.
- Provide recessed cans or surface mounted wall packs (sharp cutoff) at exterior doors. Refer to Architectural Site Plan for locations.
- Provide LED fixtures with battery backup for illumination of exit pathways, per Code.
- Wall pack lighting at the perimeter of the new building, located approximately every 20', and 14'6" above the first floor elevation
- Allowance for custom accent lighting, with RGB color and dimming capability at three locations on the exterior of the building (to be determined).
- Exterior fixtures shall be controlled by a time clock/photocell.
- Provide grade mounted LED fixture at site signs. Refer to Architectural Site Plan for locations.

Interior Lighting

- Provide 4-foot strip fixtures in support rooms and areas, such as Mechanical, Electrical and Storage Rooms. Provide occupancy sensors in all rooms, except for Electrical and Mechanical Rooms.
- Public spaces including Offices, Restrooms, Conference Rooms and Workroom shall utilize occupancy or vacancy sensors as required per Code.
- Every other corridor lighting fixture shall be controlled by either an integral motion sensor or zoned motion sensor. If zoned motion sensors are utilized, spacing of the motion sensors shall be installed an average of thirty feet on-center.
- LED emergency battery packs shall be provided for emergency egress illumination, per Code. Approximately 30' on center.
- LED exit fixtures with battery backup shall be provided, per Code.
- LED Fixtures within shelter area shall be provided with extended run batteries, allowing illumination to be maintained in the event of a power outage for a minimum of 2hrs.

Systems

General

- Provide 120-volt branch circuits to all life safety systems, communication and special system control panels and head end equipment such as Fire Alarm, Security, etc.

Voice/Data

- A complete interior voice/data distribution system shall be provided.
- Except for Utility incoming service, provide all punch down blocks. Make all needed cross connections.
- Voice/Data cable shall be CAT6.
- Provide two Voice/Data cables from backboard to each outlet.
- Provide telephone data connections to other systems, such as Elevator, Fire Alarm & Detection, and Security, as required for proper operation.
- Owner's Low Voltage Vendor will provide a central phone system and make connections.
- At common area gas meter, provide weatherproof data outlet dedicated for Utility telemetering equipment.

CCTV

- Owner will provide a web-based CCTV System with indoor cameras, exterior cameras, and DVR recording.
- Exterior cameras shall be located within the building aimed exterior entries into the building.
- Interior cameras shall be located in the Corridors, Vestibules and other locations selected by the Owner.
- Head end equipment shall be located in the Tech Room.
- Provide allowance for 12 cameras.
- Cable shall be CAT6.

Entry & Access Control

- A complete Access Control system compatible with Owner's existing system shall be provided.
- Provide a hands-free call station in vestibules for visitor use.
- Security access points shall consist of a fob reader, door contacts and dc electric strike.
- Provide security access at all exterior doors and inner doors at vestibules.
- System shall be sized to allow for future expansion. Refer to Architectural Plans.

Fire Alarm & Detection (Voice System)

- Provide an addressable Voice & Detection System, per Code.
- Main fire alarm panel shall be located in the Server room and Annunciator panel shall be located in the vestibule.
- Provide power and control connections to smoke and smoke/fire dampers.
- Notification devices shall be LED visual display boards. Corridors to have large display boards and restrooms to have small display boards.
- System shall be sized to allow for future expansion.

Elevator

- A gearless MRL traction elevator will serve the two floors. Basis of Design: TK Evolution 200 (3000), or equivalent.
- Cab size: 6'-8" x 4'-9". A small controller closet will be located in Storage/Mechanical Room B201. The pit will be approximately 5'-0" deep (clear). A small rooftop penthouse will be located at the top of the hoistway shaft.
- See structural narrative in appendix for additional information.

ADDITIONAL INFORMATION

In the fall of 2023, an evaluation of the existing facilities and their use was conducted. Refer to the F*acility Needs Study,* prepared by Hay Dobbs P.A., included in the appendix, for more information regarding existing conditions.

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.

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.

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. Development of this parcel, by adding a school storm shelter addition, is the focus of this study.

On the pages that follow are photos of existing conditions for reference.

Existing School Main Entrance along Victoria Way

Existing School Main Entrance along Victoria Way

Looking towards Main Entrance from Public Parking along Victoria Way

Looking towards the back of the Existing School from the Existing Undeveloped Parcel

Existing School Exterior along Mercer Way

Existing Undeveloped Parcel along Mercer Way

Existing School Exterior at Madson St.

Existing Undeveloped Parcel - view to the north towards Shalom Property

Existing Undeveloped Parcel - view to the northeast towards residential property

Existing Undeveloped Parcel - Utilities along Kay Ave.

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Appendix

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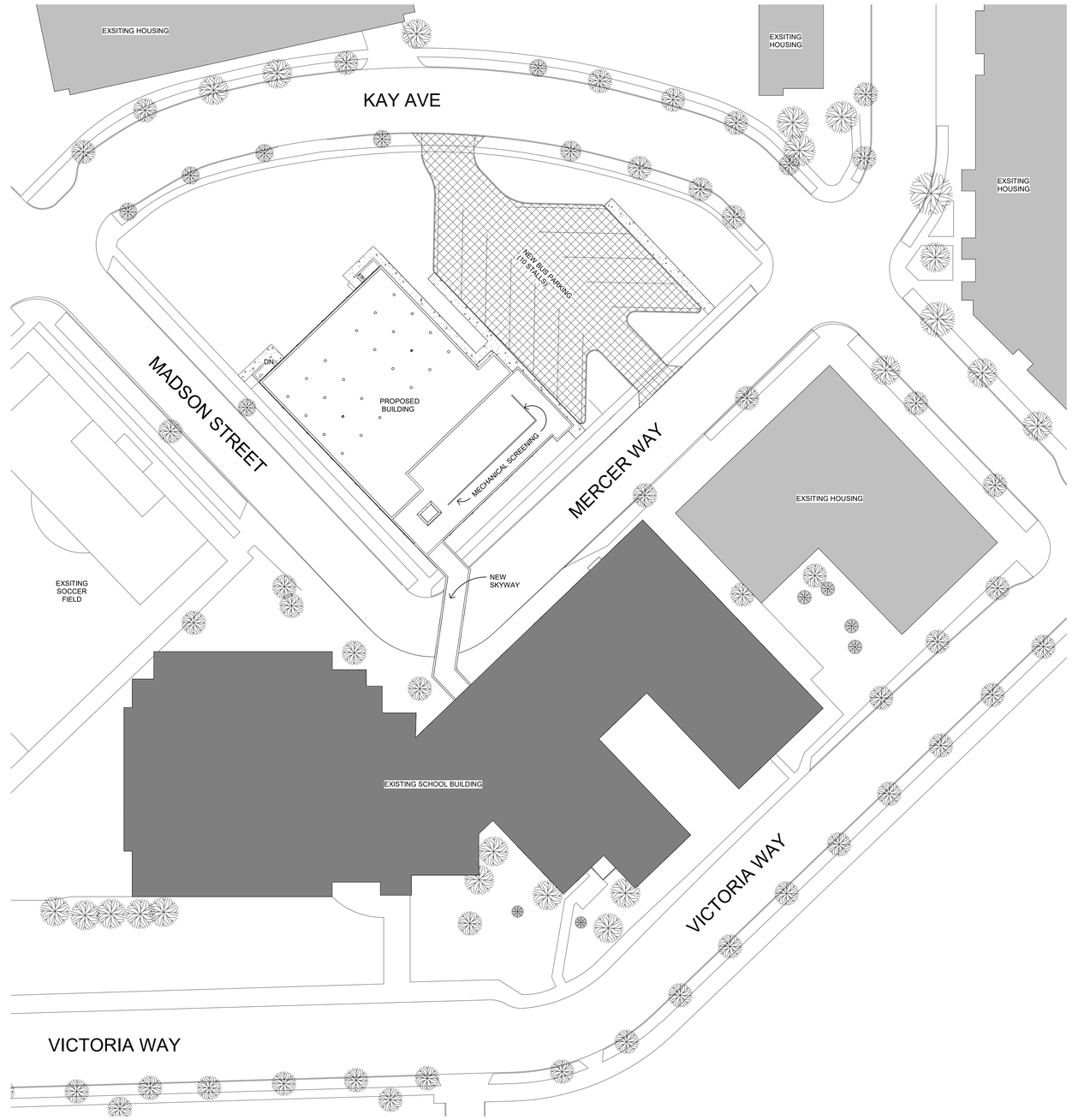
SECTION 1

SCHEMATIC DESIGN DRAWINGS



1 SITE PLAN
1" = 30'-0"

PROJECT TRUE

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Midtown Commons
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Suite 200
St. Paul, MN 55114
Tel. 612.338.4590

NOVA CLASSICAL ACADEMY
1455 VICTORIA WAY

CONSULTANT

Project Name: NOVA CLASSICAL ACADEMY
Project Number: 23008.003
Date: 10/01/2024

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME

SIGNATURE

LICENSE NO.

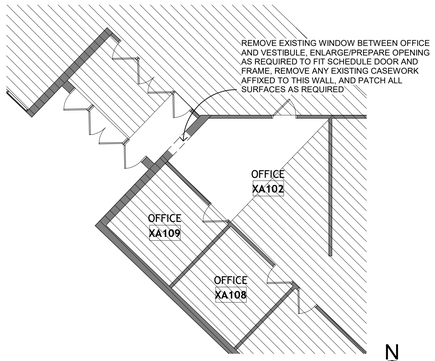
10/01/2024
DATE

PRELIMINARY Not For Construction

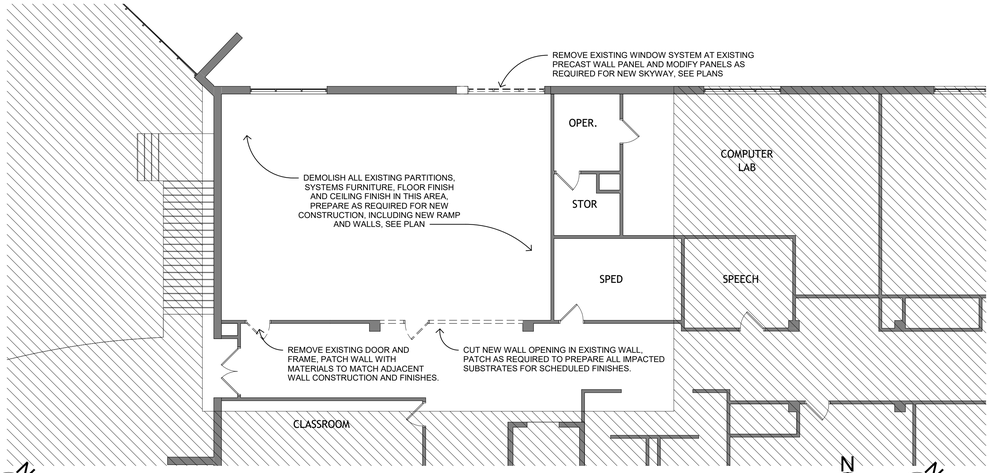
SHEET TITLE:
ARCHITECTURAL SITE PLAN

SHEET NUMBER:

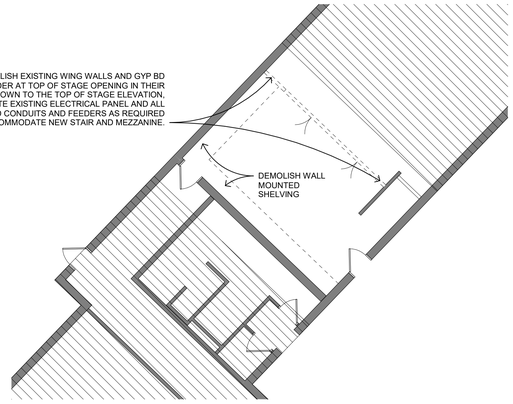
A100



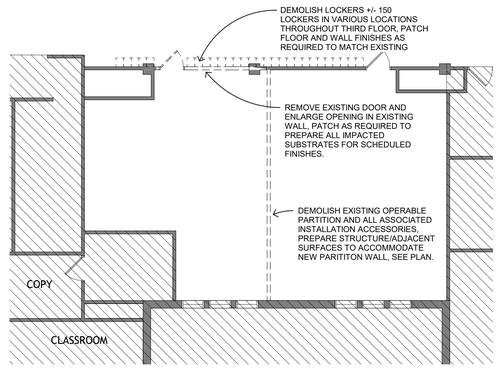
3 EXISTING BUILDING - LEVEL 1 DEMOLITION - ADMIN OFFICES
1/8" = 1'-0"



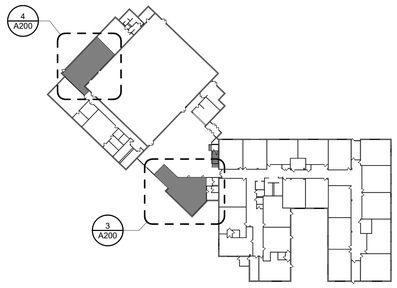
1 EXISTING BUILDING - LEVEL 2 DEMOLITION - OFFICE SUITE
1/8" = 1'-0"



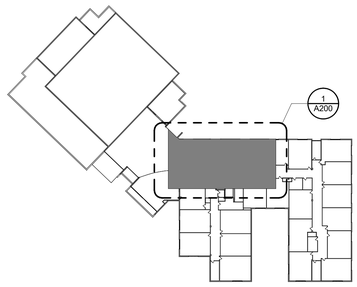
4 EXISTING BUILDING - LEVEL 1 DEMOLITION - FACILITIES ROOM (NEAR EXISTING STAGE)
1/8" = 1'-0"



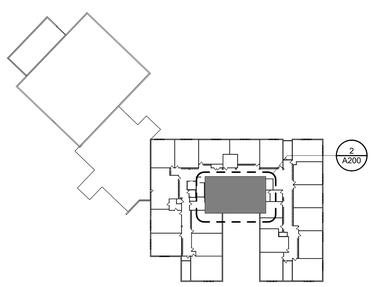
2 EXISTING BUILDING - LEVEL 3 DEMOLITION - EX. HALL
1/8" = 1'-0"



5 LEVEL 1 DEMO KEY PLAN
1/64" = 1'-0"



6 LEVEL 2 DEMO KEY PLAN
1/64" = 1'-0"



7 LEVEL 3 DEMO KEY PLAN
1/64" = 1'-0"

GENERAL DEMOLITION NOTES

A. PROVIDE ALL DEMOLITION WORK AS REQUIRED TO COMPLETE THE WORK IN THIS CONTRACT, INCLUDING THAT REQUIRED TO COMPLETE THE WORK SHOWN ELSEWHERE IN THESE DOCUMENTS, BUT NOT SPECIFICALLY IDENTIFIED ON THESE DEMOLITION PLANS.

B. SHADED AREAS ON THE PLAN GENERALLY INDICATE AREA TO CONTAIN NO DEMOLITION WORK. HOWEVER, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PERFORMING ALL RELATED DEMOLITION THAT IS NECESSARY TO COMPLETE ALL WORK THAT IS DIRECTED BY THESE DOCUMENTS, WHETHER OR NOT THAT DEMOLITION WORK IS SPECIFICALLY IDENTIFIED ON THESE DEMOLITION PLANS OR IS LOCATED OUTSIDE THE AREAS OF CONSTRUCTION OR DEMOLITION THAT ARE IDENTIFIED ON THIS PLAN.

C. CONSTRUCTION SHOWN DASHED INDICATES CONSTRUCTION TO BE REMOVED. ALL PARTITIONS SHOWN TO BE DEMOLISHED ARE TO BE REMOVED FROM TOP OF FLOOR SLAB UP TO BOTTOM OF STRUCTURE ABOVE, UNLESS NOTED OTHERWISE. ALL CONSTRUCTION MOUNTED IN OR ON PARTITIONS TO BE REMOVED, SUCH AS DOORS, GLAZING AND OTHER WALL MOUNTED CONSTRUCTION AND FINISHES SHALL BE REMOVED AS A PART OF THE PARTITION DEMOLITION.

D. ALL PRIME CONTRACTORS AND SUBCONTRACTORS SUBMITTING BIDS SHALL CAREFULLY EXAMINE THE ENTIRE SET OF BIDDING DOCUMENTS, VISIT THE SITE OF THE WORK, RECORD THEIR OWN INVESTIGATIONS, AND SHALL BECOME FULLY INFORMED OF THE EXISTING CONDITIONS AND LIMITATIONS UNDER WHICH THE WORK SHALL BE PERFORMED, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

• EXISTING BUILDINGS: INCLUDING THE CONDITION OF EXISTING STRUCTURE, LOCATIONS AND CAPACITIES OF EXISTING UTILITIES, AND ANY OBSTACLE OR CONFLICT WHICH MAY BE ENCOUNTERED WHILE COMPLETING THE WORK DESCRIBED IN THE BIDDING DOCUMENTS

• SUBMITTAL OF A BID SHALL BE CONCLUSIVE EVIDENCE THAT THE BIDDER HAS MADE SUCH AN EXAMINATION, UNDERSTANDS THE CONTRACT DOCUMENTS IN THEIR ENTIRETY, AND IS FAMILIAR WITH THE SITE CONDITIONS IN WHICH THE WORK SHALL OCCUR. FAILURE TO MAKE SUCH AN EXAMINATION SHALL NOT BE ACCEPTED AS A BASIS FOR CLAIMS FOR ADDITIONAL COMPENSATION OR AN EXTENSION OF TIME.

• IF FIELD CONDITIONS ARE OBSERVED THAT CONFLICT WITH THE INTENTIONS AND FEASIBILITY OF THE WORK DESCRIBED IN THESE DOCUMENTS DURING BIDDING, THE CONTRACTOR/SUBCONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT SO THAT THEY MAY MAKE ACCOMMODATIONS THROUGH AN ADDENDUM.

• SUBMISSION OF BID ALSO PRESUMES THAT ALL REQUIRED DEMOLITION WORK, WHETHER OR NOT IT HAS BEEN SPECIFICALLY IDENTIFIED BY THESE DOCUMENTS OR BY ADDENDUM, HAS BEEN INCORPORATED INTO THE BIDDER'S BID PROPOSAL.

E. WHERE FINISHES ARE TO BE REMOVED FROM EXISTING SUBSTRATES AND SUBSTRATES ARE SCHEDULED TO RECEIVE NEW FINISHES, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING EXISTING ADHESIVES, ATTACHMENTS, FASTENERS AND OTHER COATINGS THAT WILL INTERFERE WITH THE INSTALLATION OR ADHESION OF NEW FINISHES. THE CONTRACTOR SHALL PREPARE ALL EXISTING SURFACES TO PROVIDE SUBSTRATES THAT ARE ACCEPTABLE FOR THE NEW FINISH INSTALLER. AT EXISTING CONCRETE FLOOR SLABS WHERE SLAB IS DAMAGED DUE TO THE REMOVAL OF EXISTING FINISHES, THE CONTRACTOR SHALL PATCH ALL DAMAGE OF THE EXISTING SLAB WITH CONCRETE TOPPING TO PROVIDE A SMOOTH AND EVEN SUBSTRATE FOR NEW FINISHES.

F. SEE MECHANICAL/ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR WORK THAT REQUIRES ADDITIONAL DEMOLITION AND PATCHING. PROVIDE ALL DEMOLITION AS REQUIRED TO PERFORM THE SCHEDULED WORK AND REINSTALL ALL EXISTING CONSTRUCTION AND FINISHES TO MATCH PREVIOUS CONDITIONS WHERE POSSIBLE. IF NOT POSSIBLE, PATCH IN NEW CONSTRUCTION TO MATCH EXISTING CONDITITIONS.

G. PATCH ALL EXISTING AND NEW PENETRATIONS THROUGH EXISTING FIRE OR SMOKE RATED FLOOR SLABS AND PARTITIONS, USING U.L. LISTED MATERIALS THAT ARE REQUIRED TO MAINTAIN ALL EXISTING FIRE RATINGS.

H. SEE ALSO REFLECTED CEILING PLANS FOR ADDITIONAL REMOVAL AND REINSTALLATION OF EXISTING SUSPENDED ACOUSTICAL CEILINGS AS REQUIRED FOR NEW CONSTRUCTION.

I. WHERE EXISTING CEILINGS ARE SHOWN TO BE REMOVED AND REINSTALLED, SALVAGE ALL FIRE ALARM AND NOTIFICATION DEVICES, INCLUDING SMOKE DETECTORS, STROBES, ALARMS, ETC. CONTRACTOR MAY REINSTALL THOSE DEVICES THAT ARE FULLY FUNCTIONAL. IF IT IS NOT POSSIBLE TO REINSTALL EXISTING SYSTEM COMPONENTS, THE CONTRACTOR SHALL PROVIDE NEW MATCHING DEVICES THAT ARE COMPATIBLE AND WARRANTABLE WITH THE EXISTING SYSTEM WHICH SHALL PROVIDE A FULLY FUNCTIONAL, CODE-COMPLIANT FIRE DETECTION/ NOTIFICATION SYSTEM.

J. PATCHING: WHERE DEMOLITION OR CUTTING WORK HAS OCCURRED OR WHERE EXISTING CONSTRUCTION HAS BEEN REMOVED, DAMAGED OR DISTURBED AS A PART OF THIS WORK, THE SAID SURFACES SHALL BE CLOSED UP, PATCHED, FINISHED AND RESTORED AS REQUIRED TO MATCH CONTIGUOUS SURFACES AND FINISHES.

K. PROTECTION OF EXISTING CONSTRUCTION: ALL CONSTRUCTION INDICATED TO REMAIN SHALL BE PROTECTED FROM DAMAGE BY ALL CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL RETURN ALL EXISTING CONSTRUCTION TO THE CONDITION FOUND PRIOR TO THE START OF DEMOLITION AND CONSTRUCTION, WHETHER OR NOT IT IS SPECIFICALLY INDENTIFIED ON THE DRAWINGS TO REMAIN. UNLESS NOTED OTHERWISE. THE CONTRACTOR SHALL REPAIR OR REPLACE ALL SUCH DAMAGED ITEMS AT THE OWNER'S DISCRETION

L. SALVAGE: BEFORE COMMENCING ANY DEMOLITION WORK, THE CONTRACTOR SHALL CONTACT THE OWNER TO CONFIRM THEIR INTENT REGARDING THE SALVAGE, REUSE AND FINAL DISPOSITION OF ANY EXISTING ITEMS OF EQUIPMENT OR MATERIAL NOT USED IN THIS PROJECT. INCLUDING ALL WALL & CEILING MOUNTED EQUIPMENT (WHITEBOARDS, HEADWALL UNITS, CAMERAS, ETC.)

M. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND IDENTIFYING EXISTING UTILITY LINES PRIOR TO BEGINNING DEMOLITION. SEE MECHANICAL, PLUMBING, AND ELECTRICAL DOCUMENTS FOR PROTECTION AND PATCHING OF EXISTING UTILITIES

N. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING EXISTING PIPING, CONDUIT AND OTHER UTILITY LINES, AND THEIR HANGERS OR SUPPORTS WHICH ARE ABANDONED BY THE WORK DESCRIBED IN THESE DOCUMENTS OR THOSE THAT HAVE BEEN PREVIOUSLY ABANDONED AND LEFT IN PLACE, LOCATED IN ALL CONSTRUCTION AREAS, UNLESS NOTED OTHERWISE. SEE MECHANICAL AND ELECTRICAL DOCUMENTS FOR EXTENT OF REMOVAL AND THE CAPPING OFF OR TERMINATION OF EXISTING LINES

O SEE STRUCTURAL DRAWINGS FOR INFORMATION REGUARDING DEMOLITION OF EXISTING STRUCTURAL SYSTEMS AND SHORING REQUIREMENTS

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St. Paul, MN 55114
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NOVA CLASSICAL ACADEMY
1455 VICTORIA WAY

CONSULTANT

Project Name: NOVA CLASSICAL ACADEMY
Project Number: 23008.003
Date: 10/01/2024

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PRINT NAME

SIGNATURE

LICENSE NO.

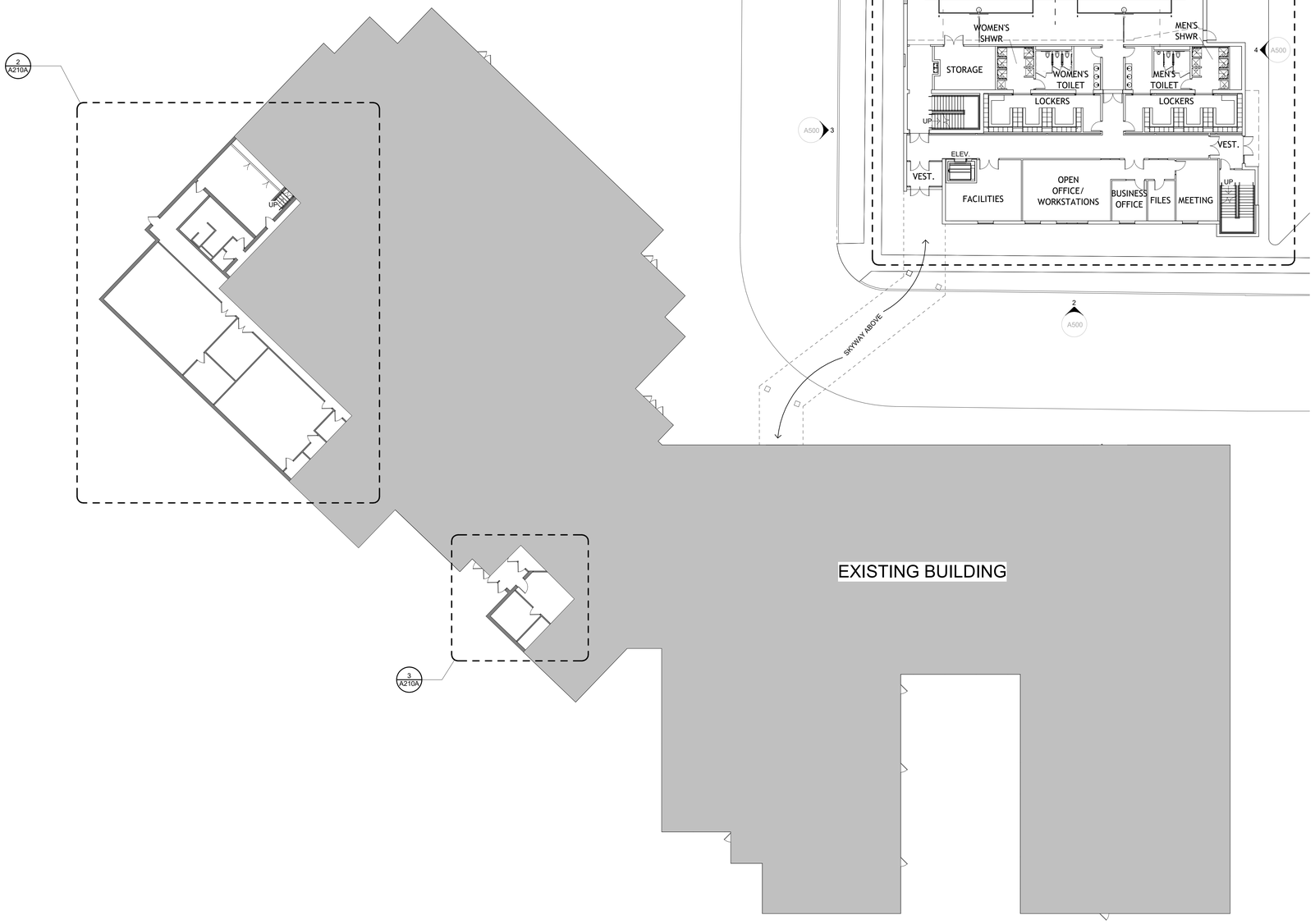
10/01/2024
DATE

PRELIMINARY Not For Construction

SHEET TITLE:
SELECTIVE DEMOLITION PLANS

SHEET NUMBER:

A200



GENERAL PLAN NOTES

A. GENERAL NOTES APPLY TO ALL SHEETS.

B. ALL WORK DESCRIBED HEREIN SHALL BE EXECUTED IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, ORDINANCES AND PUBLIC AUTHORITIES HAVING JURISDICTION

C. AREAS SHOWN HATCHED ARE EXISTING BUILDING AREAS OUTSIDE THE CONSTRUCTION LIMITS. NO WORK IN THESE AREAS UNLESS NOTED OTHERWISE. SEE MECHANICAL/ELECTRICAL DRAWINGS FOR ADDITIONAL WORK THAT MAY OCCUR OUTSIDE THE CONSTRUCTION LIMITS SHOWN, EITHER AS SHOWN ON DRAWINGS OR THROUGH EXTRAPOLATION OF EXISTING UTILITY LINES SERVING AREAS WITHIN THE CONSTRUCTION LIMITS.

D. ALL FRAMING DIMENSIONS ARE TAKEN TO FINISH FACE OF EXISTING CONSTRUCTION OR THE FACE OF FRAMING FOR NEW CONSTRUCTION UNLESS NOTED OTHERWISE.

E. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER GRAPHIC SCALE. DO NOT SCALE THE DRAWINGS.

F. CONTRACTOR SHALL VISIT THE SITE AND VERIFY ALL FIELD CONDITIONS PRIOR TO BIDDING AND CONSTRUCTION.

G. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND NOTIFY ARCHITECT OF ANY DISCREPANCIES OR CONFLICTS PRIOR TO COMMENCING WORK.

H. THE CONTRACTOR SHALL LOCATE EXISTING BUILDING UTILITIES AND SERVICES PRIOR TO THE START OF CONSTRUCTION

I. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS IN THE DRAWINGS THAT ARE BASED ON FIELD MEASURING/OBSERVATION OF THE EXISTING CONSTRUCTION.

J. ALL WALLS SHADED ARE EXISTING CONSTRUCTION SCHEDULED TO REMAIN, PROTECT FROM DAMAGE FROM CONSTRUCTION ACTIVITIES UNLESS NOTED OTHERWISE.

K. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATIONS OF NEW PENETRATIONS THROUGH EXISTING BEARING WALLS FOR DUCTWORK AND OTHER MECHANICAL/ ELECTRICAL RUNS. DO NOT CUT EXISTING BEAMS OR PURLINS. ADJUST LOCATIONS AS REQUIRED TO MISS EXISTING STRUCTURAL MEMBERS. IF IT IS NOT POSSIBLE TO MISS EXISTING STRUCTURAL MEMBERS, CONTACT THE ARCHITECT WHO WILL CONSULT WITH THE STRUCTURAL ENGINEER TO DETERMINE ACCEPTABLE LOCATIONS TO PENETRATE STRUCTURAL MEMBERS AND ADDITIONAL STRUCTURAL REINFORCEMENT OF EXISTING MEMBERS THAT MAY BE REQUIRED BY THE PENETRATION.

L. NEW PARTITIONS SHALL BE TYPE: 1A PARTITIONS UNLESS OTHERWISE NOTED.

M. WHERE NEW PARTITIONS ARE CONTINUOUS WITH EXISTING PARTITIONS, FINISH FACE OF NEW PARTITIONS SHALL ALIGN WITH EXISTING FINISH FACE UNLESS OTHERWISE NOTED

N. THIS PLAN AS DESIGNED COMPLIES WITH ADA REQUIREMENTS. MINOR FIELD ADJUSTMENTS TO DIMENSIONS MAY AFFECT REQUIRED CLEARANCES, DIMENSIONAL ADJUSTMENTS WITHIN INDUSTRY TOLERANCES MAY NOT BE ACCEPTABLE. ADJUSTMENTS AFFECTING DOOR CLEARANCES, WITHIN TOILET ROOMS AND UNDER COUNTER CASEWORK AREAS ARE OF PARTICULAR IMPORTANCE AND SHALL BE DISCUSSED WITH THE ARCHITECT PRIOR TO PROCEEDING.

O. SEE CODE PLANS FOR LOCATION OF WALLS OF FIRE-RESISTIVE AND SMOKE BARRIER CONSTRUCTION. ALL PARTITIONS CONSISTING OF SUCH ASSEMBLIES SHALL EXTEND TO UNDERSIDE OF FLOOR OR ROOF DECK ASSEMBLIES. COORDINATE WITH MECHANICAL AND PLUMBING. ALL NEW AND EXISTING PIPED PENETRATIONS THROUGH WALLS SHALL BE SEALED WITH FIRE-RATED SEALANTS OR FIRE-SAFING AS REQUIRED TO MAINTAIN EXISTING RATINGS AND SMOKE STOPPAGE. CONTRACTOR CREATING PENETRATION WILL BE RESPONSIBLE FOR PROVIDING FIRE SEAL OF OPENING. SEE MECHANICAL PLANS FOR LOCATIONS OF REQUIRED FIRE DAMPERS.

P. AT RATED PARTITIONS THAT EXTEND ABOVE ACCESSIBLE FINISHED CEILINGS, PROVIDE SIGNAGE OR PAINTED STENCILING IDENTIFYING PARTITION WITH THE WORDING "FIRE AND/OR SMOKE BARRIER - PROTECT ALL OPENINGS". LETTERING SHALL BE A MINIMUM HEIGHT OF 3" WITH A MINIMUM 3/8" STROKE IN A CONTRASTING COLOR. SIGNAGE SHALL BE LOCATED AT INTERVALS NOT EXCEEDING 30 FEET AND WITH 15 FEET OF THE END OF EACH WALL.

Q. PROVISIONS SHALL BE MADE AT ALL FULL HEIGHT NON-BEARING WALLS FOR 1-INCH VERTICAL MOVEMENT OF THE BUILDING STRUCTURE WITHOUT TRANSFER OF COMPRESSIVE LOADS TO WALL. FILL ALL GAPS BETWEEN TOP OF WALL AND DECK ABOVE WITH FIRE SAFING INSULATION OR FIRE STOPPING MATERIALS AS REQUIRED TO MEET FIRE RATING OF RESPECTIVE WALLS.

R. GYPSUM BOARD SURFACES SHALL BE ISOLATED WITH CONTROL JOINTS WHERE SHOWN ON DRAWINGS OR NOTED IN SPECIFICATIONS.

S. SCRIBE GYPSUM BOARD OF WALL AND PARTITIONS TO PROFILES OF DECK ABOVE. SEAL TIGHTLY AROUND ALL PENETRATIONS WITH ACOUSTIC CAULK OR FIRE-RATED CAULK AT RATED PATITIONS

T. PROVIDE SOUND ATTENUATION BLANKETS IN ALL WALLS OF OFFICES, CLASSROOMS, ETC, AND AS INDICATED BY PARTITION TYPE

U. CONTRACTOR TO COORDINATE AND PROVIDE WOOD BLOCKING IN WALLS FOR ALL WALL MOUNTED EQUIPMENT, CASEWORK, SHELVING, AND CABINETRY. CONTRACTOR SHALL ALSO PROVIDE BLOCKING TO ACCOMMODATE ANY OWNER PROVIDED EQUIPMENT, AND SHALL COORDINATE INSTALLATION LOCATION DIRECTLY WITH OWNER.

1 LEVEL 1 OVERALL
1/16" = 1'-0"

N
PROJECT
TRUE

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NOVA CLASSICAL ACADEMY
1455 VICTORIA WAY

CONSULTANT

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PRINT NAME

SIGNATURE

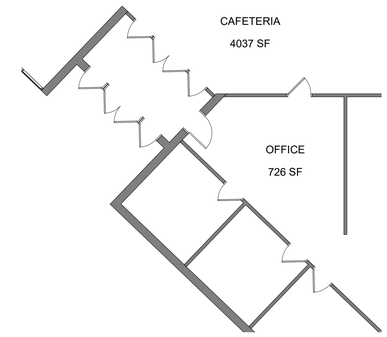
LICENSE NO.

10/01/2024
DATE

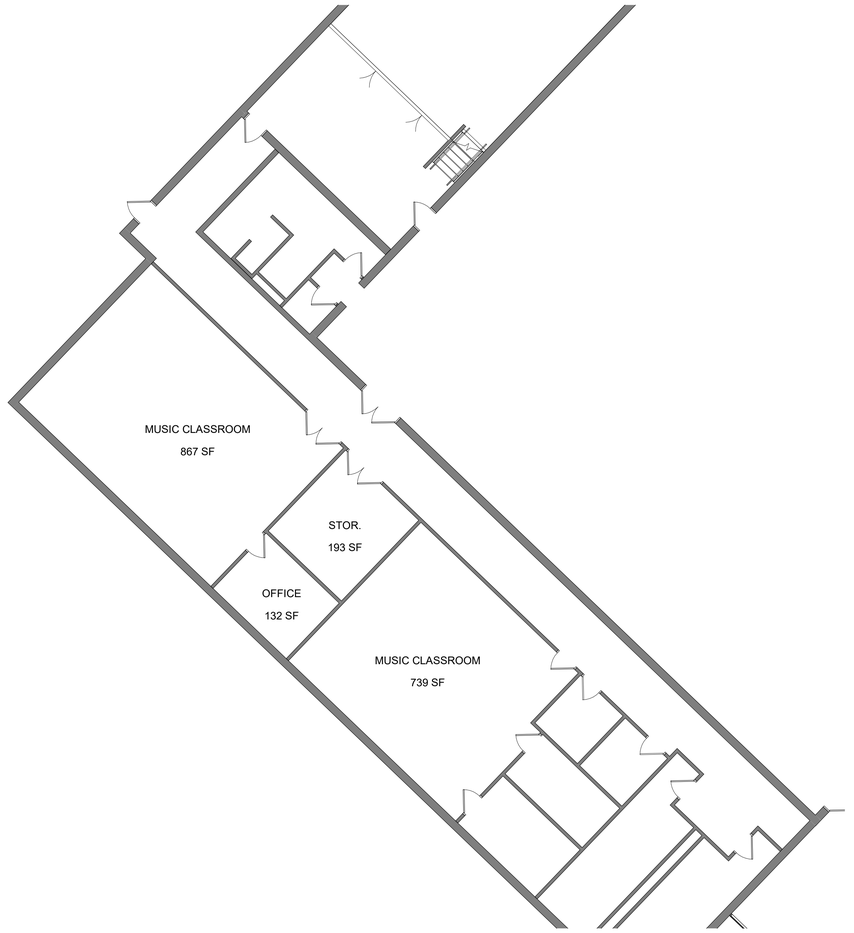
PRELIMINARY Not For Construction

SHEET TITLE:
FIRST FLOOR PLAN - OVERALL

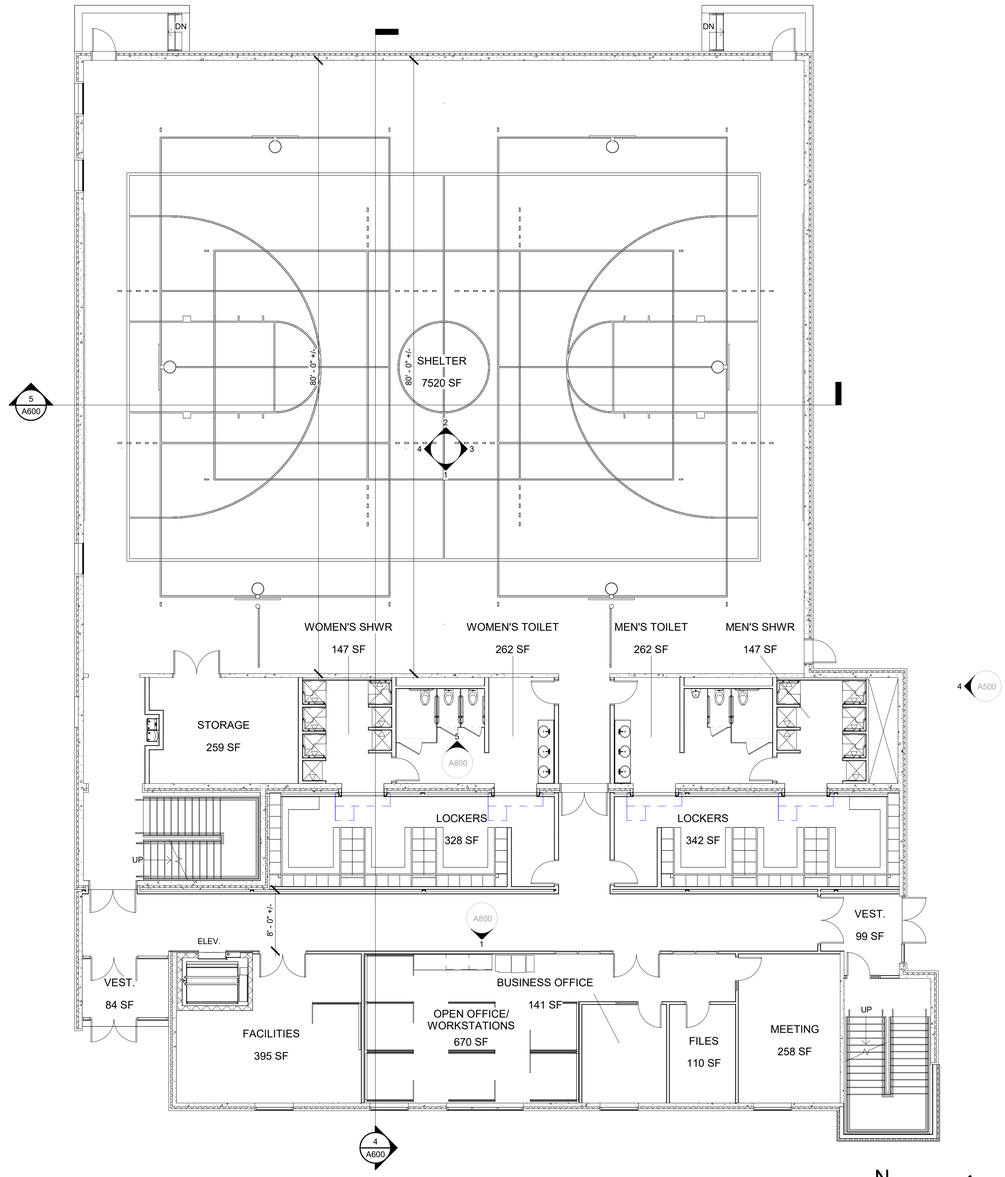
SHEET NUMBER:
A210



3 LEVEL 1 FLOOR PLAN - ENTRANCE & ADMIN
1/8" = 1'-0"



2 LEVEL 1 FLOOR PLAN - MUSIC ROOMS
1/8" = 1'-0"



1 LEVEL 1 FLOOR PLAN - SHELTER
1/8" = 1'-0"

N
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PRINT NAME

SIGNATURE

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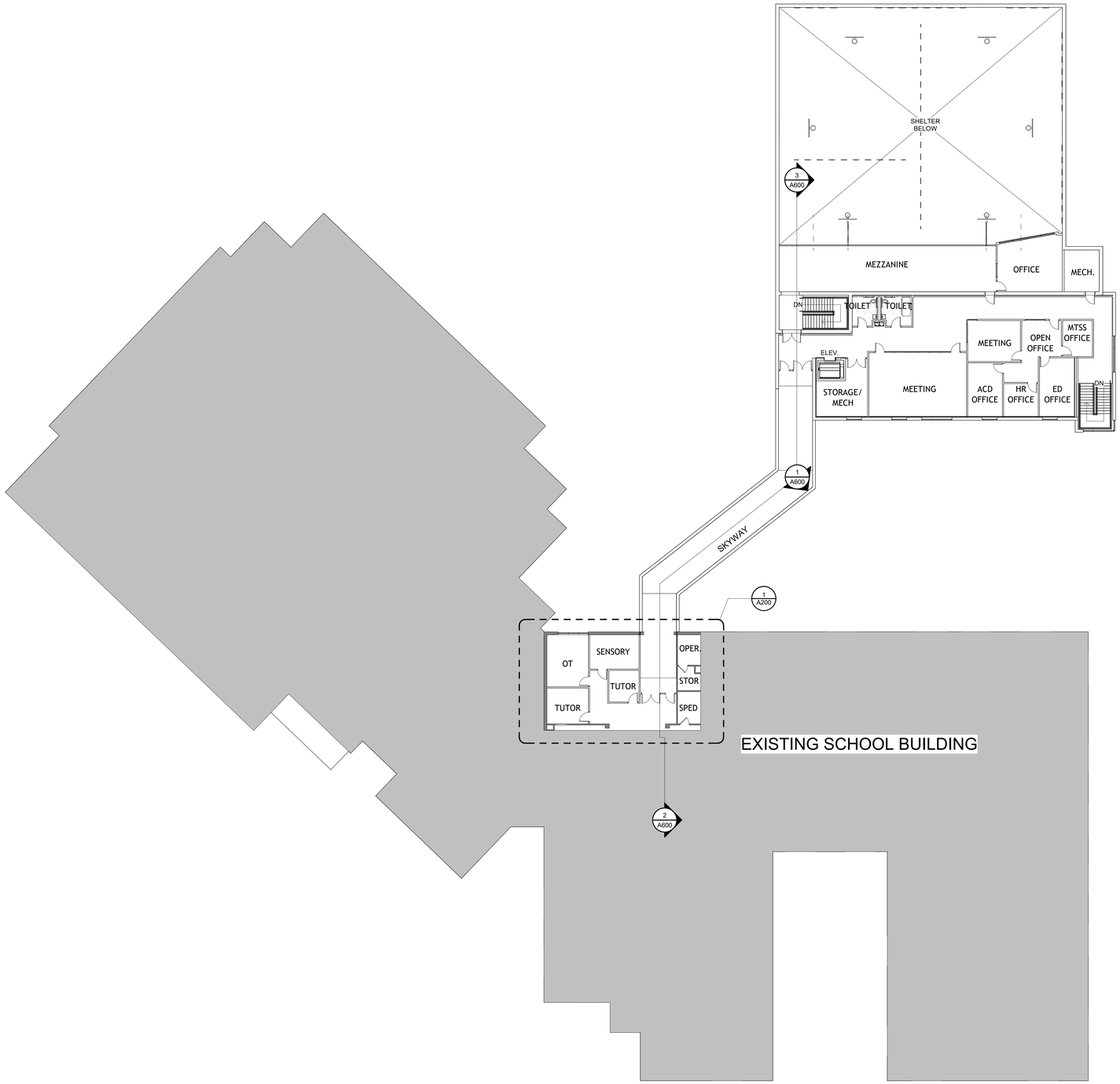
DATE

PRELIMINARY
Not For Construction

SHEET TITLE:
FIRST FLOOR PLAN - SHELTER

SHEET NUMBER:

A210A



1 LEVEL 2 OVERALL
1/16" = 1'-0"

N
PROJECT
TRUE

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Project Number: 23008.003
Date: 10/01/2024

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PRINT NAME

SIGNATURE

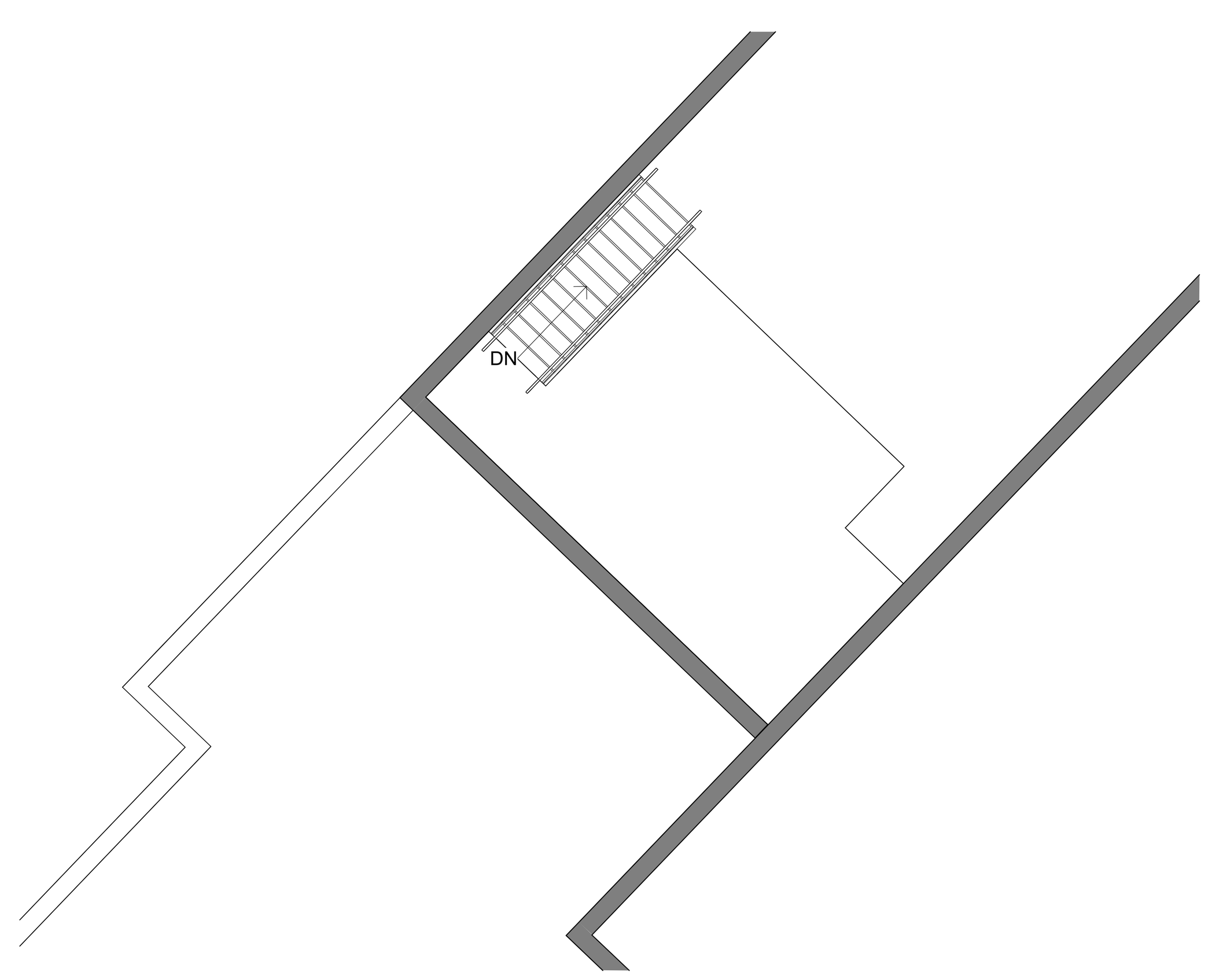
LICENSE NO.

10/01/2024
DATE

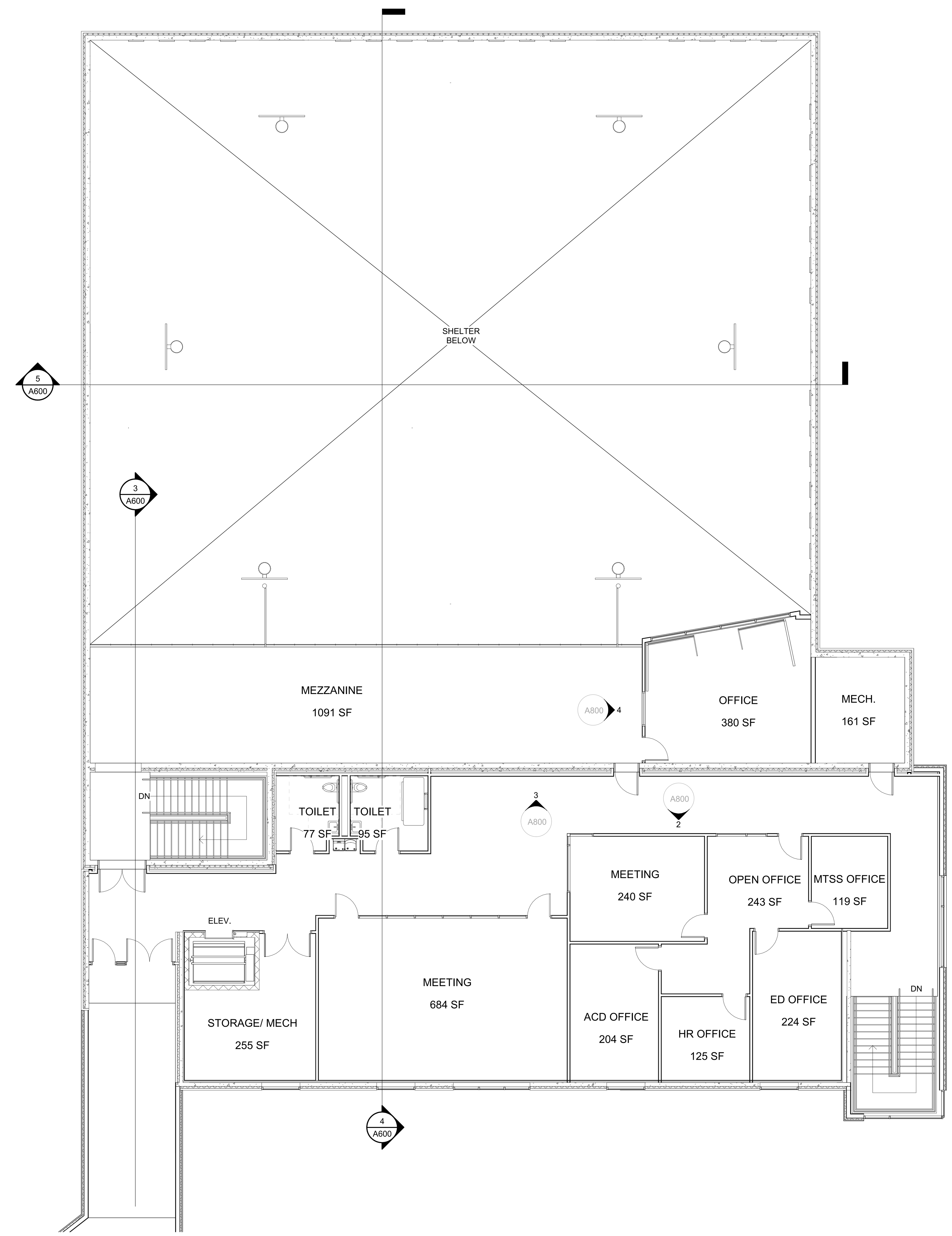
PRELIMINARY
Not For Construction

SHEET TITLE:
SECOND FLOOR PLAN - OVERALL

SHEET NUMBER:
A211



2 LEVEL 2 - MEZZANINE
1/8" = 1'-0"



1 LEVEL 2 - SHELTER
1/8" = 1'-0"

N
PROJECT
TRUE

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NOVA CLASSICAL ACADEMY
1455 VICTORIA WAY

CONSULTANT

Project Name: NOVA CLASSICAL ACADEMY
Project Number: 23008.003
Date: 10/01/2024

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LICENSE NO.

10/01/2024
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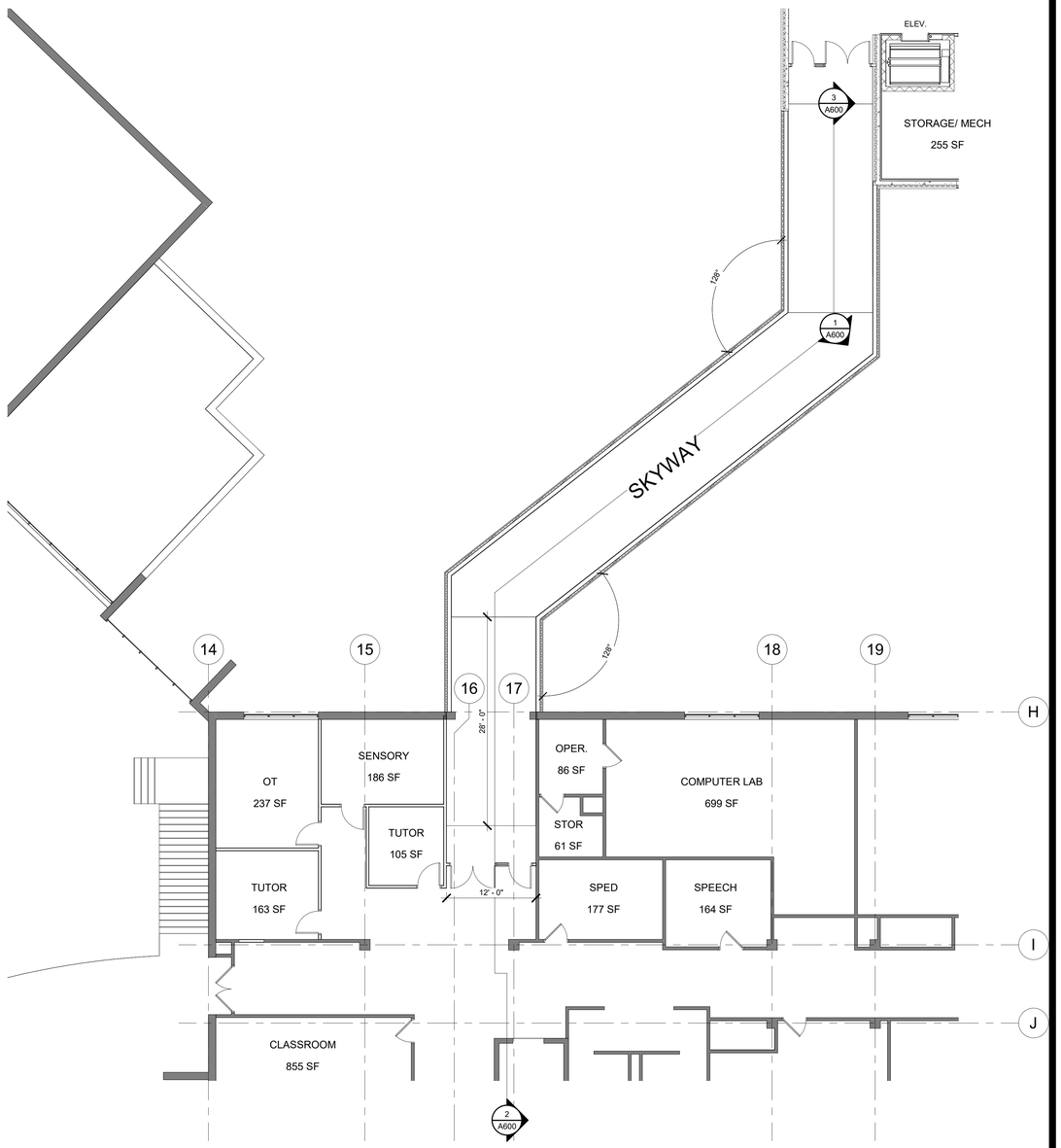
Construction**

SHEET TITLE:
SECOND FLOOR PLAN - SHELTER

SHEET NUMBER:
A211A



1 LEVEL 2 -SKYWAY AT EXISTING
1/8" = 1'-0"

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1455 VICTORIA WAY

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10/01/2024
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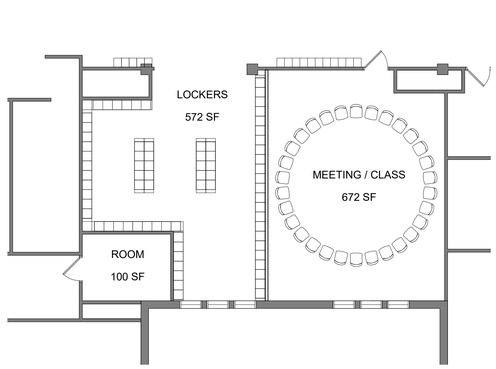
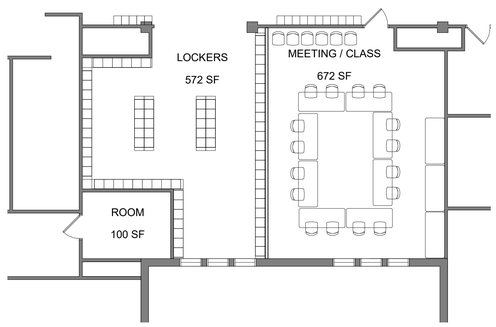
SHEET TITLE:
SECOND FLOOR PLAN - SKYWAY AND SKYWAY AT EXSITING

SHEET NUMBER:

A211B



2 LEVEL 3 - EX HALL - CLASS
1/8" = 1'-0"



3 LEVEL 3 - EX HALL - MEETING
1/8" = 1'-0"

1 LEVEL 3 OVERALL
1/16" = 1'-0"

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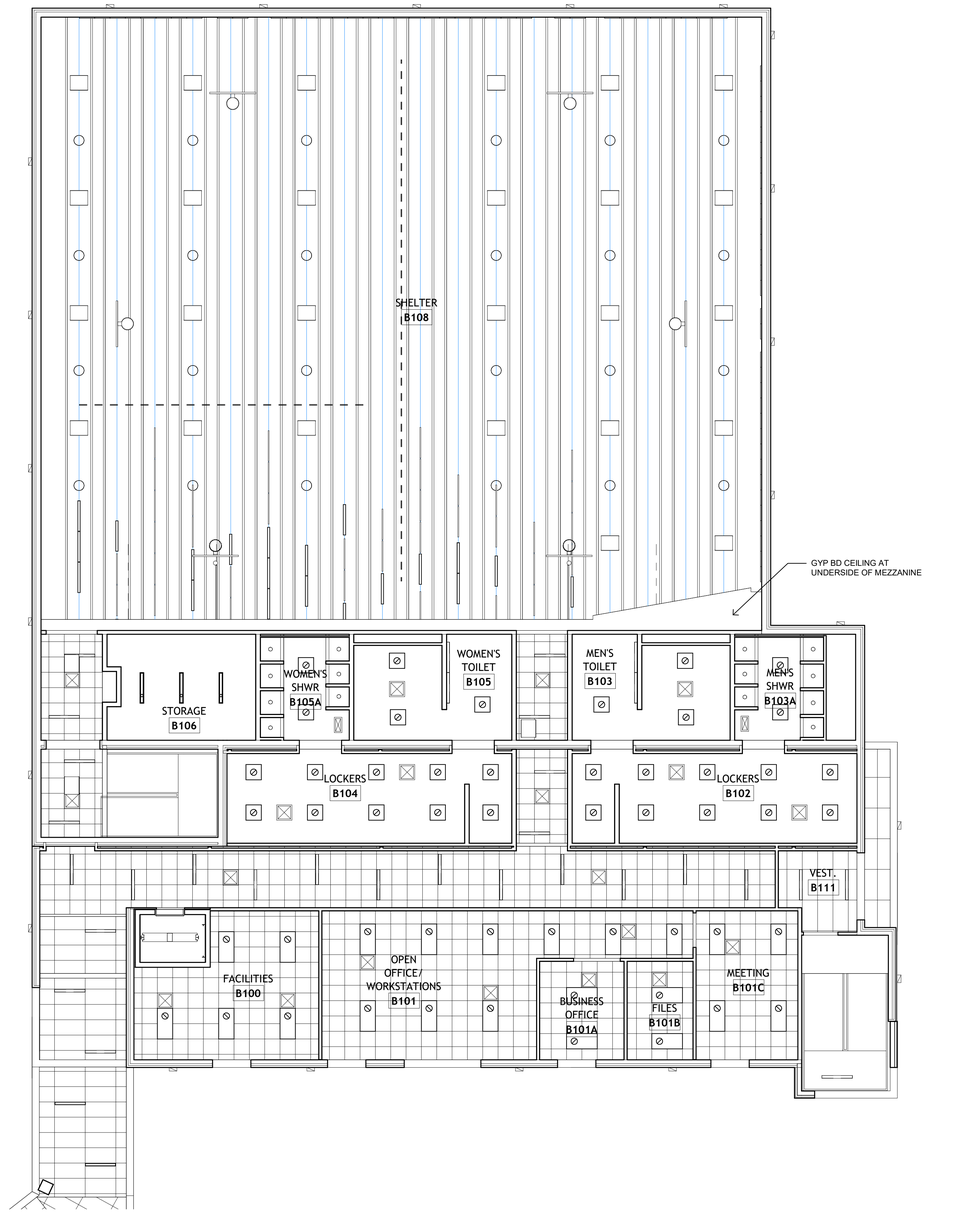
SHEET TITLE:
THIRD FLOOR OVERALL & EX HALL ENLARGEMENTS

SHEET NUMBER:

A212



1 LEVEL 1
1/8" = 1'-0"

N
PROJECT
TRUE

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CONSULTANT

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Project Number: 23008.003
Date: 10/01/2024

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10/01/2024
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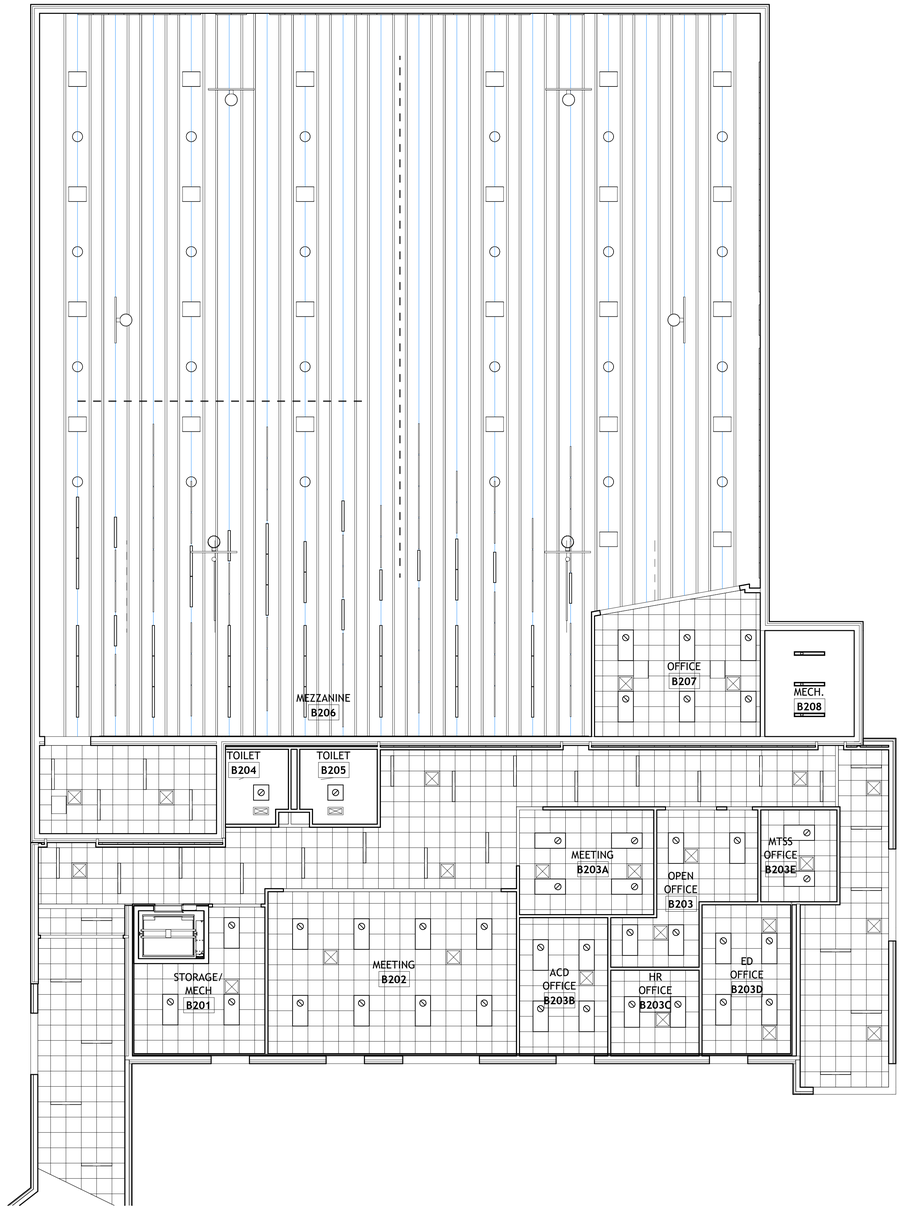
SHEET TITLE:
FIRST FLOOR REFLECTED CEILING PLAN - SHELTER

SHEET NUMBER:

A220A



1 LEVEL 2
1/8" = 1'-0"

N
PROJECT

N
TRUE

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10/01/2024
DATE

PRELIMINARY
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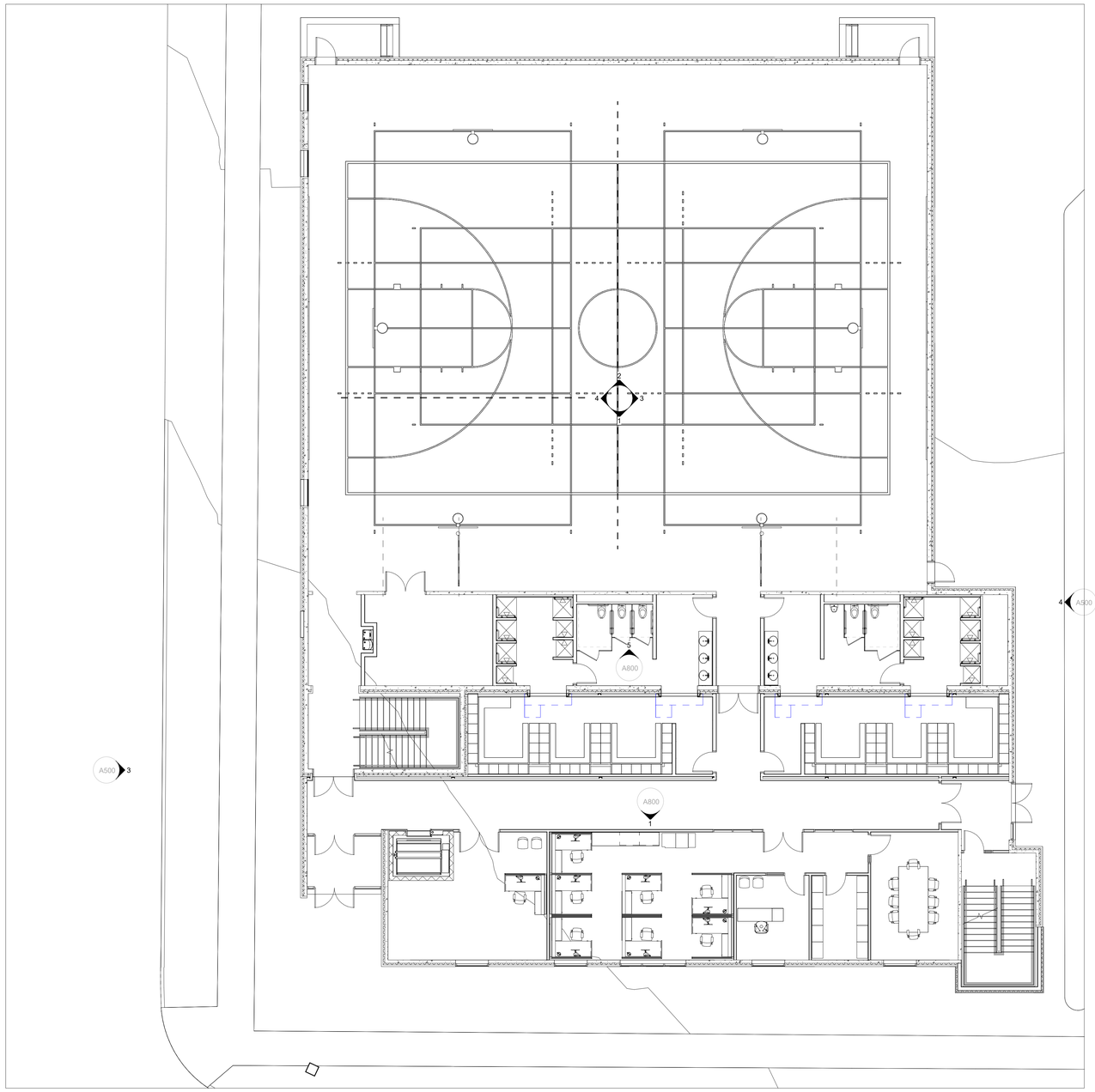
SHEET TITLE:
SECOND FLOOR REFLECTED CEILING PLAN - SHELTER
Copy 1

SHEET NUMBER:

A221A



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SHEET TITLE:
FURNITURE PLAN - FIRST FLOOR

SHEET NUMBER:

A240

OPENING SCHEDULE

OPENING NUMBER	OPENING SIZE		DOOR				FRAME				HARDWARE GROUPS	DETAILS			NOTES
	WIDTH	HEIGHT	THICKNESS	TYPE	MATERIAL	FINISH	TYPE	MATERIAL	FINISH	RATING		HEAD	JAMB	SILL/THRESHOLD	
B1	3' - 0"	7' - 0"	1 3/4"	B	WD	POLY	1	HM	PT	X					
B2	3' - 0"	7' - 0"	1 3/4"	B	WD	POLY	1	HM	PT	X					
B3	3' - 0"	7' - 0"	1 3/4"	B	WD	POLY	1	HM	PT	X					
B4	3' - 0"	7' - 0"	1 3/4"	B	WD	POLY	1	HM	PT	X					
B100	3' - 0"	7' - 0"	1 3/4"	A	HM	PT	1	HM	PT	X					
B101	3' - 0"	7' - 0"	1 3/4"	A	HM	PT	1	HM	PT	X					
B101A	3' - 0"	8' - 0"	1 3/4"	A	WD	POLY	9	HM	PT	X					
B101B	3' - 0"	7' - 0"	1 3/4"	A	WD	POLY	1	HM	PT	X					
B101C	3' - 0"	8' - 0"	1 3/4"	A	WD	POLY	9	HM	PT	X					
B102A	3' - 0"	7' - 0"	1 3/4"	A	WD	POLY	1	HM	PT	X					
B103	3' - 0"	7' - 0"	1 3/4"	A	WD	POLY	1	HM	PT	X					
B103A	3' - 0"	7' - 0"	1 3/4"	A	WD	POLY	1	HM	PT	X					
B104A	3' - 0"	7' - 0"	1 3/4"	A	WD	POLY	1	HM	PT	X					
B105	3' - 0"	7' - 0"	1 3/4"	A	WD	POLY	1	HM	PT	X					
B105A	3' - 0"	7' - 0"	1 3/4"	A	WD	POLY	1	HM	PT	X					
B106	3' - 0"	7' - 0"	1 3/4"	A	HM	PT	1	HM	PT	X					
B107	3' - 0"	7' - 0"	1 3/4"	B	HM	PT	1	HM	PT	X					
B108A	3' - 0"	7' - 0"	1 3/4"	A	HM	POLY	1	HM	PT	X					
B108B	3' - 0"	7' - 0"	1 3/4"	A	HM	POLY	1	HM	PT	X					
B109A	6' - 0"	8' - 0"	1 3/4"	D	WD		SEE ELEV	HM			TBD				
B109B	6' - 0"	8' - 0"	1 3/4"	D	WD		SEE ELEV	HM			TBD				
B110	3' - 0"	7' - 0"	1 3/4"	B	HM	PT	1	HM	PT	X					
B111A	6' - 0"	8' - 0"	1 3/4"	D	WD		SEE ELEV	HM			TBD				
B111B	3' - 0"	7' - 0"	1 3/4"	D	WD	POLY	1	PT	HM	X					
B111C	3' - 0"	8' - 0"	1 3/4"	A	WD	POLY	9	HM	PT	X					
B201	3' - 0"	8' - 0"	1 3/4"	A	HM	PT	1	HM	PT	X					
B202A	3' - 0"	8' - 0"	1 3/4"	A	WD		SEE ELEV	HM			TBD				
B202B	3' - 0"	8' - 0"	1 3/4"	A	WD		SEE ELEV	HM			TBD				
B203	3' - 0"	8' - 0"	1 3/4"	B	WD	POLY	1	HM	PT	X					
B203A	3' - 0"	7' - 0"	1 3/4"	B	WD	POLY	1	HM	PT	X					
B203B	3' - 0"	7' - 0"	1 3/4"	B	WD	POLY	1	HM	PT	X					
B203C	3' - 0"	7' - 0"	1 3/4"	B	WD	POLY	1	HM	PT	X					
B203D	3' - 0"	7' - 0"	1 3/4"	B	WD	POLY	1	HM	PT	X					
B203E	3' - 0"	7' - 0"	1 3/4"	B	WD	POLY	1	HM	PT	X					
B204	3' - 0"	7' - 0"	1 3/4"	A	WD	POLY	1	HM	PT	X					
B205	3' - 0"	7' - 0"	1 3/4"	A	WD	POLY	1	HM	PT	X					
B206	3' - 0"	7' - 0"	1 3/4"	B	HM	PT	1	HM	PT	X					
B207	3' - 0"	7' - 0"	1 3/4"	A	WD	POLY	1	HM	PT	X					
B208	3' - 0"	7' - 0"	1 3/4"	A	HM	PT	1	HM	PT	X					
B209A	3' - 0"	8' - 0"	1 3/4"	C	WD	POLY	1	HM	PT	X					
B209B	3' - 0"	8' - 0"	1 3/4"	C	WD		4	HM		X	12				
B209C	3' - 0"	7' - 0"	1 3/4"	B	HM	PT	1	HM	PT	X					

ROOM FINISH SCHEDULE

ROOM NUMBER	ROOM NAME	FLOOR FINISH	BASE FINISH	NORTH WALL FINISH	NORTH WALL SUBSTRATE	EAST WALL FINISH	EAST WALL SUBSTRATE	SOUTH WALL FINISH	SOUTH WALL SUBSTRATE	WEST WALL FINISH	WEST WALL SUBSTRATE	CEILING MATERIAL	CEILING FINISH	CEILING HEIGHT
B1	OT													
B2	TUTOR													
B3	SENSORY													
B4	TUTOR													
B5	Room													
B100	FACILITIES													
B101	OPEN OFFICE/ WORKSTATIONS													
B101A	BUSINESS OFFICE													
B101B	FILES													
B101C	MEETING													
B102	LOCKERS													
B103	MEN'S TOILET													
B103A	MEN'S SHWR													
B104	LOCKERS													
B105	WOMEN'S TOILET													
B105A	WOMEN'S SHWR													
B106	STORAGE													
B107	Room													
B108	SHELTER													
B109	VEST.													
B110	Room													
B111	VEST.													
B201	STORAGE/ MECH													
B202	MEETING													
B203	OPEN OFFICE													
B203A	MEETING													
B203B	ACD OFFICE													
B203C	HR OFFICE													
B203D	ED OFFICE													
B203E	MTSS OFFICE													
B204	TOILET													
B205	TOILET													
B206	MEZZANINE													
B207	OFFICE													
B208	MECH.													
B209	Room													

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1455 VICTORIA WAY

CONSULTANT

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Project Number: 23008.003
Date: 10/01/2024

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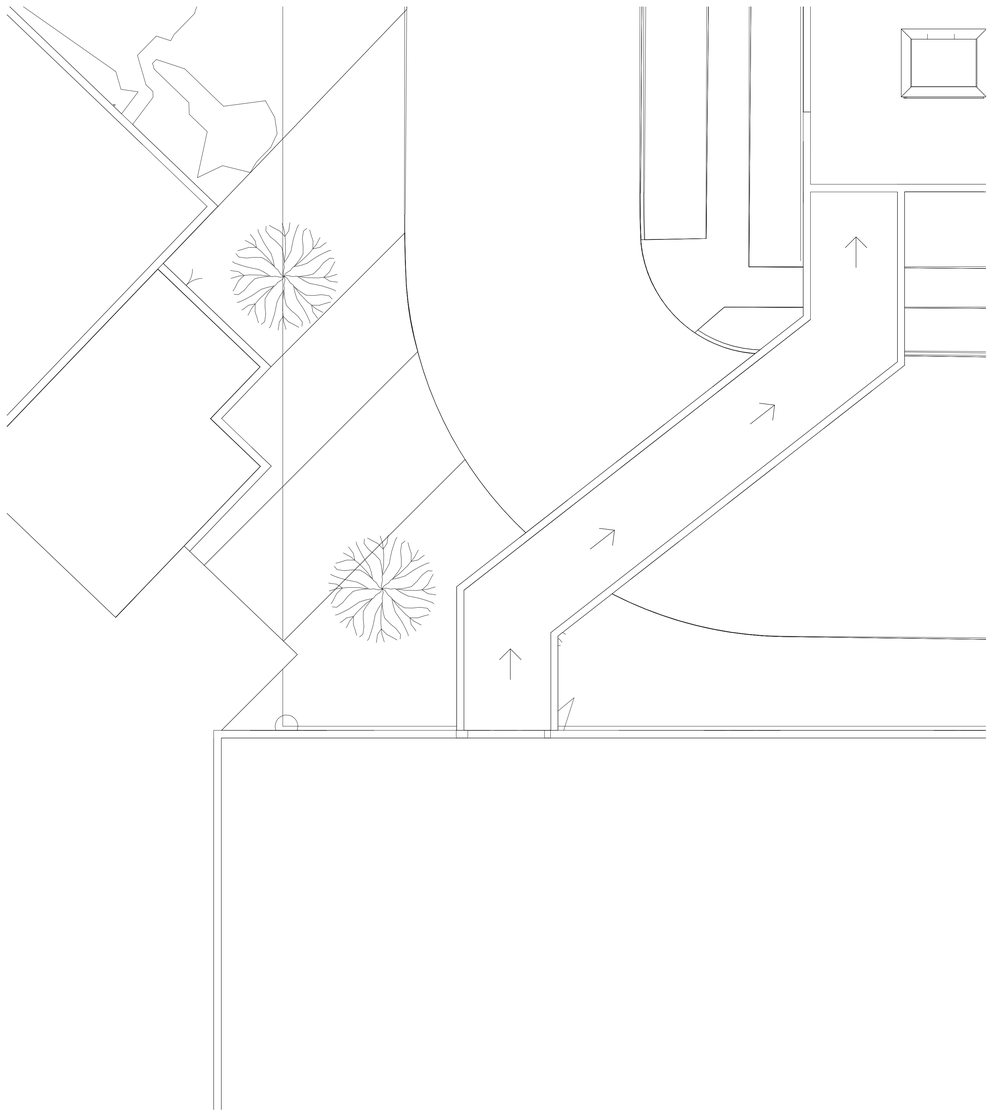
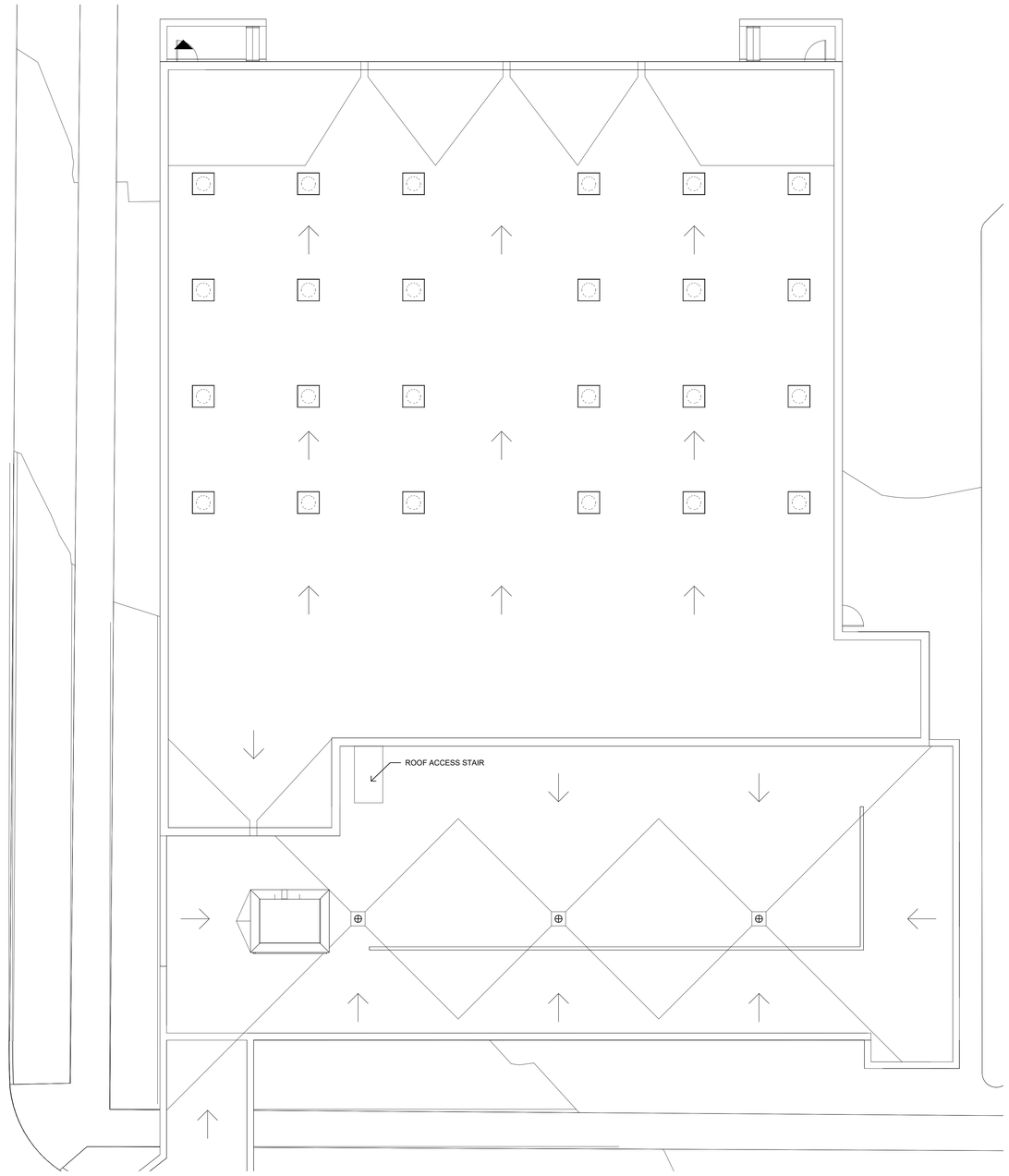
SHEET TITLE:
OPENING & FINISH SCHEDULE

SHEET NUMBER:

A300



2 ROOF PLAN SKYWAY
1/8" = 1'-0"



1 ROOF PLAN SHELTER
1/8" = 1'-0"

N PROJECT

N TRUE

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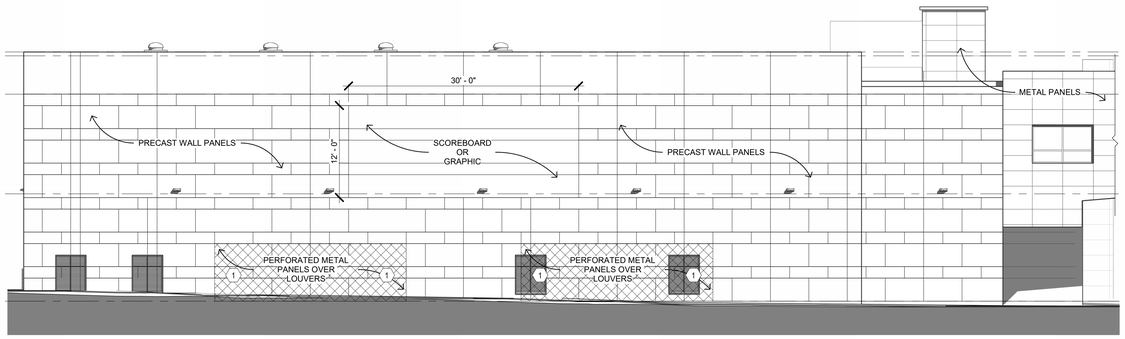
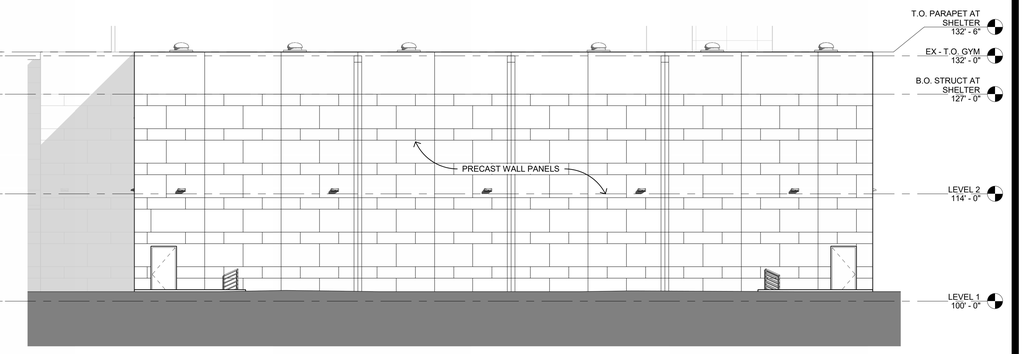
SHEET TITLE:
ROOF PLAN - SHELTER

SHEET NUMBER:

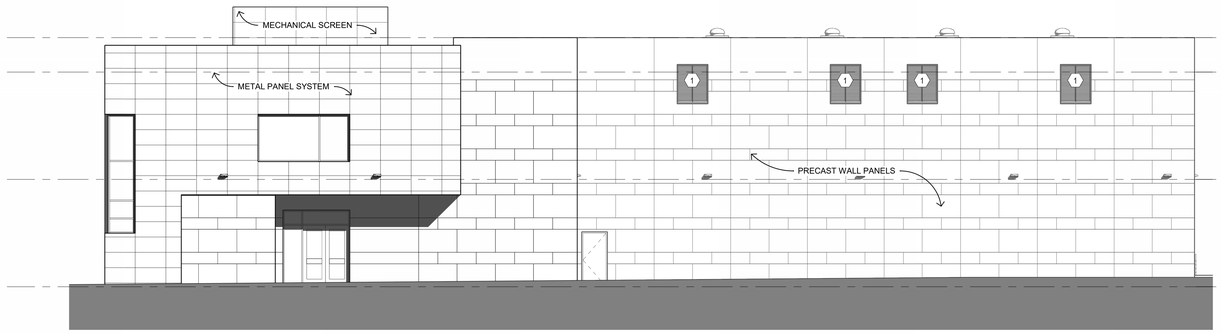
A400



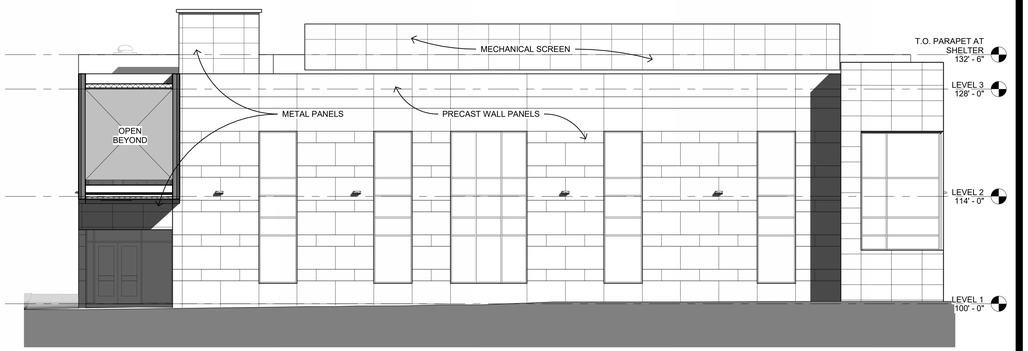
3 SHELTER ELEVATION - SOUTH WEST
1/8" = 1'-0"



1 SHELTER ELEVATION - NORTH WEST
1/8" = 1'-0"



4 SHELTER ELEVATION - NORTH EAST
1/8" = 1'-0"



2 SHELTER ELEVATION - SOUTH EAST
1/8" = 1'-0"

EXTERIOR ELEVATION KEYNOTES

Keynote Number	Keynote Description
1	FEMA RATED LOUVER, SEE MECH

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1455 VICTORIA WAY

CONSULTANT

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Project Number: 23008.003
Date: 10/01/2024

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10/01/2024
DATE

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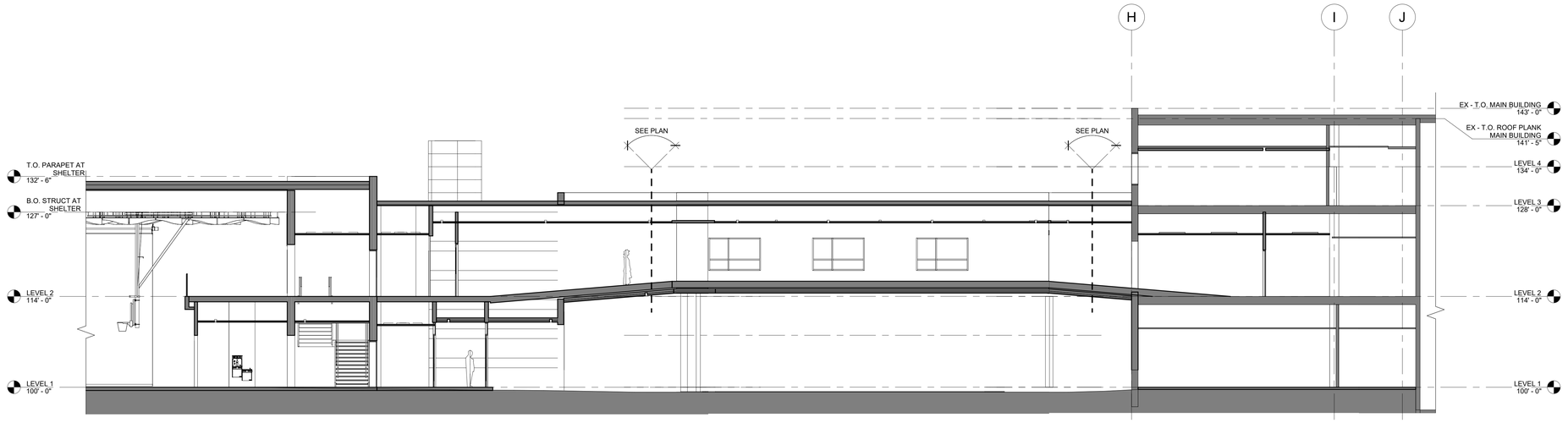
Not For Construction

SHEET TITLE:
SHELTER BUILDING ELEVATIONS

SHEET NUMBER:

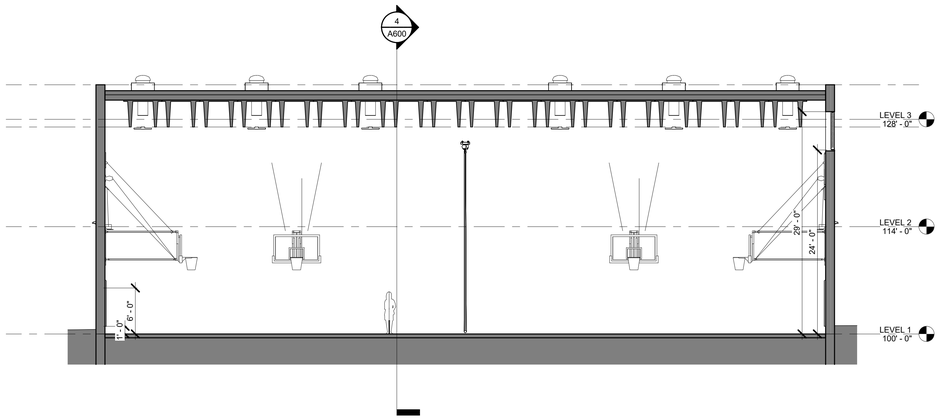
A500



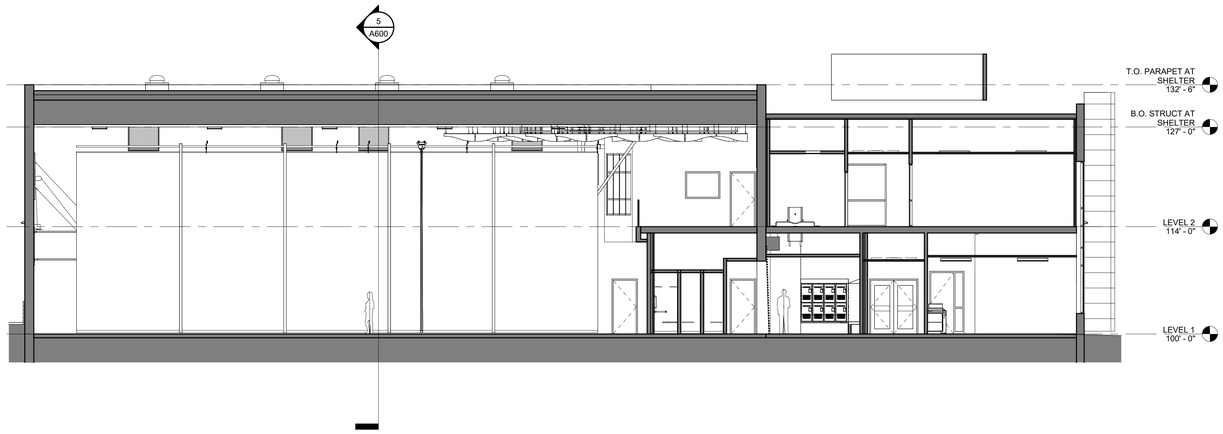
3 SKYWAY SECTION - AT NEW
1/8" = 1'-0"

1 SKYWAY SECTION - CENTER1
1/8" = 1'-0"

2 SKYWAY SECTION - AT EXISTING
1/8" = 1'-0"



5 EAST-WEST SECTION AT SHELTER
1/8" = 1'-0"



4 NORTH-SOUTH SECTION AT SHELTER
1/8" = 1'-0"

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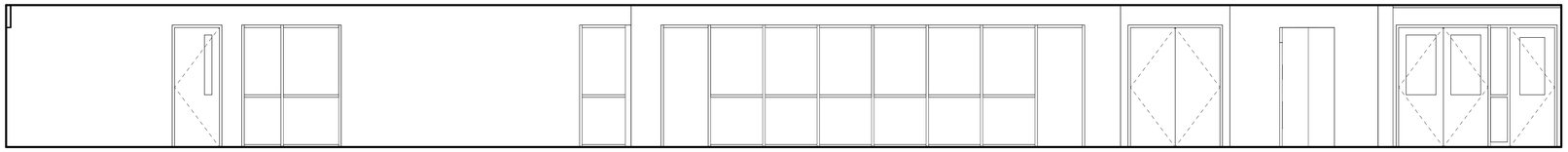
SHEET TITLE:
BUILDING SECTIONS

SHEET NUMBER:

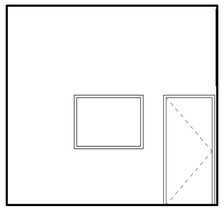
A600

1 LEVEL 1 HALLWAY SOUTH
1/4" = 1'-0"

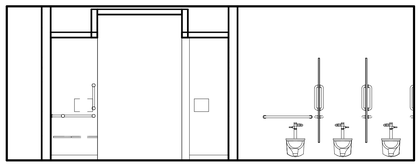


2 LEVEL 2 HALLWAY SOUTH
1/4" = 1'-0"

3 LEVEL 2 HALLWAY NORTH
1/4" = 1'-0"



4 LEVEL 2 MEZZANINE EAST
1/4" = 1'-0"



5 LEVEL 1 BATHROOM
1/4" = 1'-0"

HAY DOBBS
ARCHITECTURE
URBAN DESIGN
PLANNING
INTERIORS
WWW.HAYDOBBS.COM
Midtown Commons
2324 University Ave. W,
Suite 200
St. Paul, MN 55114
Tel. 612.338.4590

NOVA CLASSICAL ACADEMY
1455 VICTORIA WAY

CONSULTANT

Project Name: NOVA CLASSICAL ACADEMY
Project Number: 23008.003
Date: 10/01/2024

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME

SIGNATURE

LICENSE NO.

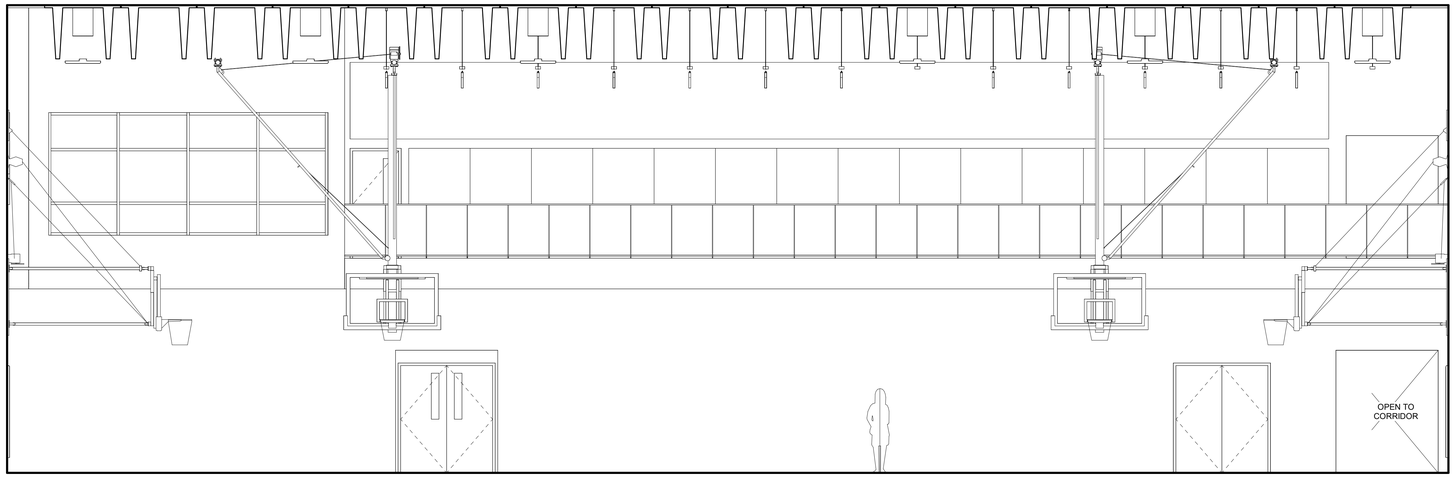
10/01/2024
DATE

PRELIMINARY
Not For Construction

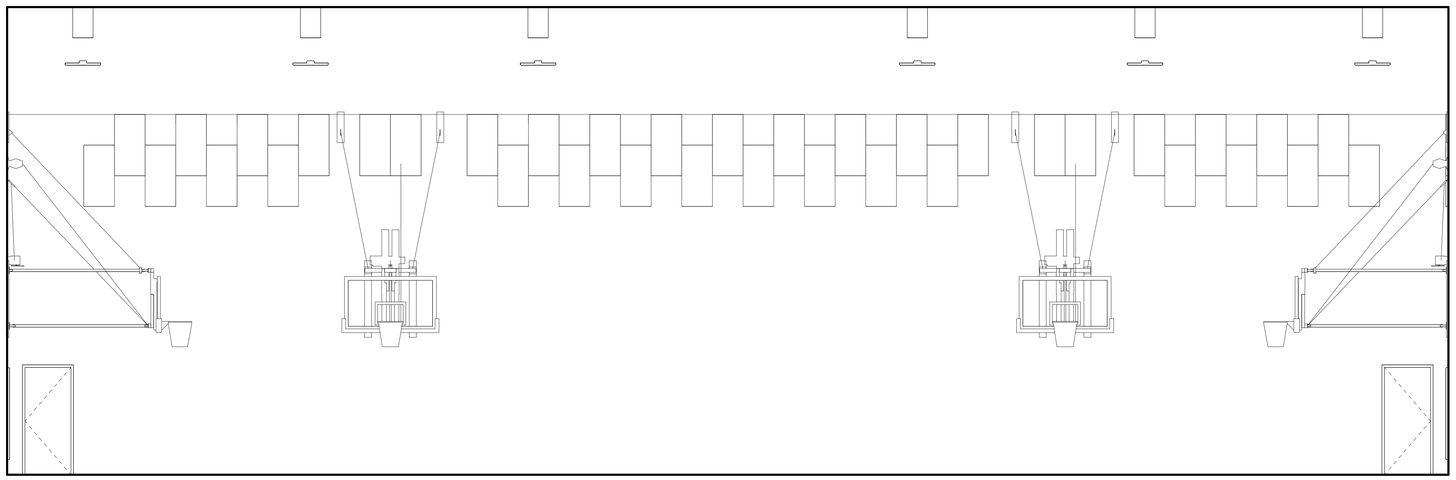
SHEET TITLE:
INTERIOR ELEVATIONS

SHEET NUMBER:

A800



1 INTERIOR ELEVATION - SHELTER LOOKING SOUTH
1/4" = 1'-0"



2 INTERIOR ELEVATION - SHELTER LOOKING NORTH
1/4" = 1'-0"

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PLANNING
INTERIORS
WWW.HAYDOBBS.COM
Midtown Commons
2324 University Ave. W,
Suite 200
St. Paul, MN 55114
Tel. 612.338.4990

NOVA CLASSICAL ACADEMY
1455 VICTORIA WAY

CONSULTANT

Project Name: NOVA CLASSICAL ACADEMY
Project Number: 23008.003
Date: 10/01/2024

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PRINT NAME

SIGNATURE

LICENSE NO.

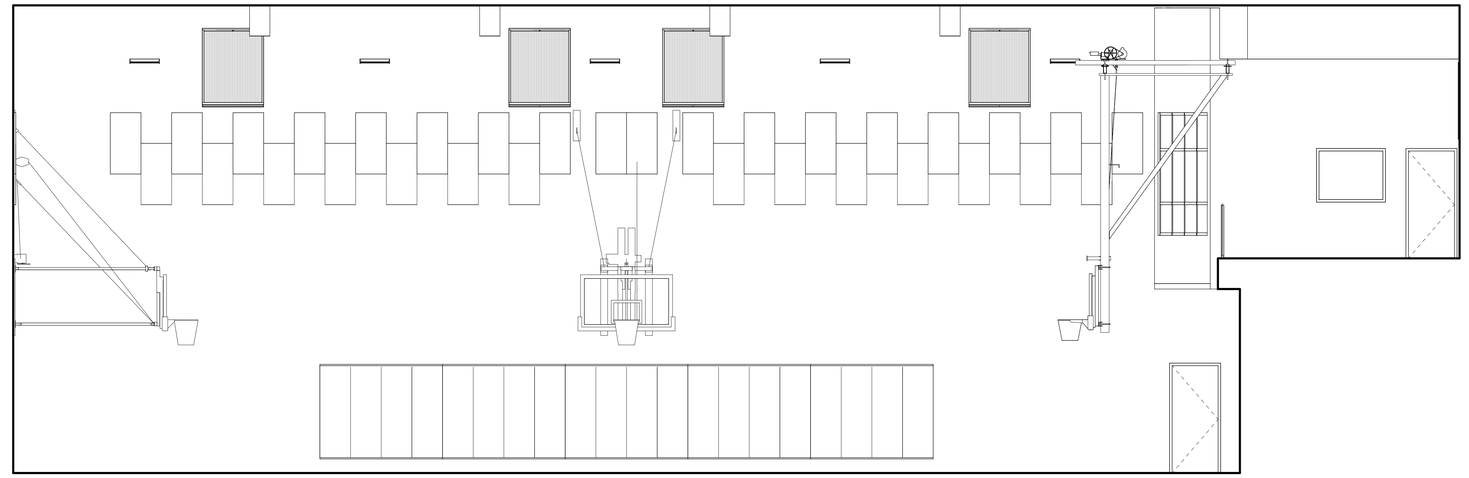
10/01/2024
DATE

PRELIMINARY Not For Construction

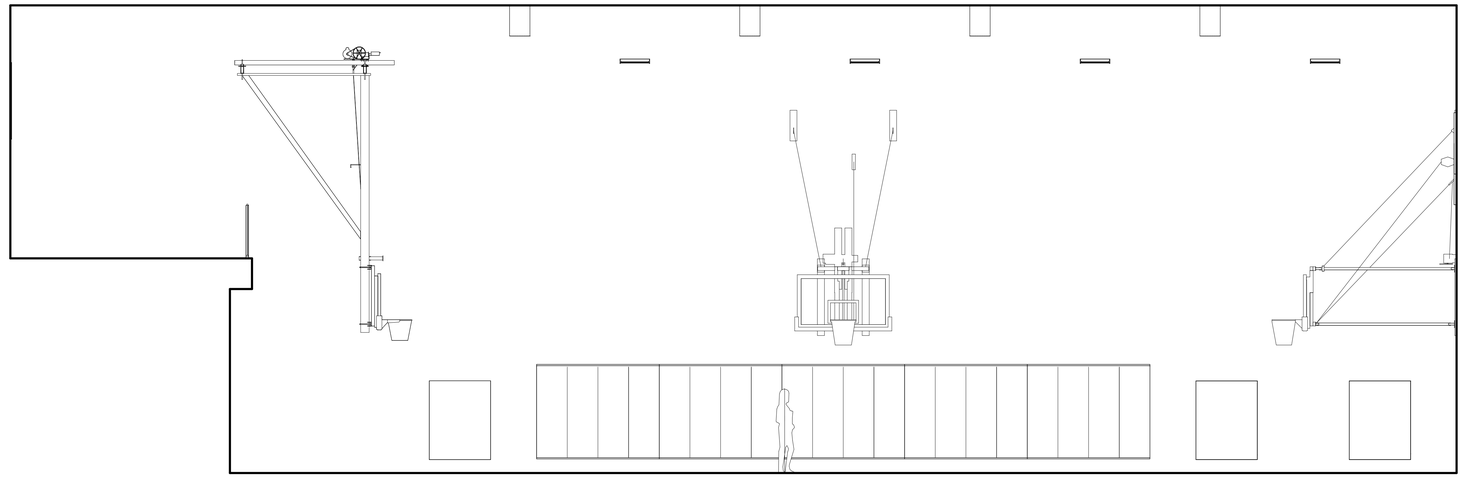
SHEET TITLE:
INTERIOR ELEVATIONS

SHEET NUMBER:

A801



3 INTERIOR ELEVATION - SHELTER LOOKING EAST
1/4" = 1'-0"



4 INTERIOR ELEVATION - SHELTER LOOKING WEST
1/4" = 1'-0"

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Midtown Commons
2324 University Ave. W,
Suite 200
St. Paul, MN 55114
Tel. 612.338.4590

NOVA CLASSICAL ACADEMY
1455 VICTORIA WAY

CONSULTANT

Project Name: NOVA CLASSICAL ACADEMY
Project Number: 23008.003
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PRINT NAME

SIGNATURE

LICENSE NO.

10/01/2024
DATE

PRELIMINARY
Not For Construction

SHEET TITLE:
INTERIOR ELEVATIONS

SHEET NUMBER:

A802

1 ILLUSTRATIVE VIEW OF SKYWAY

2 ILLUSTRATIVE VIEW OF GYM

3 ILLUSTRATIVE VIEW OF WEIGHT ROOM

4 ILLUSTRATIVE VIEW OF BUS PARKING ENTRANCE

HAY DOBBS
ARCHITECTURE
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PLANNING
INTERIORS
WWW.HAYDOBBS.COM
Midtown Commons
2324 University Ave. W,
Suite 200
St. Paul, MN 55114
Tel. 612.338.4590

NOVA CLASSICAL ACADEMY
1455 VICTORIA WAY

CONSULTANT

Project Name: NOVA CLASSICAL ACADEMY
Project Number: 23008.003
Date: 10/01/2024

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PRINT NAME

SIGNATURE

LICENSE NO.

10/01/2024
DATE

PRELIMINARY
Not For Construction

SHEET TITLE:
ILLUSTRATIVE VIEWS

SHEET NUMBER:

SK01

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SECTION 2

CIVIL NARRATIVE AND DRAWINGS

BKBM
Structural & Civil Engineers

6120 Earle Brown Drive Suite 700
Minneapolis, MN 55430

3507 Ringsby Court, Suite 105
Denver, CO 80216

NOVA CLASSIC ACADEMY
CIVIL SCHEMATIC DESIGN NARRATIVE FOR EXPANSION 10/7/2024

Nova Classic Academy is located at 1455 Victoria Way in Saint Paul. The school is interested in expanding their facility by adding a skyway with a building addition and storm shelter being constructed on a vacant lot on the north side of Mercer Street. The total parcel area for the building addition is 1.14 acres. A 10-stall bus parking lot is planned to the east of the building addition.

DEMOLITION AND REMOVALS

The scope of selective site demolition will generally be the removal of existing vegetation and pavements that currently exist near the footprint of the building and parking lot addition or due to utility service extensions to the building. All debris is to be hauled offsite for disposal or sorted and recycled. All voids are to be backfilled and compacted and sloped to drain away from the building.

EARTHWORK, EXCAVATION AND GRADING

Erosion control silt fence and sediment control devices are to be installed around the perimeter of the proposed scope of work to limit sediment from leaving the construction site and to fulfill permit requirements. A temporary rock construction entrance and inlet sediment control devices will also be required.

Existing topsoil within the grading limits encompassing the building and any service drives, sidewalks, and utility installations shall be removed and stockpiled for later use. Exterior finished grading will be required around the new building area and paved areas. Excavations will be required for footings and foundations, and any direct-bury utilities needed for the building addition. All fill areas will require either imported granular borrow or soil salvaged from site grading activities if approved for reuse by the geotechnical engineer. The stockpiled topsoil may be utilized for finish grading. Disturbed areas are to have 6” of topsoil placed prior to turf establishment.

Based on Ramsey County’s GIS maps, grades range from approximate elevation 790.5 in the northwest corner of the parcel to approximate elevation 787.5 in the southeast corner of the lot. We anticipate an approximate finish floor elevation of 790.0 for the new building addition.

BKBM has been informed that the site is contaminated. We were informed that there are encapsulated contaminated soils approximately 12 to 14-feet below the surface. There is a geomembrane liner between the contaminated soils and the 12 to 14-feet of clean soils near the surface. The contaminated soils are not to be disturbed by this construction. A gas mitigation system with clean rock backfill, a vapor barrier, and venting is required for the building floor. Stormwater management via infiltration will not be allowed on the site due to the underlying contamination.

STORM AND SANITARY SEWERS

A 6-inch ductile iron sanitary sewer service is stubbed to the property off Mercer Street. The service is 65 feet east of the east right of way of Madson Street. There is an 8-inch sanitary sewer main in Mercer Way that is approximately 10-feet deep if the existing sewer service cannot be used. There is also a sanitary sewer main in Madson Street, but city asbuilts are not currently available. Kay Avenue also has services stubbed to the property but the permit numbers for each service are not listed on the sewer permit maps.

Storm sewers exist near the southeast corner of the parcel in Mercer Way near Kay Avenue. The storm sewer flows southeast and outlets southeast of Victoria Way into the Soo Line (Canadian Pacific) Railroad right of way. The storm sewer in Mercer near Kay Way is 5 to 7.5 feet deep.

The City of St. Paul requires on-site stormwater management for rate control for sites with more than one-quarter acre of site disturbance. Capitol Region Watershed District requires stormwater rate control, volume reduction, and stormwater treatment for sites greater than one-acre. Since the site is contaminated and infiltration is not allowed, stormwater runoff must be filtered and the required stormwater treatment volume must be multiplied by 1.82 (55% infiltration credit). The current treatment and runoff standards for the City of St Paul and Capitol Region Watershed District are as follows:

- Volume Control – Provide the abstraction of 1.1-inches of runoff from the new and reconstructed impervious surfaces.
- Water Quality – Provide 90% Total Suspended Solids removal from 1.1-inches of runoff from the new and reconstructed impervious surfaces.
- Watershed District's Peak Stormwater Runoff Control – Proposed runoff rates shall not exceed existing runoff rates.
- St Paul's Peak Stormwater Runoff Control – Proposed runoff rates shall not exceed 1.64 cubic feet per second per acre.

An on-site stormwater filtration basin will be required that manages stormwater runoff from the area disturbed due to construction. The basin will likely be a surface pond located in the northwest corner of the site. If it is not desirable to use this portion of the parcel for a basin, an underground stormwater basin could be constructed under the east parking lot proposed for buses. An underground basin would be more costly and it would likely have more limiting constraints due to the soil contamination below. The basin will outlet into public storm sewer near Mercer Street and Kay Way. Preliminary estimates indicate a 12,000 cubic foot surface basin with a bottom elevation of 784.0 will be required to provide volume control, water quality, and controlling the peak runoff for an estimated 0.65 acres of impervious surfacing.

Soil contamination does not negate the requirement for on-site stormwater management. If contamination is present, the stormwater management basin will need to be lined with a 30-mil geomembrane liner. The stormwater will be treated via sand filtration, then collected in an underlying drain tile pipe that outlets into the public storm sewer.

DOMESTIC WATER AND FIRE SERVICE

A 6-inch ductile iron and 4-inch ductile iron water services are stubbed to the property off Mercer Street. Refer to the attached PDF for the approximate location of the services.

CONCRETE AND BITUMINOUS PAVING

Concrete pavement placed will have a pavement section of 8 inches of concrete over 6 inches of Class 5 aggregate base. Concrete sidewalks connecting the proposed entrances and exits are to be 4-inches of concrete over 6-inches of Class 5 aggregate base.

Access drives and the bituminous paved parking lot will be paved with a pavement section generally consisting of two courses of 2-inch-thick bituminous pavement over 8-inches of Class 5 aggregate base. Driveways and parking lots will require B612 concrete curb added to support the edge of the roadway and for drainage purposes.

Utility trenching and project scope that extends into the adjacent public streets will need to restore the street pavement sections to existing conditions.

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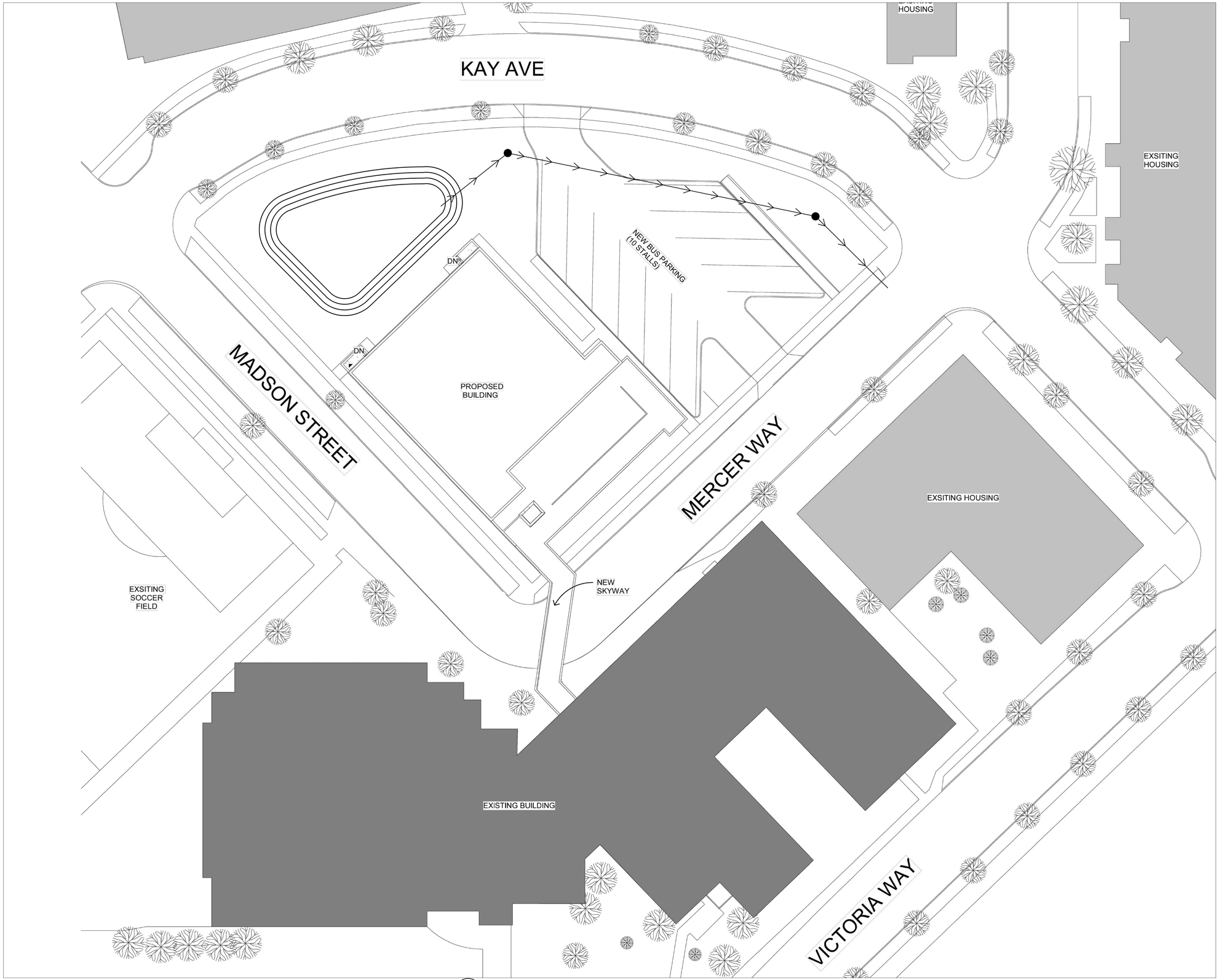
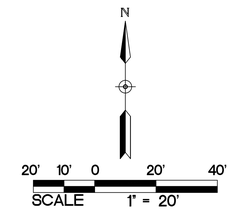
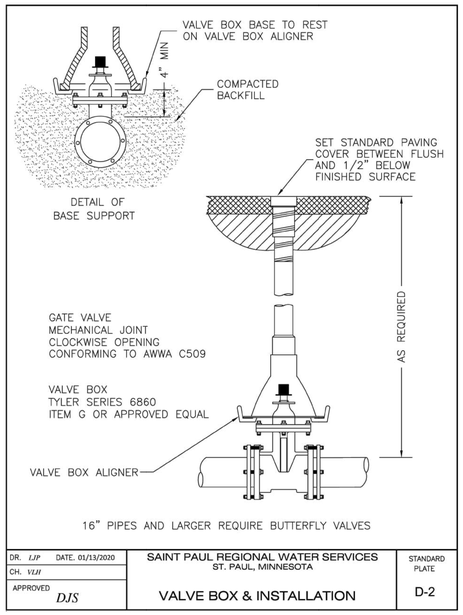
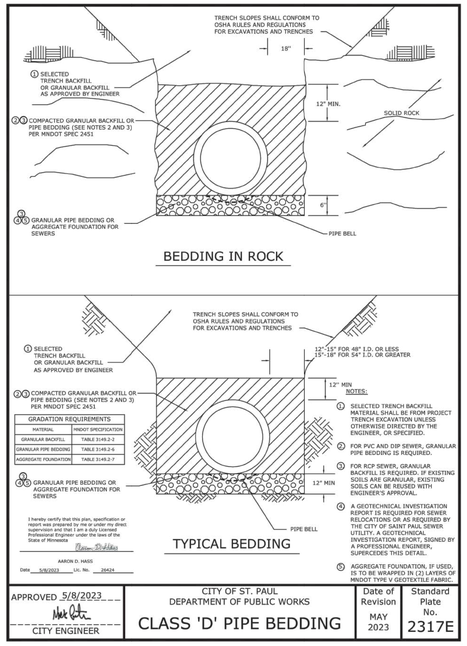




1 EX. SCHEMATIC DESIGN EXHIBIT
1" = 20'



7 C500 GATE VALVE AND BOX INSTALLATION
NOT TO SCALE

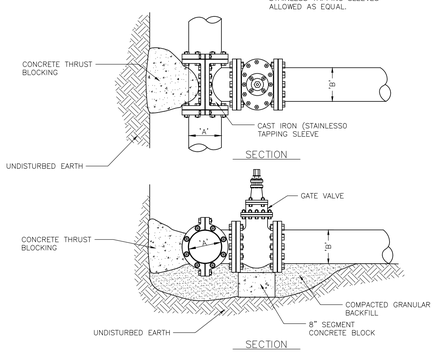


5 C500 CLASS 'D' PIPE BEDDING
NOT TO SCALE

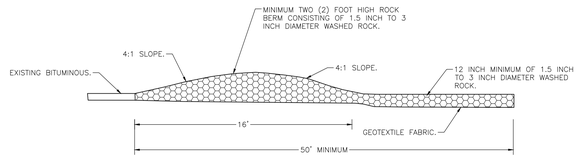
	EXISTING PIPE 'A'						
BRANCH PIPE 'B'	18"	16"	14"	12"	10"	8"	6"
12"	C,D	C,D	C	C			
10"	C,D	C,D	C,D	C	C		
8"	C,D	C,D	C,D	C,D	C	C	
6"	C,D	C,D	C,D	C,D	C,D	C	C
4"	C,D	C,D	C,D	C,D	C,D	C,D	C

C – CLOW F-5205,TGW A212A OR EQUAL. FULL CAST IRON TAPPING SLEEVE.
D – KENNEDY SQUARESEAL OR EQUAL. CAST IRON TAPPING SLEEVE.

NOTE: STAINLESS TAPPING SLEEVES ALLOWED AS EQUAL.



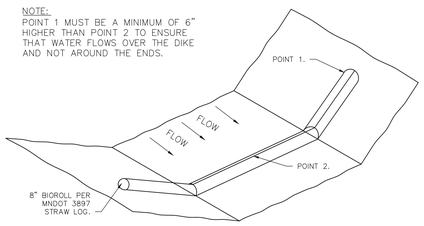
4 C500 WATERMAIN WET TAP (TYP.)
NOT TO SCALE



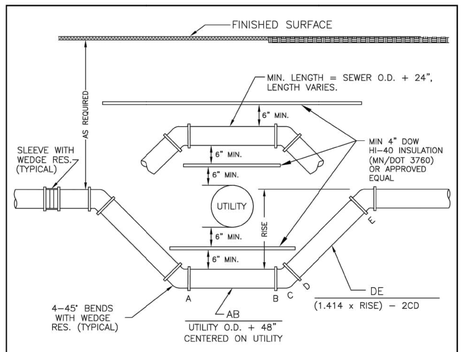
NOTE:
1. MINIMUM LENGTH OF 50 FEET AND WIDTH OF 12 FEET.
2. FOLLOW ALL CITY, WATERSHED DISTRICT AND MPCA STANDARDS.
3. CLEAN STREETS ON A DAILY BASIS OR MORE FREQUENTLY IF REQUESTED BY CITY, WATERSHED DISTRICT OR MPCA.

1 C500 BERMED ROCK CONSTRUCTION ENTRANCE
NOT TO SCALE

NOTE:
POINT 1 MUST BE A MINIMUM OF 6" HIGHER THAN POINT 2 TO ENSURE THAT WATER FLOWS OVER THE DIKE AND NOT AROUND THE ENDS.



2 C500 BIO ROLL
NOT TO SCALE



- IF AB IS LONGER THAN A STANDARD LENGTH OF PIPE, NO SLIP JOINT WILL BE ALLOWED.
- ALL OFFSETS SHALL BE RESRAINTED

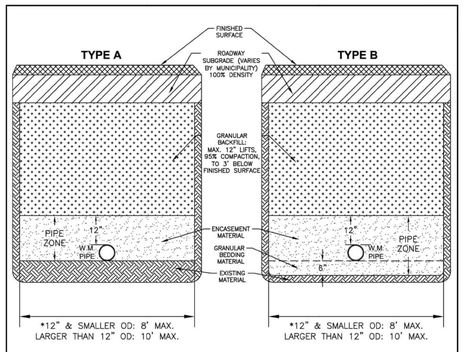
WM SIZE	CD (STD. CIP)	CD (COMPACT DIP)
6"	5"	3"
8"	5.5"	3.5"
12"	7.5"	5.5"
16"	8"	5.5"

FOR RESTRAINED PIPE LENGTHS SEE PLATE D-11

* INSULATION AND MIN. SEPARATION SHOWN BETWEEN WATER MAIN AND UTILITY APPLY TO STORM SEWER CROSSINGS ONLY. SEE SECTION 2530 FOR SEPARATION REQUIREMENTS FOR OTHER UTILITY CROSSINGS.

DR. AMB DATE. 01/13/2020
CH. TMJ
APPROVED RWH
SAINT PAUL REGIONAL WATER SERVICES
CITY OF ST. PAUL, MN
TYPICAL WATER MAIN OFFSETS
STANDARD PLATE D-10

8 C500 WATER MAIN OFFSETS
NOT TO SCALE



TYPE A TRENCH TO BE CONSIDERED STANDARD TRENCH

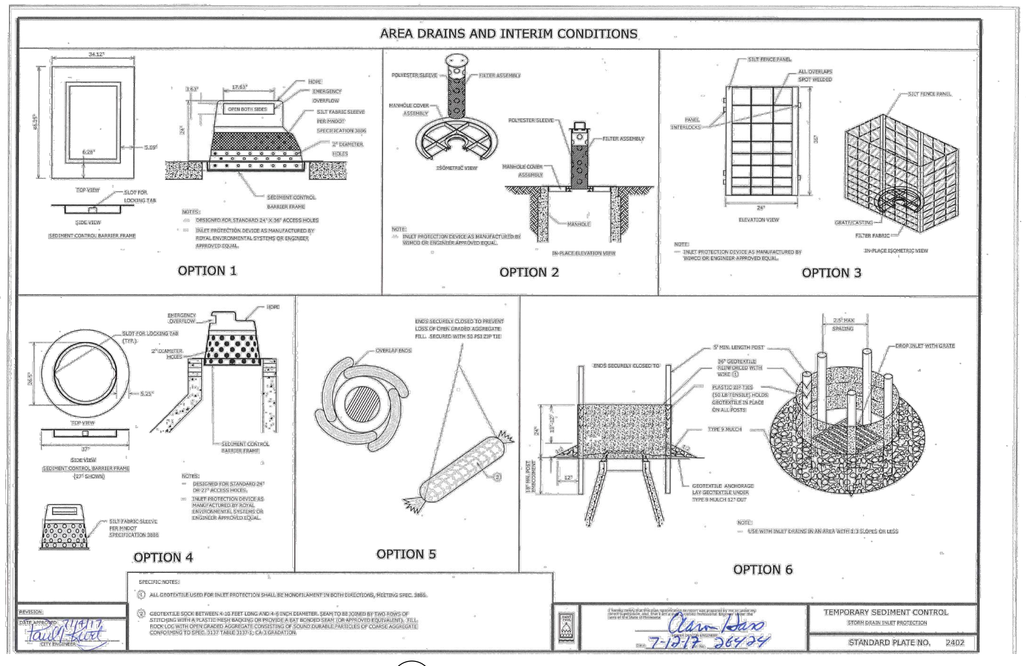
TYPE B TRENCH TO BE IMPLEMENTED IN THE FOLLOWING CASES:
- BASE MATERIAL IS OR CONTAINS ROCK(S)
- WET CONDITIONS
- FLEXIBLE PIPE (HDPE, PEX, PVC, ETC.)
- UNSUITABLE/UNSTABLE SOILS

SPRWS TO MAKE FINAL DETERMINATION TRENCH TYPE AND USE OF IMPORTED BEDDING AND BACKFILL MATERIAL

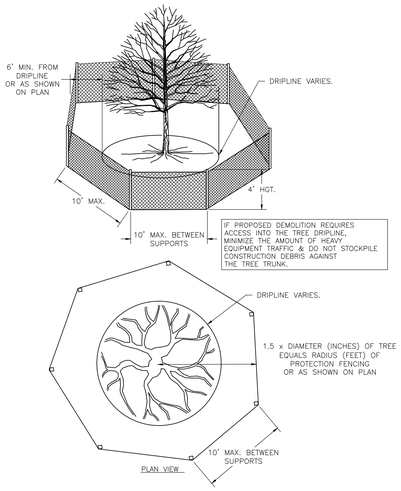
* TRENCH WIDTH INCLUDING TENCH BOX

DR. AMB DATE. 02/05/2020
CH. TMJ
APPROVED RWH
SAINT PAUL REGIONAL WATER SERVICES
CITY OF ST. PAUL, MN
WATER MAIN TRENCH DETAIL
STANDARD PLATE D-5

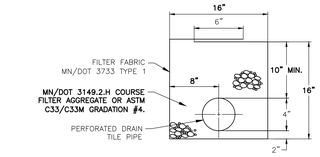
6 C500 WATER MAIN TRENCH DETAIL
NOT TO SCALE



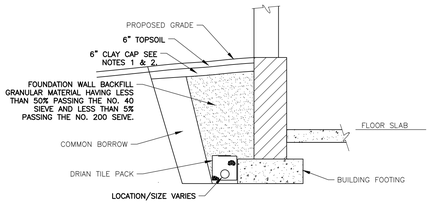
3 C500 INLET PROTECTION DETAILS
NOT TO SCALE



8 C501 TREE PROTECTION
NOT TO SCALE

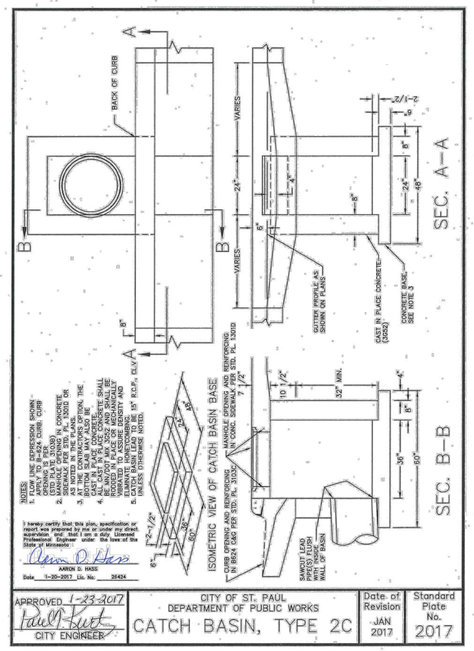


DRAIN TILE PACK

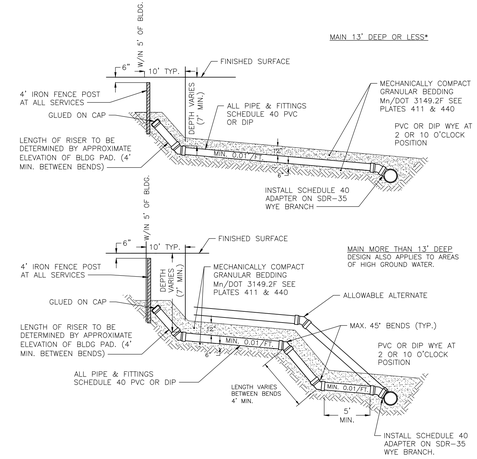


NOTE:
1. WHERE PAVEMENT IS ADJACENT TO FOUNDATION WALL, CONTRACTOR SHALL INSTALL PAVEMENT SECTION DIRECTLY OVER FOUNDATION WALL BACKFILL. CLAY CAP AND TOPSOIL SHALL NOT BE INSTALLED UNDER PROPOSED PAVEMENT SECTIONS.
2. THE FINAL ONE-FOOT OF BACKFILL FOR LANDSCAPED OR TURF "GREEN" AREAS SHALL CONSIST OF CLAY OR SILT BASED BACKFILL AND TOPSOIL. THE INTENT IS TO PREVENT STORM WATER FROM INFILTRATING INTO SOILS DIRECTLY ADJACENT TO THE FOUNDATION WALL OF THE BUILDING.
3. DRAIN TILE SHALL NOT BE INSTALLED WITHIN THE ZONE OF INFLUENCE OF THE BUILDING FOOTING.

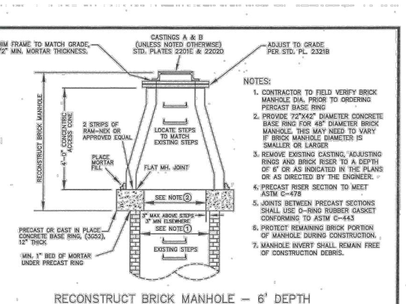
6 C501 BUILDING PERIMETER DRAIN TILE
NOT TO SCALE



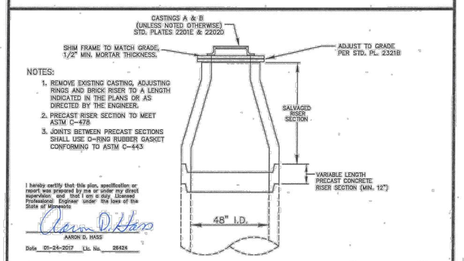
3 C501 24" x 36" CATCH BASING
NOT TO SCALE



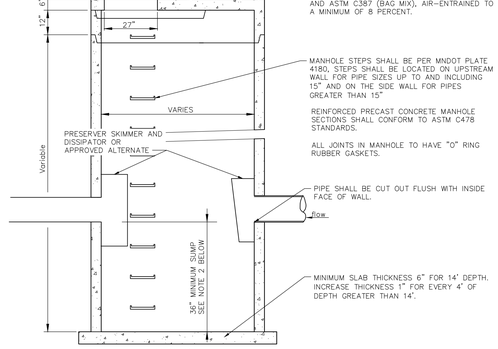
1 C501 SANITARY SEWER CONNECTIONS
NOT TO SCALE



RECONSTRUCT BRICK MANHOLE — 6' DEPTH

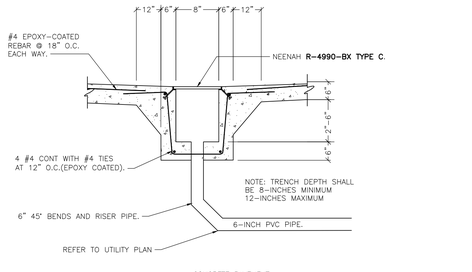


9 C501 MANHOLE RECONSTRUCTION DETAIL
NOT TO SCALE



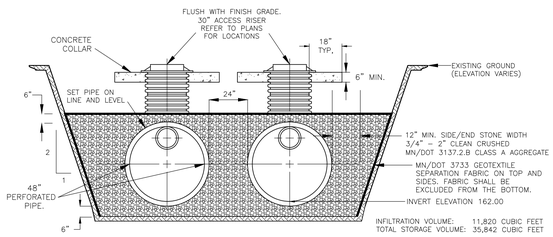
NOTE
1: SNOUT OR ENVIROHOOD DEVICE SHALL HAVE A CROSS-SECTIONAL AREA GREATER THAN OR EQUAL TO THE CROSS-SECTIONAL AREA OF THE OUTLET PIPE OF THE SUMP MANHOLE.
2: SUMP DEPTH SHALL BE EQUAL TO 3 TIMES THE OUTLET PIPE DIAMETER. WITH A MAXIMUM SUMP DEPTH OF 9 FEET.

7 C501 SUMP CATCH BASIN MANHOLE
NOT TO SCALE



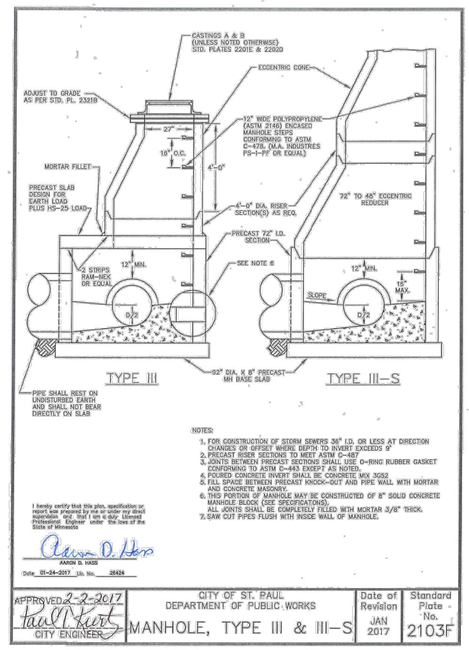
CONCRETE PAVEMENT

4 C501 TRENCH DRAIN DETAIL
NOT TO SCALE

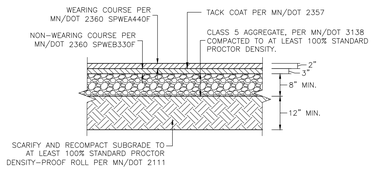


1. CONTRACTOR HAS OPTION TO USE CMP OR HDPE PIPE. SYSTEM LAYOUT IS DESIGNED BASED ON CMP PIPE. ANY ALTERNATE DESIGNS MUST BE APPROVED BY CIVIL ENGINEER PRIOR TO CONSTRUCTION.
2. UTILIZE CARE WHEN LOWERING UNIT INTO THE TRENCH. HANDLE USING NYLON SLINGS AND TWO PICK POINTS.
3. PLACE BACKFILL AROUND THE UNIT IN UNIFORM 8"-12" LIFTS, COMPACTED TO 95% SPD.
4. WHEN THE UNIT CONSISTS OF 2 SECTIONS, PLACE THE DOWNSTREAM SECTION FIRST. CONNECT AND HOME THE REMAINING SECTIONS.
5. ALL CONNECTION POINTS ARE TO BE SOIL PROOF.
6. ACCESS RISERS AND CONCRETE COLLARS SHALL BE DESIGNED TO WITHSTAND HS25 LOADING.
7. PIPE SHALL BE FURNISHED WITH PERFORATIONS 3/8" IN DIAMETER AND PERFORATED FOR THE FULL 360 DEGREE CIRCUMFERENCE OF THE PIPE. MINIMUM OPEN AREA SHALL BE 2.3% OR GREATER.
8. CONSTRUCTION TRAFFIC IN TANK BASIN IS NOT ALLOWED AFTER AREA HAS BEEN EXCAVATED. PRIOR TO FINAL STABILIZATION, LOOSEN SOIL WITH MECHANICAL TILLER TO A MINIMUM DEPTH OF 18-INCHES. TANK BASINS ARE NOT APPROVED BORROW SITES AND ARE NOT TO BE USED AS TEMPORARY SEDIMENT BASIN ONCE BASIN SUBGRADE ELEVATION HAS BEEN EXCAVATED. CONTRACTOR SHALL ENSURE THAT BASIN INFILTRATES AT A MINIMUM RATE AS INDICATED ON PLAN USING A DOUBLE RING INFILTROMETER TEST BEFORE FINAL ACCEPTANCE. DOUBLE RING INFILTROMETER TEST SHALL BE SIGNED BY A REGISTERED GEOTECHNICAL ENGINEER AND SUBMITTED TO THE CITY AND ENGINEER FOR REVIEW BEFORE FINAL APPROVAL.
9. NOTIFY CRWD (651-644-8888) AT LEAST 24 HOURS BEFORE THE CONSTRUCTION OF PERMANENT STORMWATER TREATMENT SYSTEMS.
10. WHERE POSSIBLE, EXCAVATION SHALL BE DONE FROM THE SIDES AND OUTSIDE OF THE FOOTPRINT OF THE INFILTRATION AREA TO AVOID SOIL COMPACTION.
11. INFILTRATION PERIMETER CONTROL AND EROSION CONTROL PRACTICES SHALL REMAIN IN PLACE UNTIL THE FINAL COMPLETION OF THE PROJECT OR VEGETATION HAS BEEN ESTABLISHED (WHICHEVER IS LATER).
12. INSTALLATION OF INFILTRATION PRACTICES SHALL BE DONE DURING PERIODS OF DRY WEATHER AND COMPLETED BEFORE A RAINFALL EVENT. PLACEMENT OF ENGINEERED SOILS SHALL BE ON DRY NATIVE SOIL ONLY.
13. ENGINEERED SOIL SHALL REMAIN UNCONTAMINATED (NOT MIXED WITH OTHER SOIL) BEFORE AND DURING INSTALLATION.
14. SUBMIT FINAL SHOP DRAWINGS TO CAPITOL REGION WATERSHED DISTRICT FOR REVIEW AND APPROVAL AT LEAST SEVEN (7) DAYS BEFORE CONSTRUCTION OF PERMANENT STORMWATER TREATMENT SYSTEMS.

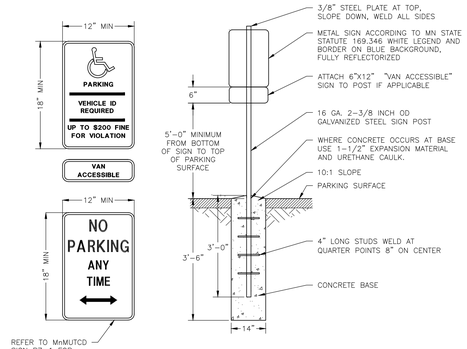
5 C501 INFILTRATION TANK DETAIL
NOT TO SCALE



2 C501 MANHOLE DETAIL
NOT TO SCALE

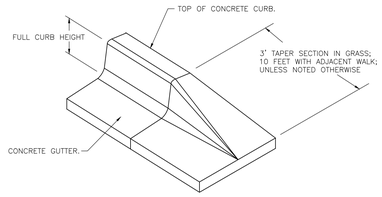


11 C502 WEST 7TH AVE. BITUMINOUS PAVEMENT
NOT TO SCALE

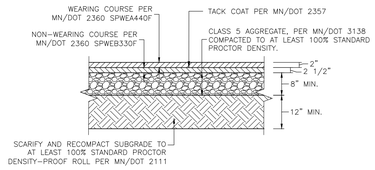


IMPERVIOUS SURFACE POST WITH SIGN

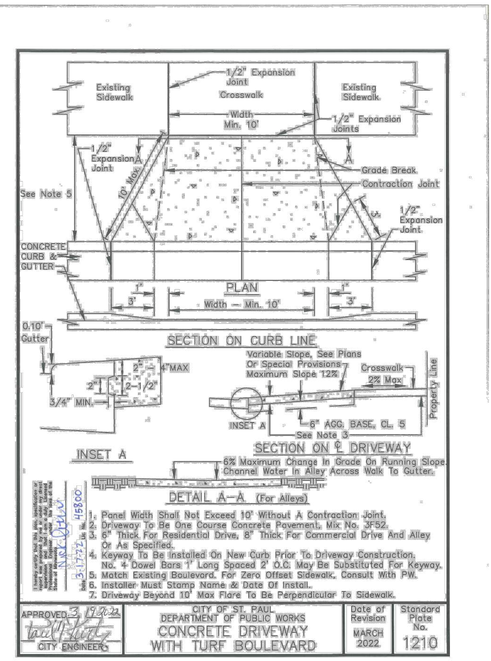
8 C502 SIGN AND POST
NOT TO SCALE



3 C502 NOSE-DOWN CURB SECTION
NOT TO SCALE

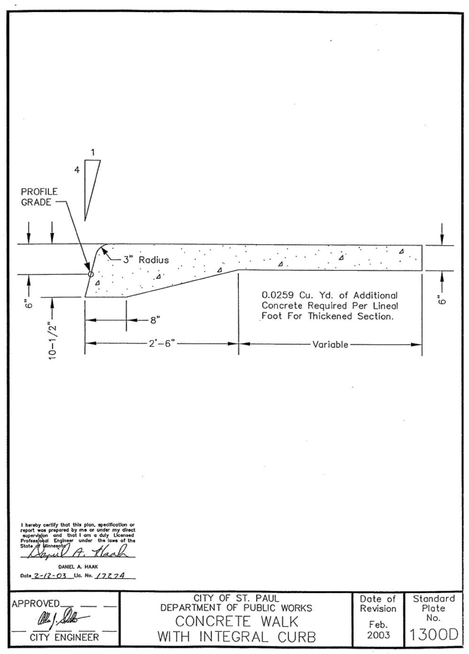


4 C502 HEAVY-DUTY BITUMINOUS PAVEMENT
NOT TO SCALE

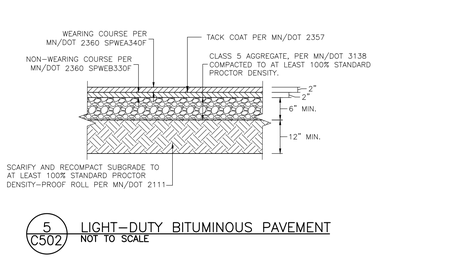


1 C502 CONCRETE DRIVEWAY ENTRANCE
NOT TO SCALE

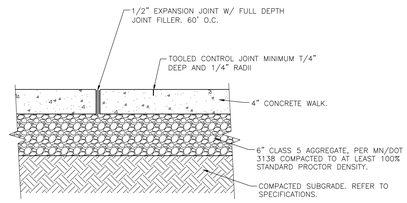
12 C502 ROOF DRAIN WITH SPLASH PAD AND CASTING
NOT TO SCALE



9 C502 INTEGRAL CONCRETE CURB AND SIDEWALK
NOT TO SCALE

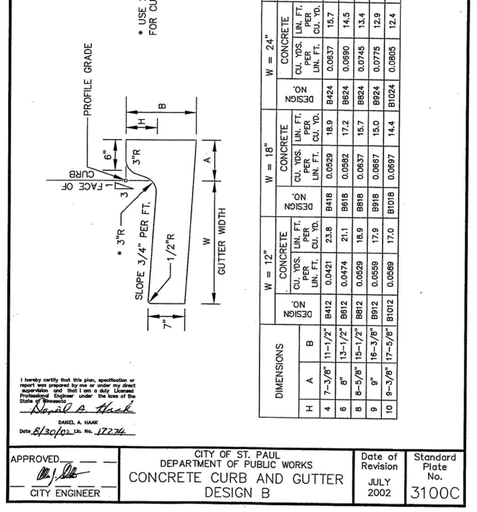


5 C502 LIGHT-DUTY BITUMINOUS PAVEMENT
NOT TO SCALE

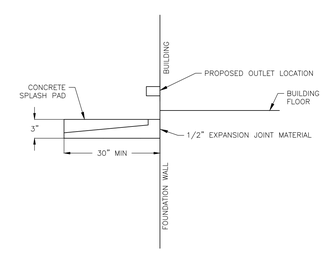


NOTE:
1: JOINT SPACING SHALL BE A MAXIMUM OF 6-FEET ON CENTER.

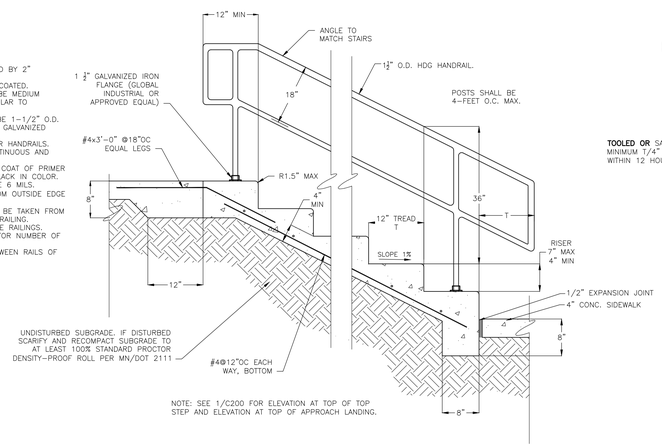
6 C502 CONCRETE SIDEWALK (TYP.)
NOT TO SCALE



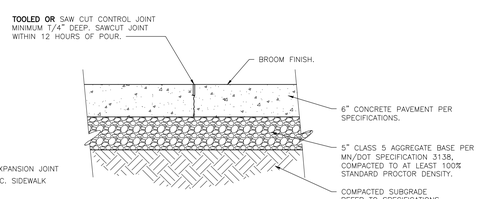
2 C502 CONCRETE CURB
NOT TO SCALE



1 2 13 C502 PRECAST CONCRETE SPLASH BLOCK
NOT TO SCALE



10 C502 CONCRETE STAIR AND RAILING
NOT TO SCALE



NOTE:
1: JOINT SPACING SHALL NOT EXCEED 24 TO 30 TIMES THE PAVEMENT THICKNESS WITH A MAXIMUM OF 15 FEET.

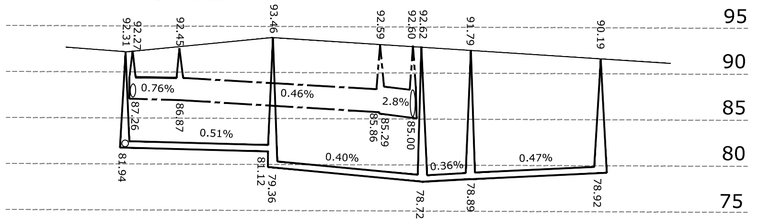
7 C502 CONCRETE PAVEMENT
NOT TO SCALE

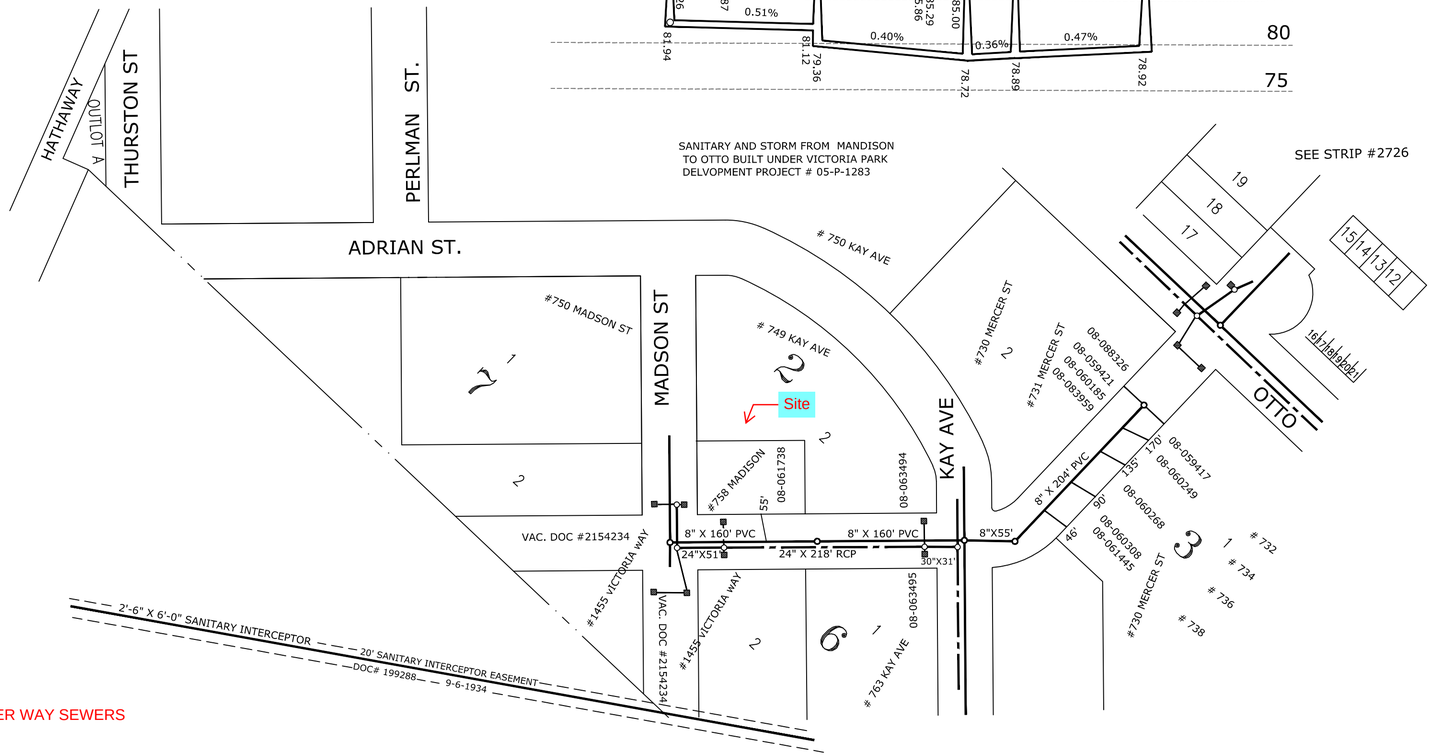
WATER SERVICES

MERCER WAY

MERCER WAY #1

518





MERCER WAY SEWERS

City of Saint Paul
Department of Public Works
Bureau Of Construction and Repairs

Sanitary

Permit No. 08 – 061738

Date 4/21/08

Lot 2 Block 2

Addition VICTORIA PARK

PIN 14–28–23–21–0044

Misc. Desc. PAVING CONNECTION

Address 758 MADSON ST.

Contractor BARBAROSSA & SONS

Permit Fee NO FEE

Date of Inspection MAY 2005

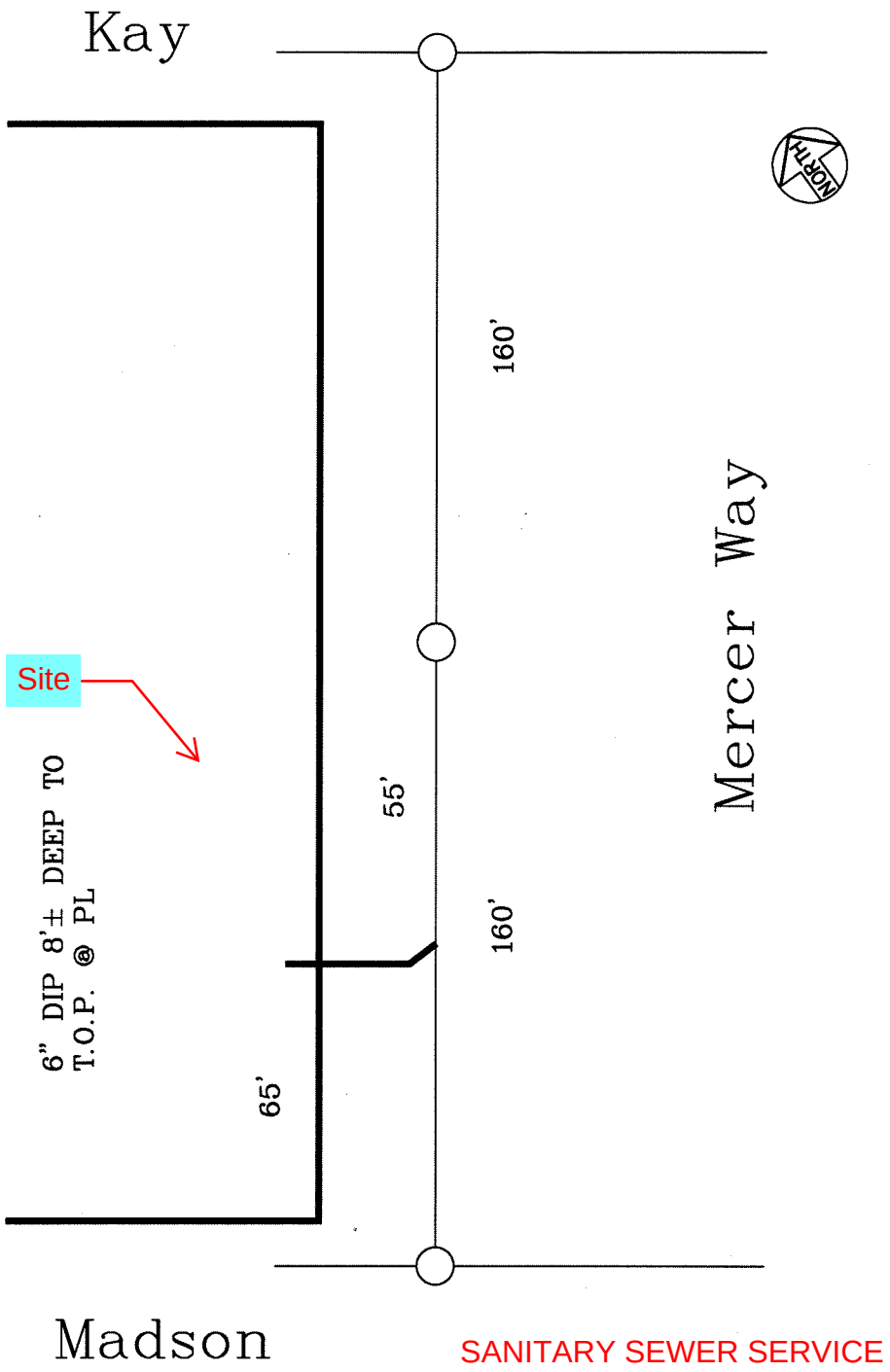
Date of Completion MAY 2005

Reference Permits

Remarks ORDINANCE PERMIT #254
05–P–1283
VICTORIA PARK

DIMENSIONS FROM PLANS

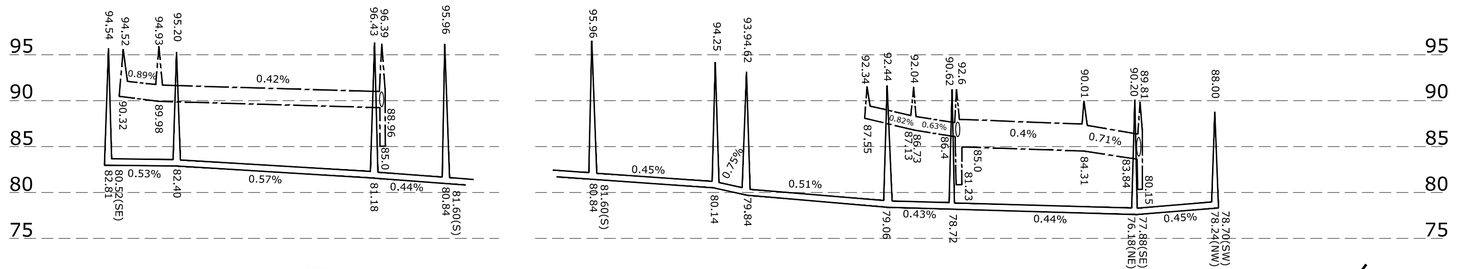
Inspector TKDA ENGINEERING



SANITARY SEWER SERVICE

KAY AVENUE

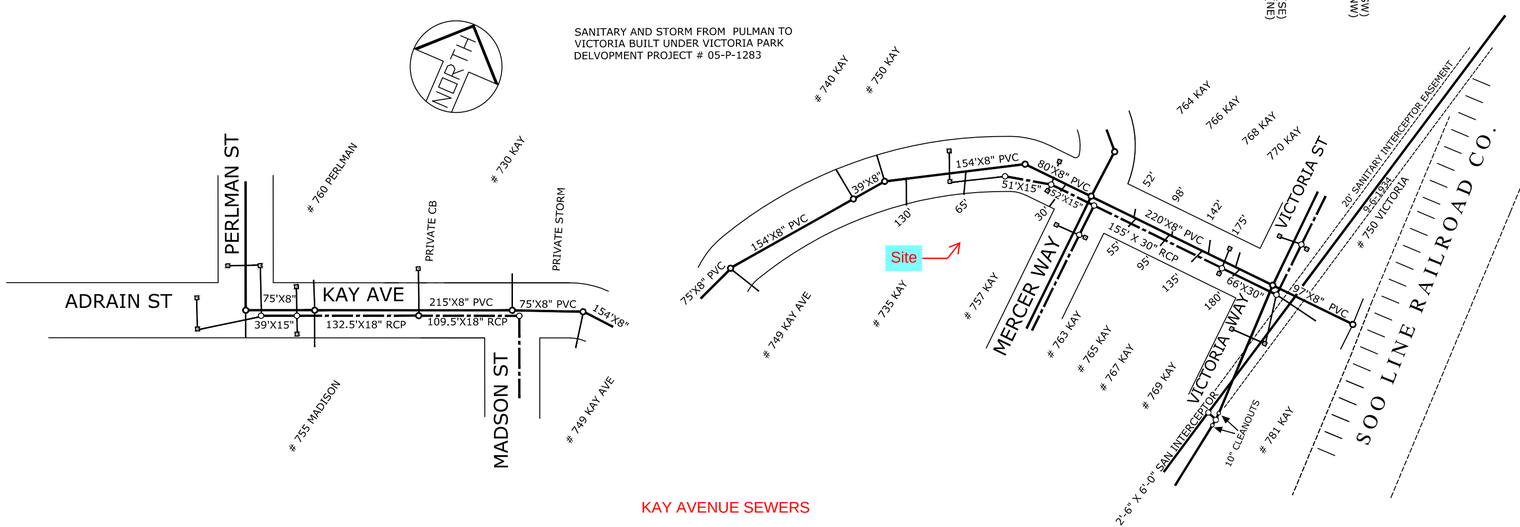
1



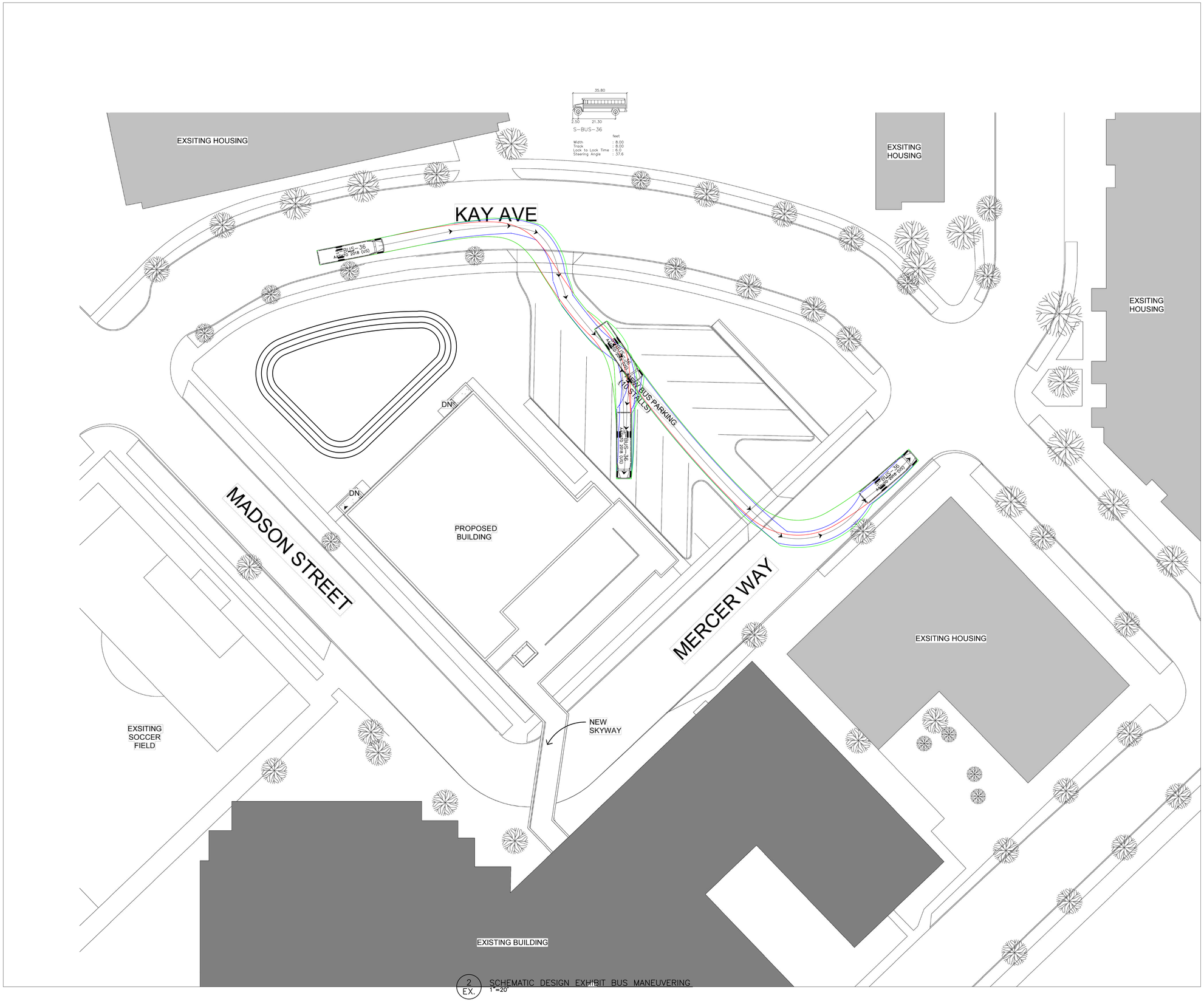
SANITARY AND STORM FROM PULMAN TO VICTORIA BUILT UNDER VICTORIA PARK DELVOPMENT PROJECT # 05-P-1283

KAY AVENUE #1

513



KAY AVENUE SEWERS



2 EX. SCHEMATIC DESIGN EXHIBIT BUS MANEUVERING 1"=20'

N

20' 10' 0 20' 40'

SCALE 1" = 20'

BLUE = FRONT TIRES
RED = REAR TIRES
GREEN = BODY OVERHANG

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SECTION 3

STRUCTURAL NARRATIVE AND DRAWINGS

STRUCTURAL NARRATIVE

Design Codes and Specifications

2018 International Building Code as amended by the 2020 Minnesota State Building Code
Minimum Design Loads for Buildings and Other Structures (ASCE 7-16)
ICC/NSSA Standard for the Design and Construction of Storm Shelters (ICC 500-14)
Building Code Requirements for Reinforced Concrete (ACI 318-14)
Specification for Structural Steel Buildings (AISC 360)
Standard Specification for K-Series, LH-Series, and DLH-series Open Web Steel Joists and for Joists Girders (SJI 100-2015)
Standard for Steel Roof Deck (Steel Deck Institute – SDI RD-2017)

Design Loads

Superimposed Dead Loads:

- Typical roof: 20 psf base load for roofing, ceiling, mechanical, and electrical distribution
  - Solar: additional 15 psf allowance on all new roofs for future ballasted solar PV solar panels
  - Gymnasium roofs: additional 10 psf for hanging athletic equipment in gymnasium
  - Mechanical room roofs: additional 20 psf for hanging mechanical loads
- Supported floors: 10 psf for flooring, ceiling, mechanical, and electrical distribution

Live Loads:

- Roof: 38.5 psf flat roof snow load plus drift
- Floor: 80 psf (typical)
  - 100 psf at stairs
  - 150 psf at mechanical & storage rooms
  - 150 psf at mezzanine
  - 100 psf at skyway

Building Wind Loads:

- 120 mph wind (3 second gust), Exposure C
- ASCE 7-16 Directional Procedure Parameters, Risk Category III
- Wind Directionality Factor (Kd) 0.85, Topographic Factor (Kzt) 1.0

ICC 500 Storm Shelter Wind + Live Loads:

- 250 mph wind (3 second gust), Exposure C
- ASCE 7-16 Directional Procedure Parameters, Risk Category III
- Wind Directionality Factor (Kd) 0.85, Topographic Factor (Kzt) 1.0
- 100 psf Roof Live Load

Seismic Loads:

- None per Minnesota State Building Code

Deflection Criteria

- Typical floor and roof: L/240 total load, L/360 live load

Materials

Concrete:
- 3,000 psi at 28 days for footings and topping
- 4,000 psi at 28 days for walls
- 4,000 psi at 28 days for interior slab on grade
- 4,000 psi at 28 days typical
- 5,000 psi at 28 days for exterior concrete (stoop slabs, etc.)
- Air entrained (4.5% to 7.5%) at exterior, exposed conditions

Reinforcing Steel:
- ASTM A615, Grade 60
- ASTM A775, Grade 60, epoxy coated at exterior, exposed conditions

Structural Steel:
- ASTM A992 for wide flange shapes
- ASTM A500, Grade C for rectangular and round HSS
- ASTM A36 for bars, plates, angles, channels, and other shapes

Special Inspections

The Owner is required to furnish special inspection services as required by Chapter 17 of the International Building Code and structural observations of the storm shelter as required by Section 106.4 of ICC 500.

Foundation Systems

The structure is anticipated to be supported on conventional spread footings. Footing elevations will generally be 42" below finished grade for frost protection and will step in elevation to allow utilities to be routed above the top of footing. Exterior spread footings (e.g., at skyway columns) will typically be 60" below finished grade.

Typical entry stoops will be constructed of 4" structural slabs supported by 8" thick reinforced concrete walls supported on conventional strip foundations. Stoop slabs will have epoxy coated bars.

Conventional strip footings supporting 12" wide cast-in-place below-grade frost/foundation walls will frame the exterior perimeter. Assume strip footings are 3' wide at the host building (office) bearing walls, 2' wide at non-bearing walls, and 8' wide at the storm shelter (with heavy reinforcement). Assume typical pad footings are 5' x 5' x 16" with 6-#5 bottom bars each way at the host (office) building.

All floor slabs on grade are anticipated to be 4" slab on grade reinforced with 1.5 lbs/yd^3 polypropylene fiber reinforcement.

Storm Shelter

The roof of the storm shelter is anticipated to be framed using 42" deep precast double tees with 6" concrete topping reinforced with #4 at 12"OC each way.

The storm shelter will have a 6" slab on grade with a mat of #5 rebar at 10" OC each way. The storm shelter foundation walls will likely be 22" wide and wall footings will be wider and thicker with increased reinforcing; assume 8'-0" x 40" strip footings with 8-#6 continuous top and bottom along exterior perimeter.

The precast walls are anticipated to be 14" architectural panels at the exterior and 6" solid interior panels supporting the mezzanine. The mezzanine floor in the storm shelter is anticipated to be 8" precast concrete plank with 2" non-structural topping.

Host Building (Office)

The new host building is to be framed with 12" architectural precast walls and HSS5x5 steel columns and wide flange beams.

The floor system will be 8" precast plank with 2" non-structural topping spanning up to 28'. The roof system will be 30KSP joists spaced at 4' OC spanning approximately 40' with 1.5" roof deck. Roof screens framed out of rectangular HSS will hide roof top mechanical units from view.

Elevator and Stair towers

Elevator walls to be 6" solid precast wall panels with the door side left open. A precast lintel/spandrel panel will support the floor and roof framing at the opening wall and the opening to be infilled with non-structural CMU after the elevator has been installed.

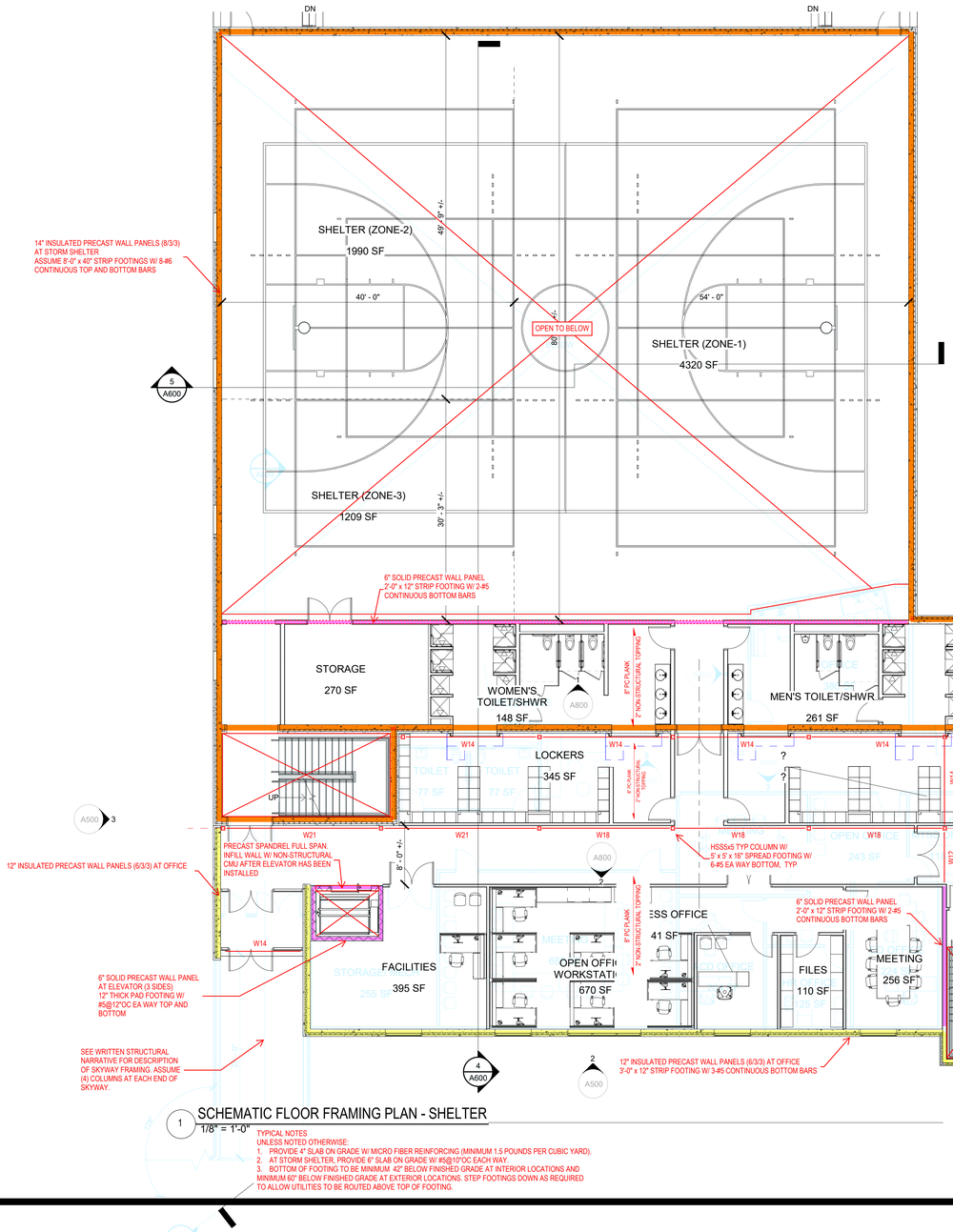
Stair towers to be framed using 12" architectural precast wall panels at the exterior and 6" solid precast wall panels at the interior with 8" precast plank floors and a steel joist/roof deck roof system.

Skyway Link

36" diameter concrete columns on 8'x8'x24" pad footings to support skyway framing; four each end of skyway. Skyway framing to be (2) W24x104 beams entire length of skyway for both the floor and roof. Assume HSS4x4 lattice framing at floor and roof to create a horizontal truss. W8x24 roof beams at approximately 10' OC with 3" roof deck. W18x76 columns at approximately 10' OC along both sides for the entire length of the skyway. W12x26 floor beams at approximately 10' OC with 3" composite floor deck plus 3.5" concrete above flutes. Expansion joints to be provided each end of skyway to buildings.

Storage Mezzanine at Existing Building

The storage mezzanine at the existing building will be wide flange steel beams supported off the existing precast wall panels along the south and west sides and two new HSS5x5 columns at the north side. The existing slab on grade will require selective demo and replacement to allow for installation of new pad footings at the two new columns. Moment connections will be required to cantilever the wide flange steel beams at the north and east side. The deck will be 1.5" composite metal deck with 2" topping (3.5" total thickness).



1 SCHEMATIC FLOOR FRAMING PLAN - SHELTER
1/8" = 1'-0"

TYPICAL NOTES
UNLESS NOTED OTHERWISE:
1. PROVIDE 4" SLAB ON GRADE W/ MICRO FIBER REINFORCING (MINIMUM 1.5 POUNDS PER CUBIC YARD).
2. AT STORM SHELTER, PROVIDE 6" SLAB ON GRADE W/ #5@10"OC EACH WAY.
3. BOTTOM OF FOOTING TO BE MINIMUM 42" BELOW FINISHED GRADE AT INTERIOR LOCATIONS AND MINIMUM 60" BELOW FINISHED GRADE AT EXTERIOR LOCATIONS. STEP FOOTINGS DOWN AS REQUIRED TO ALLOW UTILITIES TO BE ROUTED ABOVE TOP OF FOOTING.

HAY DOBBS
ARCHITECTURE
URBAN DESIGN
PLANNING
INTERIORS
WWW.HAYDOBBS.COM

Midtown Commons
2324 University Ave. W,
Suite 200
St. Paul, MN 55114
Tel. 612.338.4590

Organization Name
Owner Address
Contact: Owner Name
Phone: (###) ###-####

CONSULTANT

BKBM Structural & Civil Engineers
6120 Earle Brown Drive
Suite 700
Minneapolis, MN 55430
Phone: 763.843.0420
bkbm.com

BKBM Project No. 24426.00

Project Name: NOVA CLASSICAL ACADEMY
Project Number: 23008.003
Date: Issue Date

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME

SIGNATURE

LICENSE NO.

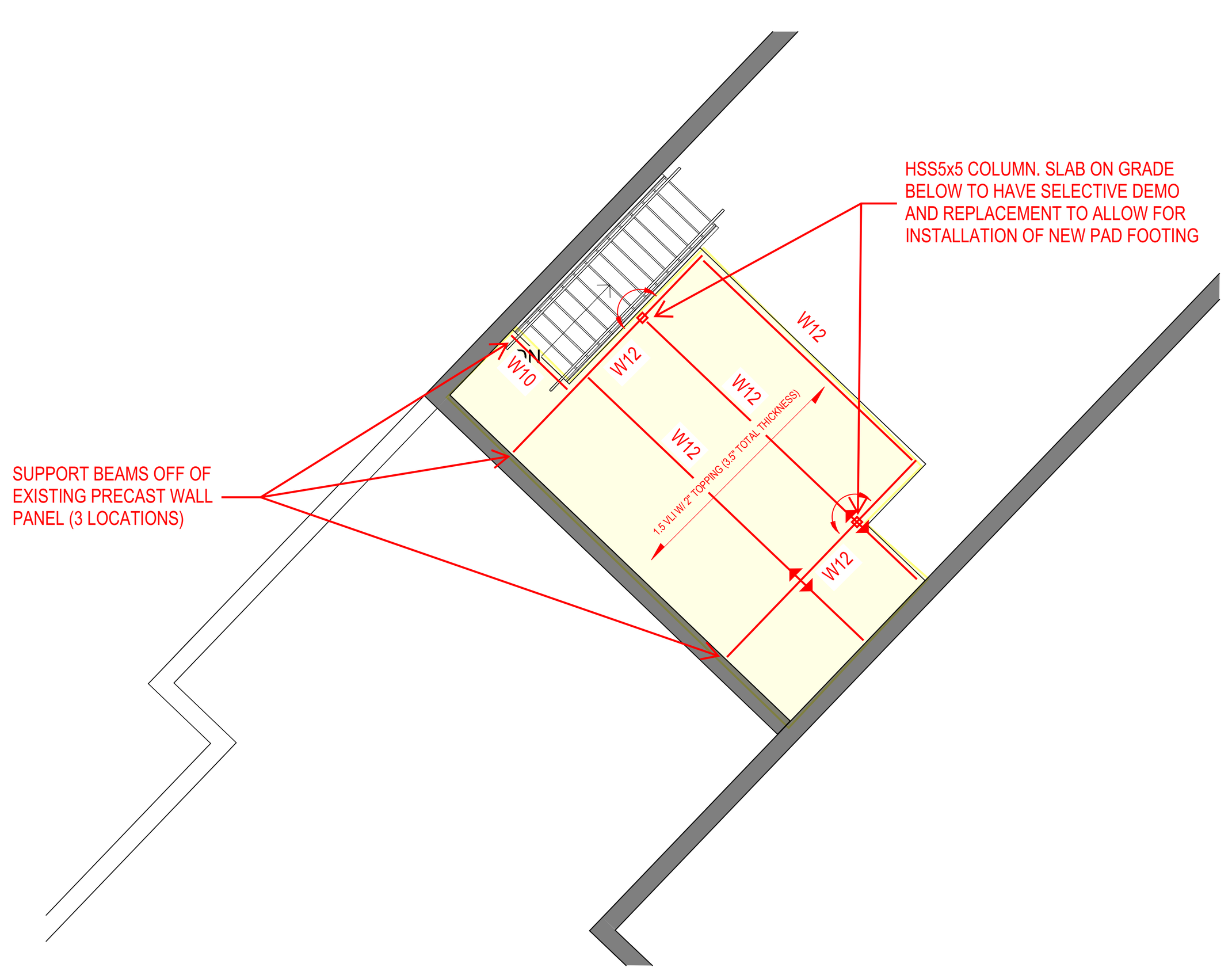
Issue Date
DATE

10/09/2024
PRELIMINARY
Not For Construction

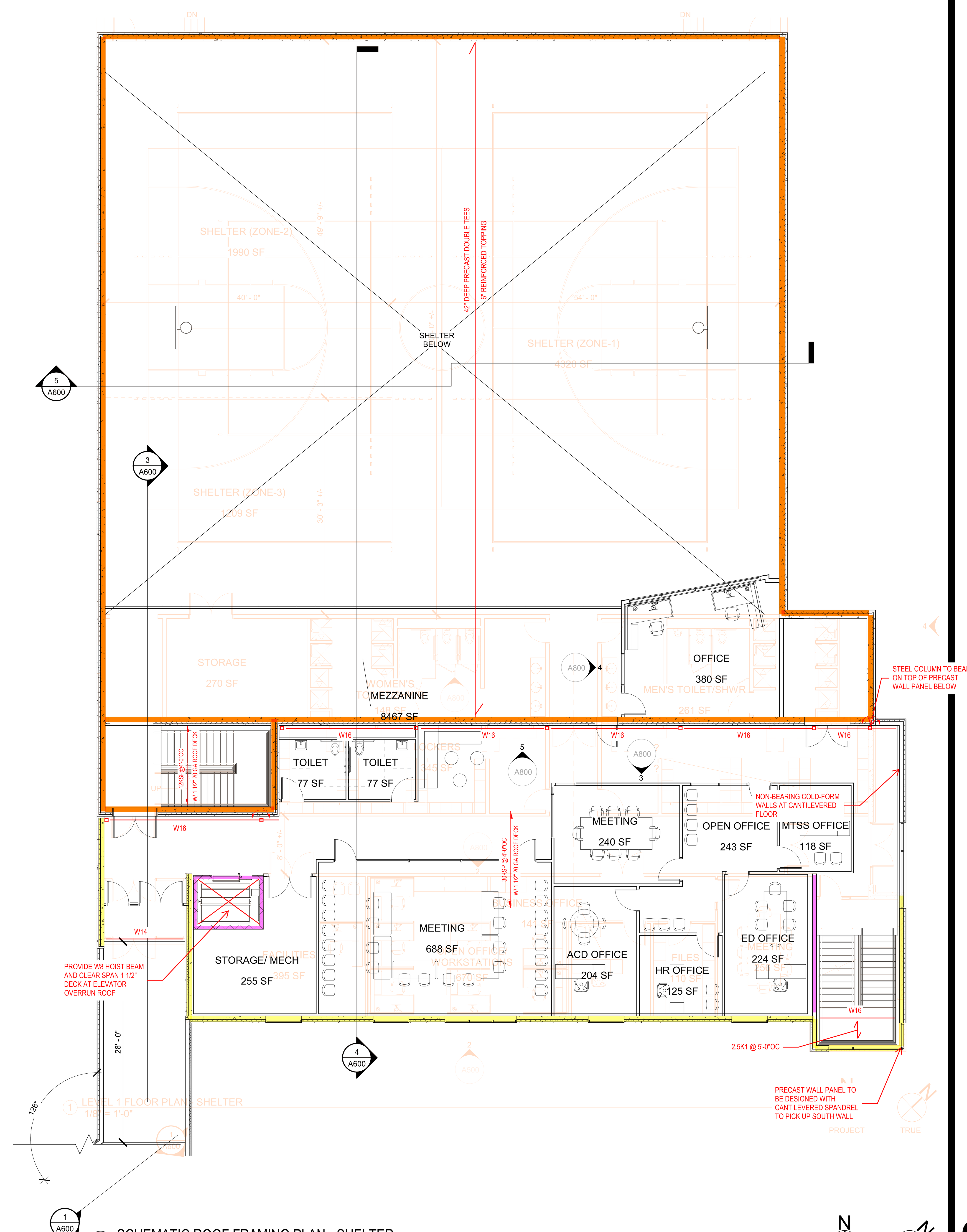
SHEET TITLE:
STRUCTURAL SCHEMATIC DESIGN CONCEPT FOUNDATION AND FIRST FLOOR FRAMING PLAN

SHEET NUMBER:

S210A



2 SCHEMATIC MEZZANINE FRAMING PLAN



1 SCHEMATIC ROOF FRAMING PLAN - SHELTER
1/8" = 1'-0"

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Organization Name
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Contact: Owner Name
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SIGNATURE

LICENSE NO.

Issue Date
DATE

10/09/2024
PRELIMINARY
Not For Construction

SHEET TITLE:
STRUCTURAL SCHEMATIC DESIGN CONCEPT ROOF FRAMING PLAN

SHEET NUMBER:
S211A

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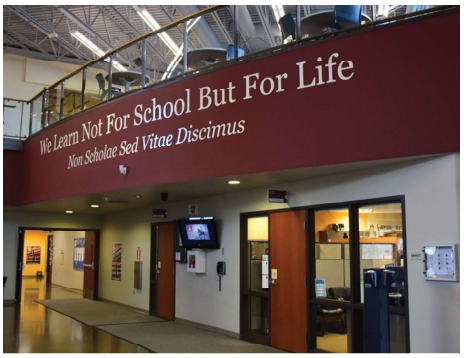
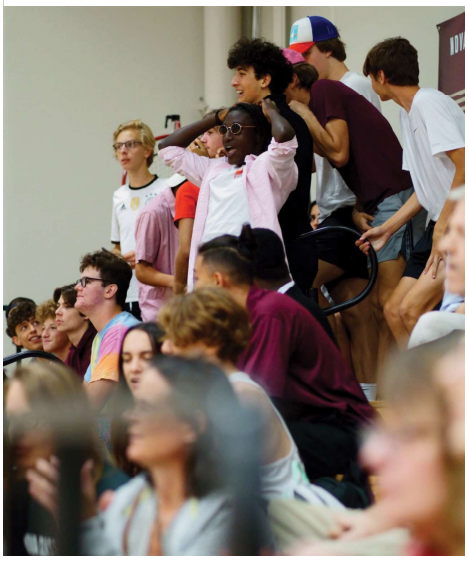
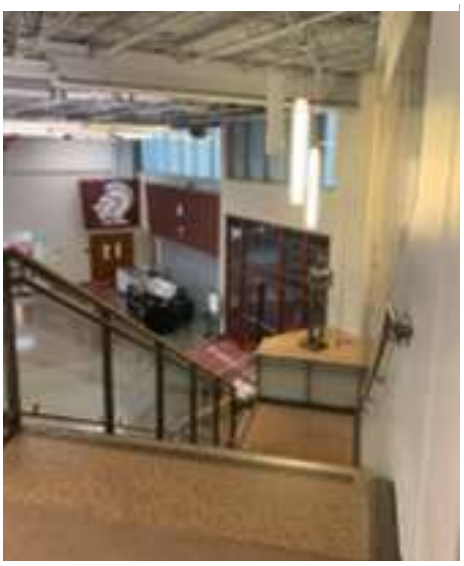
SECTION 4

FACILTY NEEDS ANALYSIS (2023)







Nova Classical Academy Facility Needs Analysis Report

FINAL REPORT, MARCH 6, 2024

HAY DOBBS

ARCHITECTURE
URBAN DESIGN
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INTERIORS

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Saint Paul, MN 55114
T. 612.338.4590

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TABLE OF CONTENTS

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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	$14,000,000
Total Performing Arts Space Estimated Project Cost	$16,674,000

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.

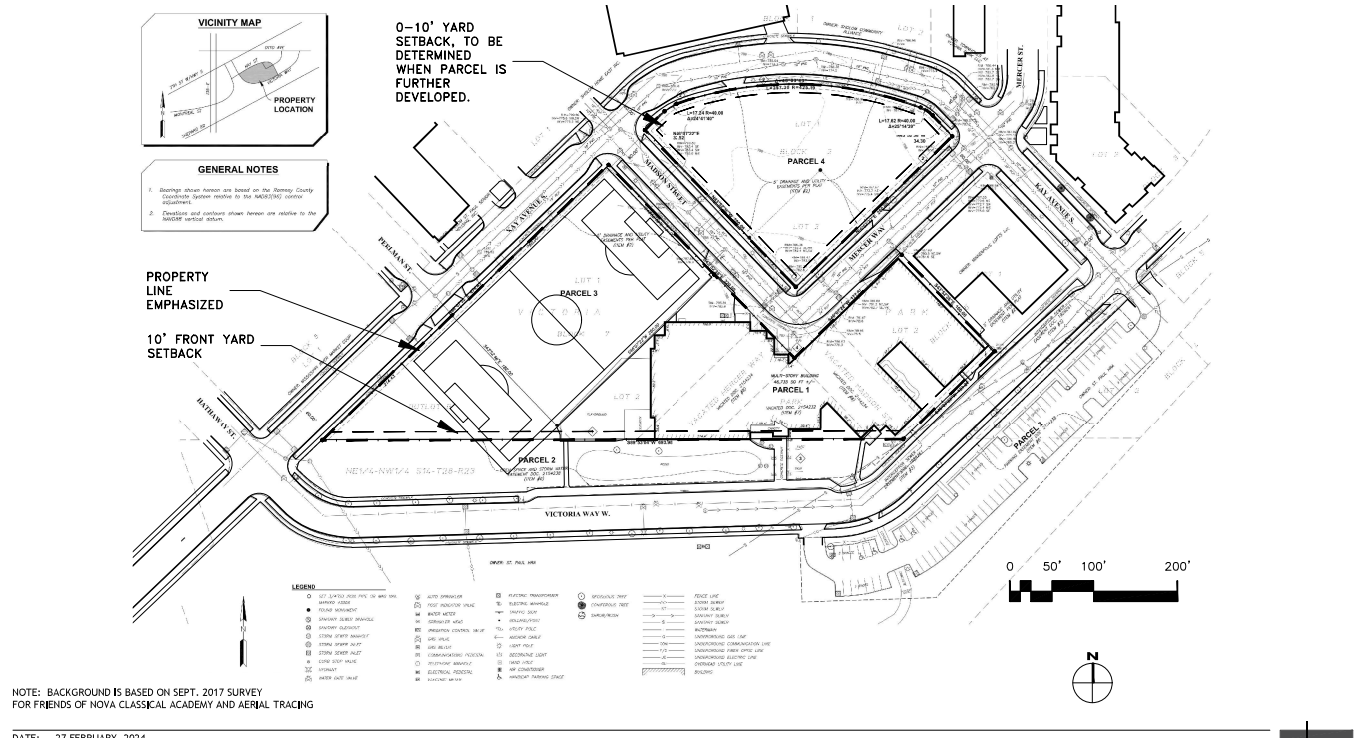
<u>School division, floor</u>

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

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

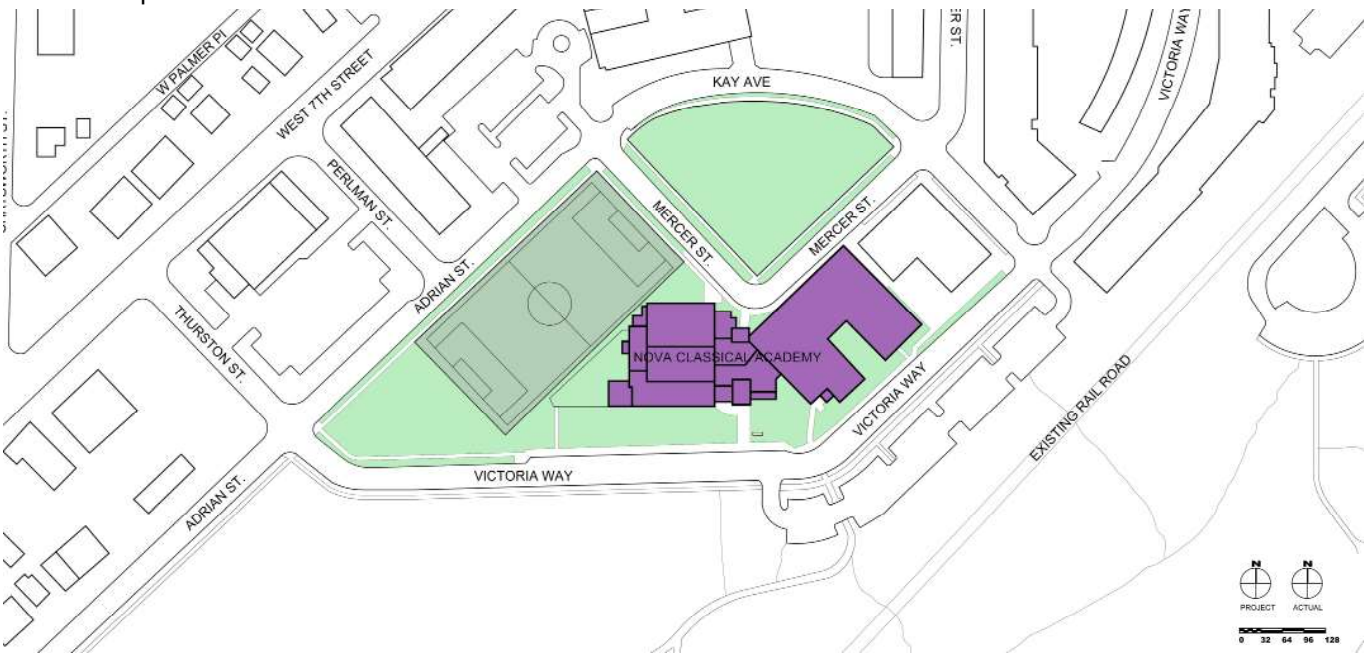
SK.EXISTING SITE

HAY DOBBS

SECTION 2: EXISTING CONDITIONS ANALYSIS SUMMARY

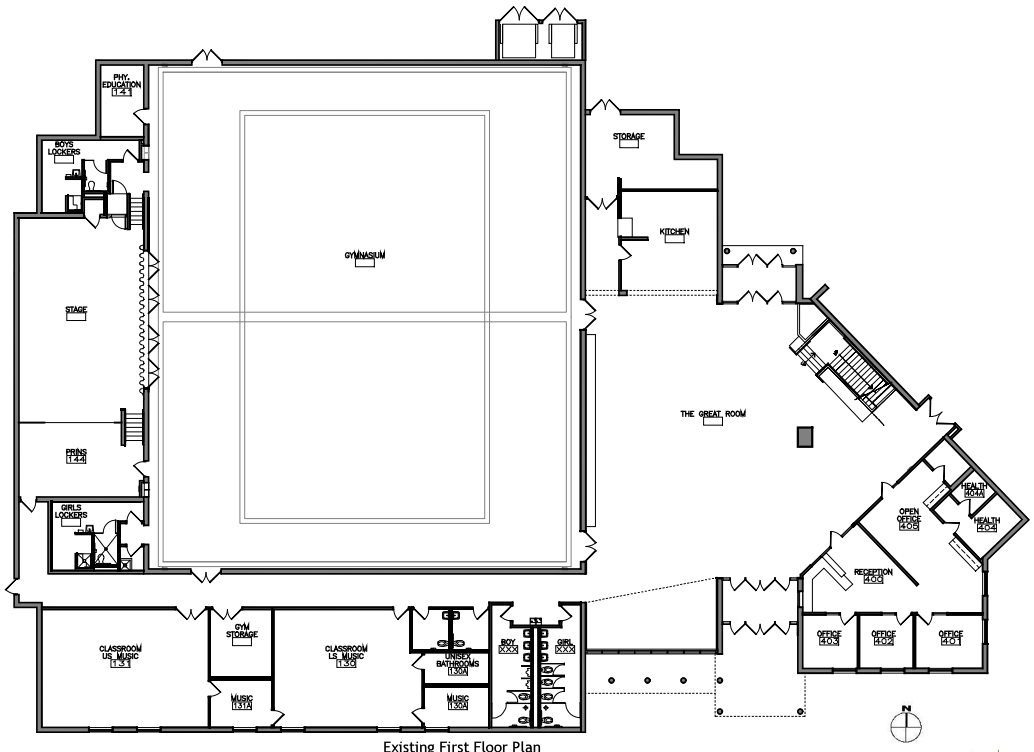
2.2 EXISTING SITE

School Footprint/Parcels



Victoria Park Master Plan (2013)

2.3 EXISTING SCHOOL BUILDING



Existing First Floor Plan

Date: 24 October 2023
PROJECT NO.: 23008.001

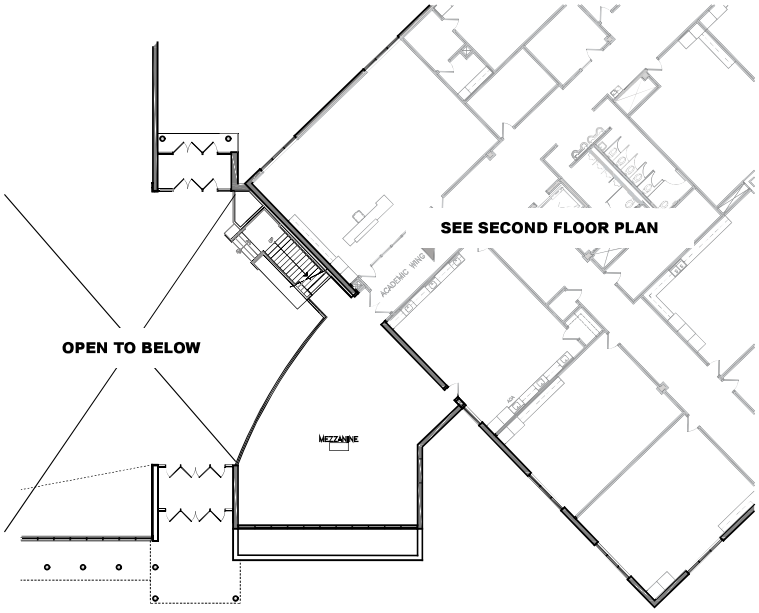
Nova Classical Academy

0' 4' 8' 16'

HAY DOBBS

Hay Dobbs P.A.

SK: 1



Existing Mezzanine Floor Plan

Date: 24 October 2023
PROJECT NO.: 23008.001

Nova Classical Academy

0' 4' 8' 16'

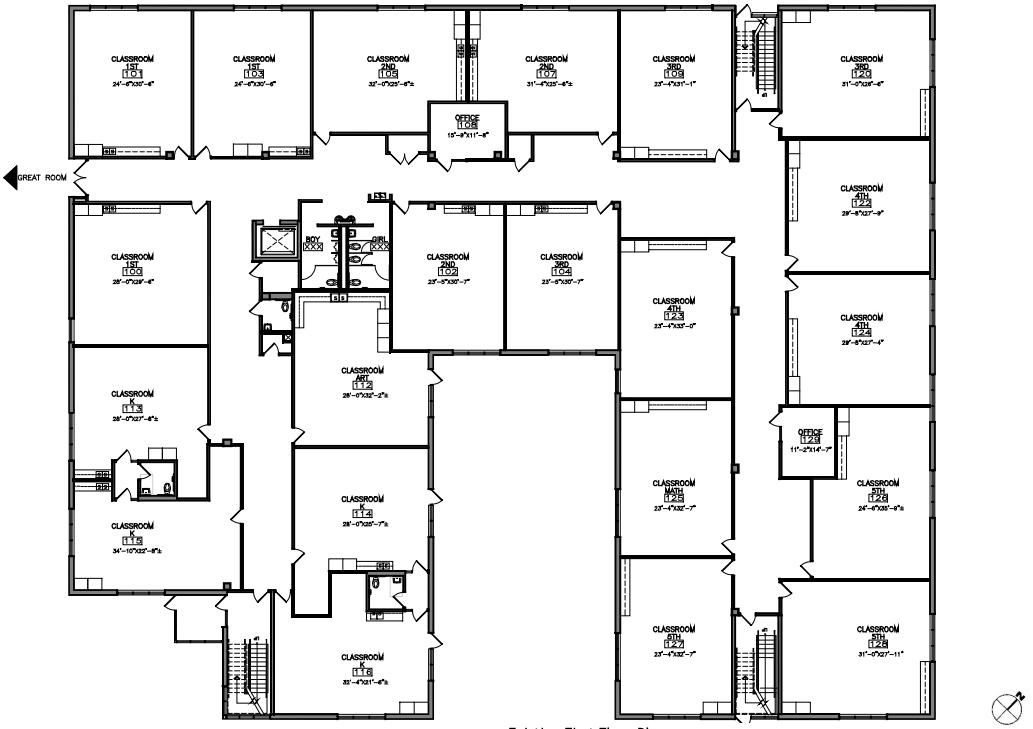
HAY DOBBS

Hay Dobbs P.A.

SK: 2

SECTION 2: EXISTING CONDITIONS ANALYSIS SUMMARY

2.3 EXISTING SCHOOL BUILDING



Existing First Floor Plan

Date: 24 October 2023
PROJECT NO.: 23008.001

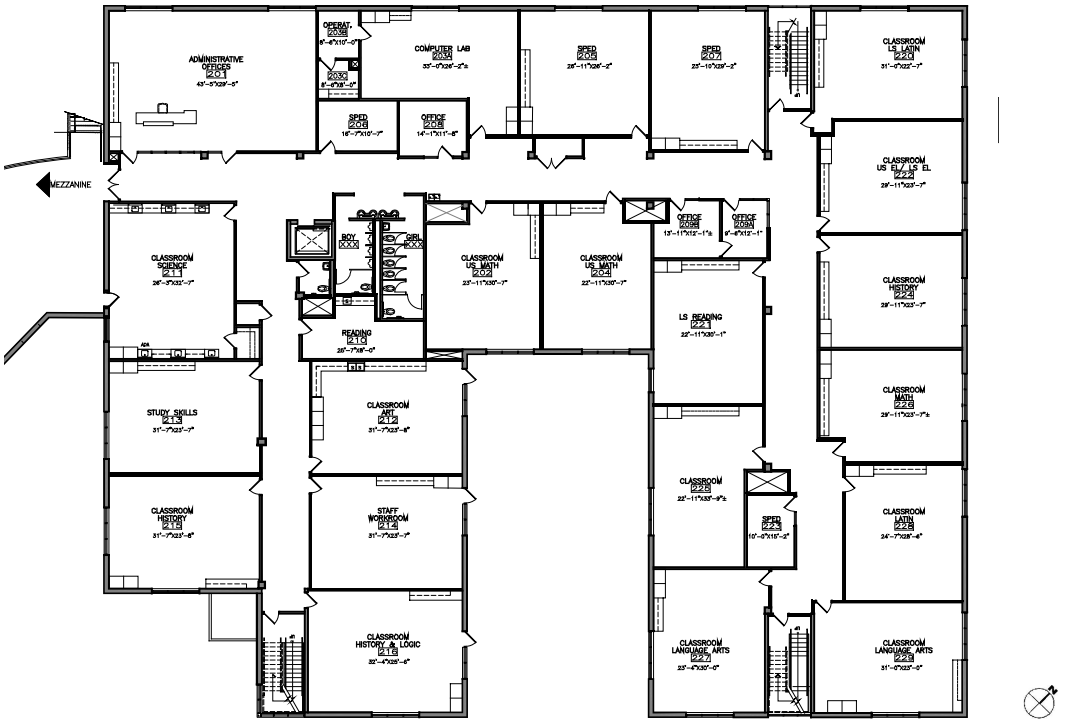
Nova Classical Academy

0' 4' 8' 16'

HAY DOBBS

Hay Dobbs P.A.

SK: 3



Existing Second Floor Plan

Date: 24 October 2023
PROJECT NO.: 23008.001

Nova Classical Academy

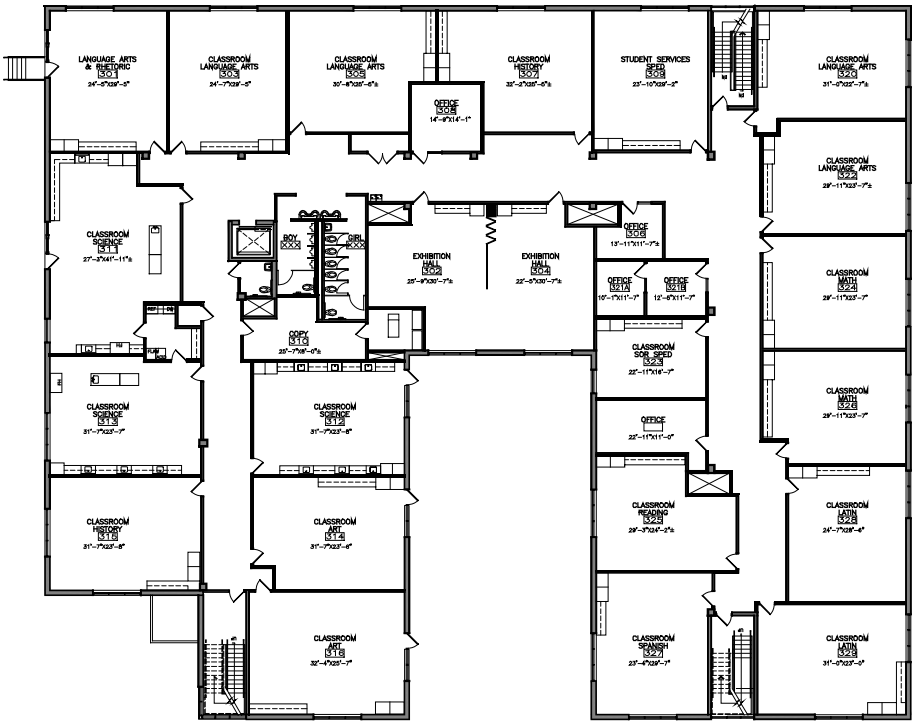
0' 4' 8' 16'

HAY DOBBS

Hay Dobbs P.A.

SK: 4

2.3 EXISTING SCHOOL BUILDING



Existing Third Floor Plan

Date: 24 October 2023
PROJECT NO.: 23008.001

Nova Classical Academy

0' 4' 8' 16'

HAY DOBBS

Hay Dobbs P.A.

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.)

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.

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.)

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.)

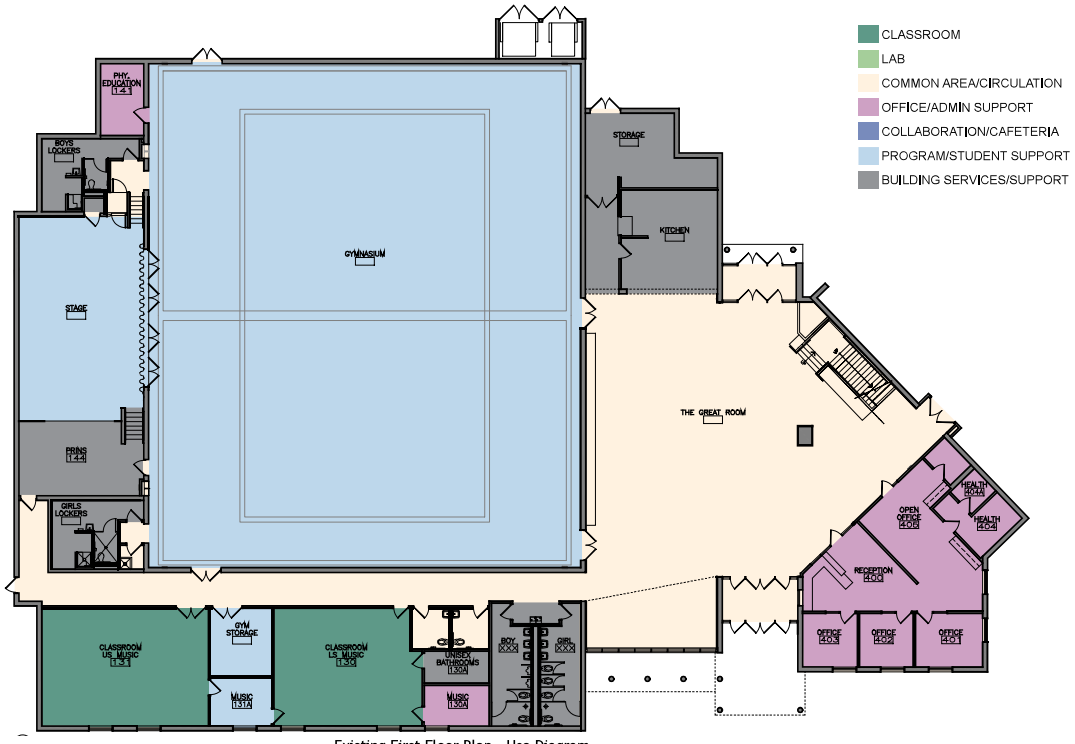
2.4 ANALYSIS SUMMARY - ENROLLMENT DATA AND SPACE UTILIZATION

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.

2.5 PROGRAMMATIC MAPPING



Existing First Floor Plan - Use Diagram

Date: 24 October 2023
PROJECT NO.: 23008.001

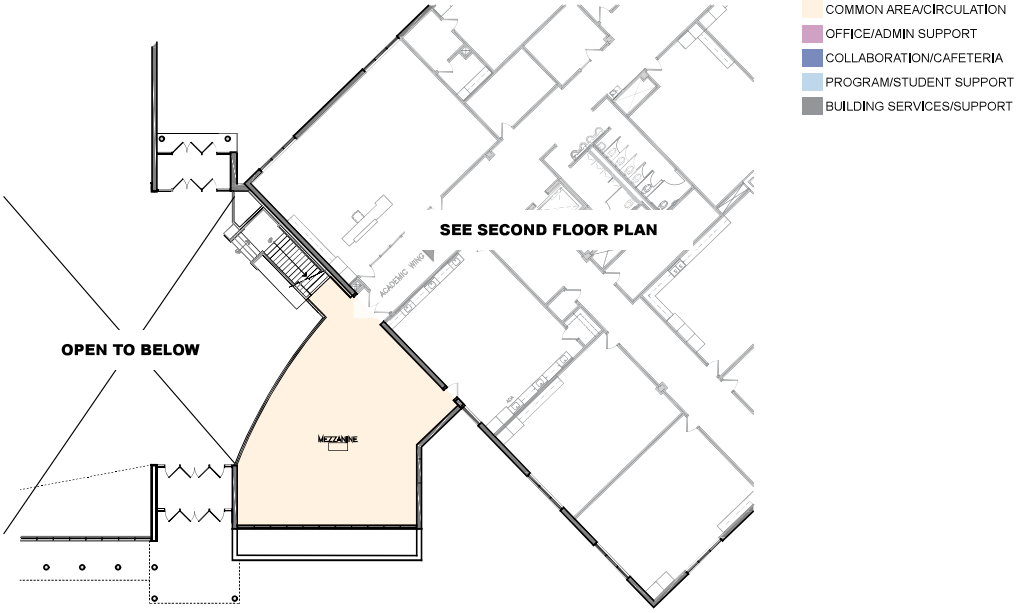
Nova Classical Academy

0' 4' 8' 16'

HAY DOBBS

Hay Dobbs P.A.

SK: 6



Existing Mezzanine Floor Plan - Use Diagram

Date: 24 October 2023
PROJECT NO.: 23008.001

Nova Classical Academy

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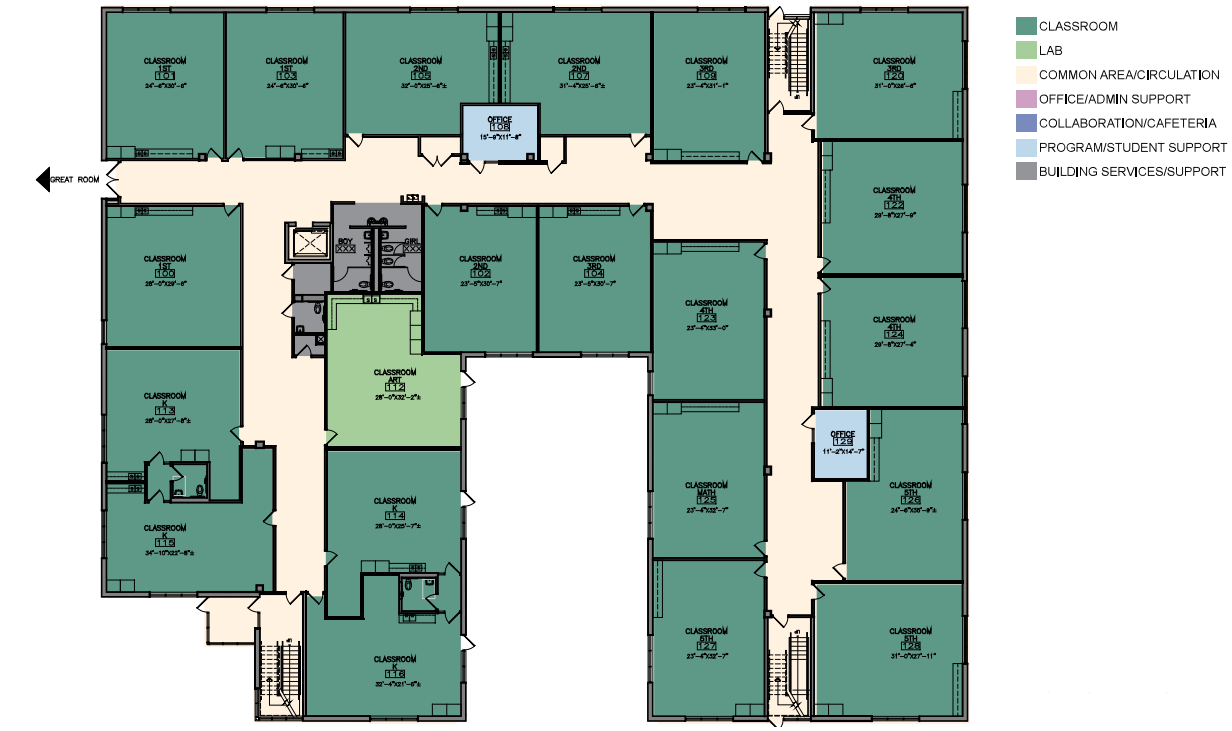
HAY DOBBS

Hay Dobbs P.A.

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

Hay Dobbs P.A.

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

Hay Dobbs P.A.

SK: 9

2.5 PROGRAMMATIC MAPPING

Existing Third Floor Plan - Use Diagram

Date: 24 October 2023
PROJECT NO.: 23008.001

Nova Classical Academy

0' 4' 8' 16'

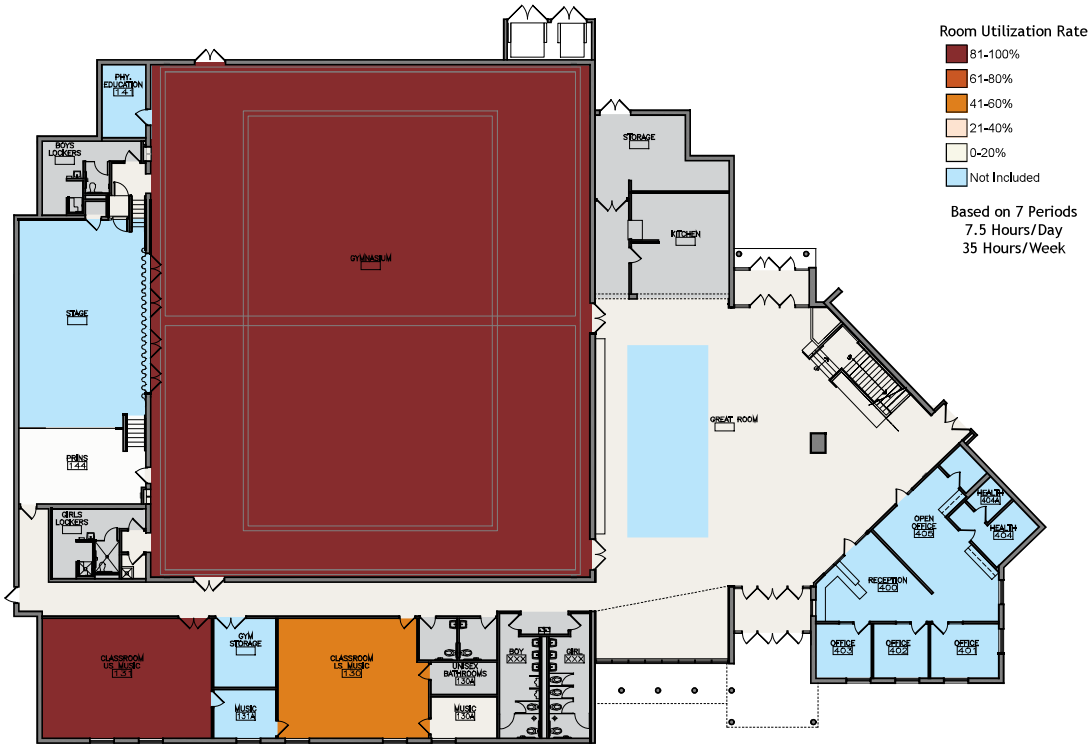
HAY DOBBS

SK: 10

Hay Dobbs P.A.

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

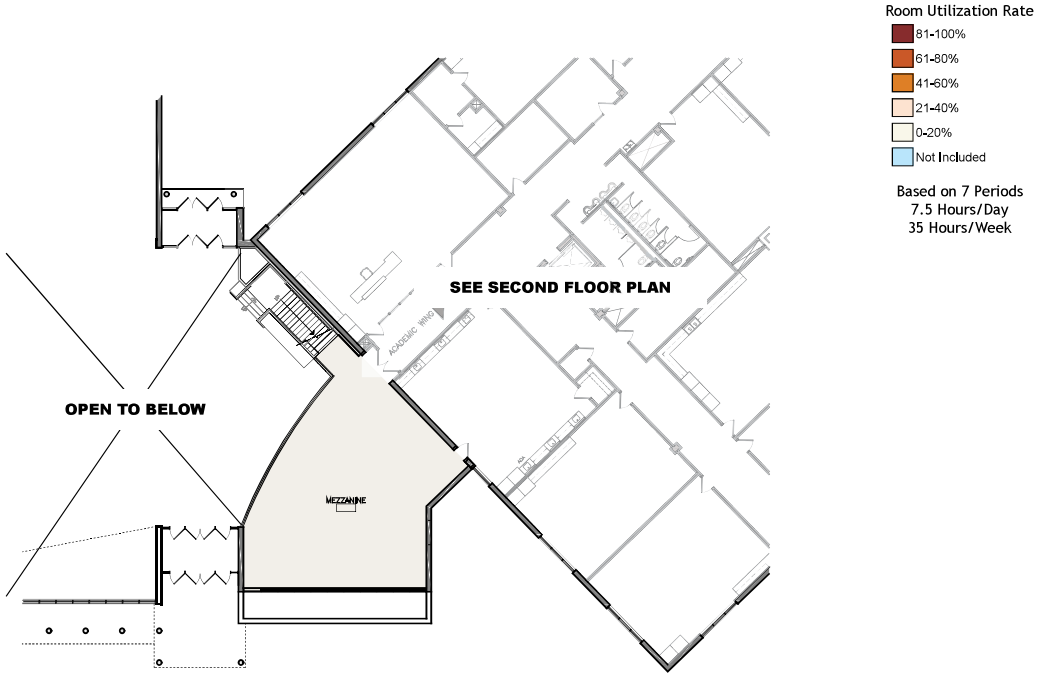
Nova Classical Academy

0' 4' 8' 16'

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

0' 4' 8' 16'

HAY DOBBS

Hay Dobbs P.A.

SK: 12

2.6 SPACE UTILIZATION MAPPING

Existing First 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: 13

Existing Second 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: 14

SECTION 2: EXISTING CONDITIONS ANALYSIS SUMMARY

2.6 SPACE UTILIZATION MAPPING

Existing Third Floor Plan - Utilization Diagram

Date: 1 November 2023
PROJECT NO.: Z3008.001

Nova Classical Academy

0' 4' 8' 16'

HAY DOBBS

SK: 15

Hay Dobbs P.A.

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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.

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**

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.

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**

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.

Function /Activity	Space Needed
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**

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/desking areas.

GUIDELINES

The Minnesota Department of Educations 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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ILLUSTRATIVE VIEW OF NEW MEETING ROOM

ILLUSTRATIVE VIEW OF NEW MEETING ROOM

ILLUSTRATIVE VIEW OF NEW LOCKER BANK

ILLUSTRATIVE VIEW OF NEW LOCKER BANK

ILLUSTRATIVE VIEW OF NEW LOCKER ROOM

ILLUSTRATIVE VIEW OF TUTOR, SENSORY, AND OT

ILLUSTRATIVE VIEW OF NEW GYM

ILLUSTRATIVE VIEW OF NEW GYM & MEZZANINE