

EXTERIOR WINDOW REPLACEMENT NOIRLab HEADQUARTERS

950 NORTH CHERRY AVENUE
TUCSON, ARIZONA

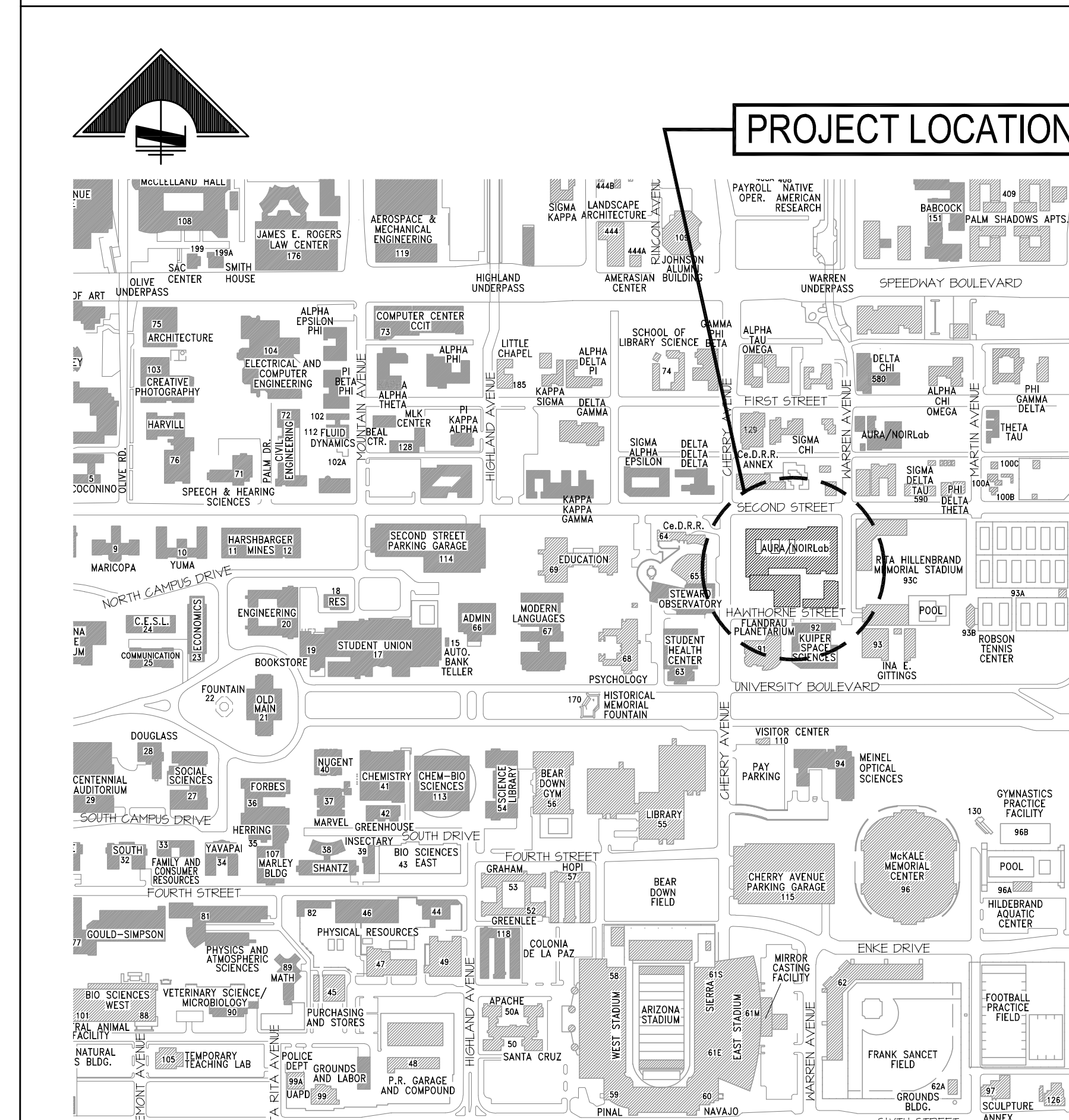
OCTOBER 05, 2023

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NOIRLab HEADQUARTERS

TUCSON, AZ 85719

950 NORTH CHERRY AVENUE

LOCATION MAP



LOCATION MAP - UNIVERSITY OF ARIZONA

SCALE: N.T.S.

DRAWING INDEX

GI001	COVER SHEET
GI002	PROJECT SPECIFICATION
AR101	FIRST FLOOR PLAN
AR102	SECOND FLOOR PLAN

SCOPE OF WORK

1. SITE VISIT TO VERIFY ALL EXISTING CONDITIONS AND WINDOW SIZES.
2. REMOVE EXISTING SINGLE-PANE GLAZING AND DISPOSE.
3. CLEAN/PREPARE EXISTING METAL FRAME AND SUBSTRATE FOR NEW WINDOW AND FRAME INSTALLATION.
4. NEW GLAZING TO BE PER TECHNICAL SPECIFICATION. REFERENCE SHEET GI002
5. CAULK AND SECURE NEW WINDOW TO EXISTING SUBSTRATE.
6. ALL WORK TO BE COORDINATED WITH NOIRLab REPRESENTATIVE TO MINIMIZE IMPACT ON BUILDING OPERATIONS.

BID PACKAGES DESCRIPTION

REFERENCE SHEETS AR101 AND AR102 FOR BASE BID AND ADDITIVE ALTERNATES FOR THE BIDDING PACKAGE.

2081 W. SUNSET RD.
SUITE NO. 101
TUCSON, ARIZONA 85704
TEL: (520) 293-1488
FAX: (520) 293-8349
M3ENGL.COM

ARCHITECTURE
ENGINEERING
CONSTRUCTION MANAGEMENT



Revisions

Description	Date
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Drawing Title
COVER SHEET

Sheet Number
GI001
M3PN 230276

TECHNICAL SPECIFICATIONS

SECTION 085113 - ALUMINUM WINDOWS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes replacement of fixed aluminum windows for exterior locations.

1.2 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.
 1. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
 2. Review and discuss the finishing of aluminum windows that is required to be coordinated with the finishing of other aluminum work for color and finish matching.
 3. Review, discuss, and coordinate the interrelationship of aluminum windows with other exterior wall components. Include provisions for anchoring, flashing, weeping, sealing perimeters, and protecting finishes.
 4. Review and discuss the sequence of work required to construct a watertight and weathertight exterior building envelope.
 5. Inspect and discuss the condition of substrate and other preparatory work performed by other trades.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 1. Include construction details, material descriptions, glazing and fabrication methods, dimensions of individual components and profiles, and finishes for aluminum windows.
- B. Shop Drawings: For aluminum windows.
 1. Include plans, elevations, sections, and details of installation, including anchor, flashing, and sealant installation.
- C. Samples for Initial Selection: For units with factory-applied finishes.

1.4 INFORMATIONAL SUBMITTALS

- A. Sample Warranties: For manufacturer's warranties.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: A manufacturer capable of fabricating aluminum windows that meet or exceed performance requirements indicated.
- B. Installer Qualifications: An installer acceptable to aluminum window manufacturer for installation of units required for this Project.
- C. Mockups: Build mockup (at location to be determined by Owner) to verify selections made under Sample submittals, to demonstrate aesthetic effects, and to set quality standards for materials and execution.

1.6 WARRANTY

- A. Manufacturer's Warranty: Manufacturer agrees to repair or replace aluminum windows that fail in materials or workmanship within specified warranty period.
 1. Failures include, but are not limited to, the following:
 - a. Failure to meet performance requirements.
 - b. Structural failures including excessive deflection, water leakage, condensation, and air infiltration.
 - c. Deterioration of materials and finishes beyond normal weathering.
 - d. Failure of insulating glass.
 2. Warranty Period:
 - a. Window: 10 years from date of Substantial Completion.
 - b. Glazing Units: 20 years from date of Substantial Completion.
 - c. Aluminum Finish: 10 from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Source Limitations: Obtain aluminum windows from single source from single manufacturer.

2.2 WINDOW PERFORMANCE REQUIREMENTS

- A. Performance Class and Grade: AAMA/WDMA/CSA 101/I.S.2/A440 as follows:
 1. Minimum Performance Class: CW.
 2. Minimum Performance Grade: 30.
- B. Thermal Transmittance: NFRC 100 maximum whole-window U-factor of 0.30 Btu/sq. ft. x h x deg F (3.43 W/sq. m x K) per the minimum ENERGY STAR requirements for Pima County, Tucson, Arizona.
- C. Solar Heat-Gain Coefficient (SHGC): NFRC 200 maximum whole-window SHGC of 0.25 per the minimum ENERGY STAR requirements for Pima County, Tucson, Arizona.

2.3 ALUMINUM WINDOWS

- A. Types: Provide the following types to replace the existing windows.
 1. Fixed.
- B. Frames and Sashes: Aluminum extrusions complying with AAMA/WDMA/CSA 101/I.S.2/ A440.
 1. Thermally Improved Construction: Fabricate frames, sashes, and muntins with an integral, concealed, low-conductance thermal barrier located between exterior materials and window members exposed on interior side in a manner that eliminates direct metal-to-metal contact.
- C. Glass: Clear annealed glass, ASTM C1036, Type 1, Class 1, q3.
- D. Insulating-Glass Units: ASTM E2190.
 1. Glass: ASTM C1036, Type 1, Class 1, q3.
 - a. Tint: Gray.
 2. Lites: Two.
 3. Filling: Fill space between glass lites with argon.
 4. Low-E Coating: Provide on second or third surface.

2.4 FABRICATION

- A. Fabricate aluminum windows in sizes indicated. Include a complete system for assembling components and anchoring windows.
- B. Glaze aluminum windows in the factory.

2.5 GENERAL FINISH REQUIREMENTS

- A. Comply with NAAMM's "Metal Finishes Manual" for recommendations for applying and designating finishes.
- B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- C. Appearance of Finished Work: Noticeable variations in same piece are not acceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

2.6 ALUMINUM FINISHES

- A. Finish designations prefixed by AA comply with the system established by the Aluminum Association for designating aluminum finishes.
- B. Class II, Clear Anodic Finish.
 1. Color: To match existing building frames, consult with Owner.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine openings, substrates, structural support, anchorage, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Verify rough opening dimensions, levelness of sill plate, and operational clearances.
- C. Examine wall flashings, vapor retarders, water and weather barriers, and other built-in components to ensure weathertight window installation.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Comply with manufacturer's written instructions for installing windows and other components. For installation procedures and requirements not addressed in manufacturer's written instructions, comply with installation requirements in ASTM E2112.
- B. Install windows level, plumb, square, true to line, without distortion or impeding thermal movement, anchored securely in place to structural support, and in proper relation to wall flashing and other adjacent construction to produce weathertight construction.
- C. Install windows and components to drain condensation, water penetrating joints, and moisture migrating within windows to the exterior.
- D. Separate aluminum and other corrodible surfaces from sources of corrosion or electrolytic action at points of contact with other materials.

3.3 ADJUSTING, CLEANING, AND PROTECTION

- A. Clean exposed surfaces immediately after installing windows. Avoid damaging protective coatings and finishes. Remove excess sealants, glazing materials, dirt, and other substances.
 1. Keep protective films and coverings in place until final cleaning.
- B. Remove and replace glass that has been broken, chipped, cracked, abraded, or damaged during construction period.
- C. Protect window surfaces from contact with contaminating substances resulting from construction operations. If contaminating substances do contact window surfaces, remove contaminants immediately according to manufacturer's written instructions.

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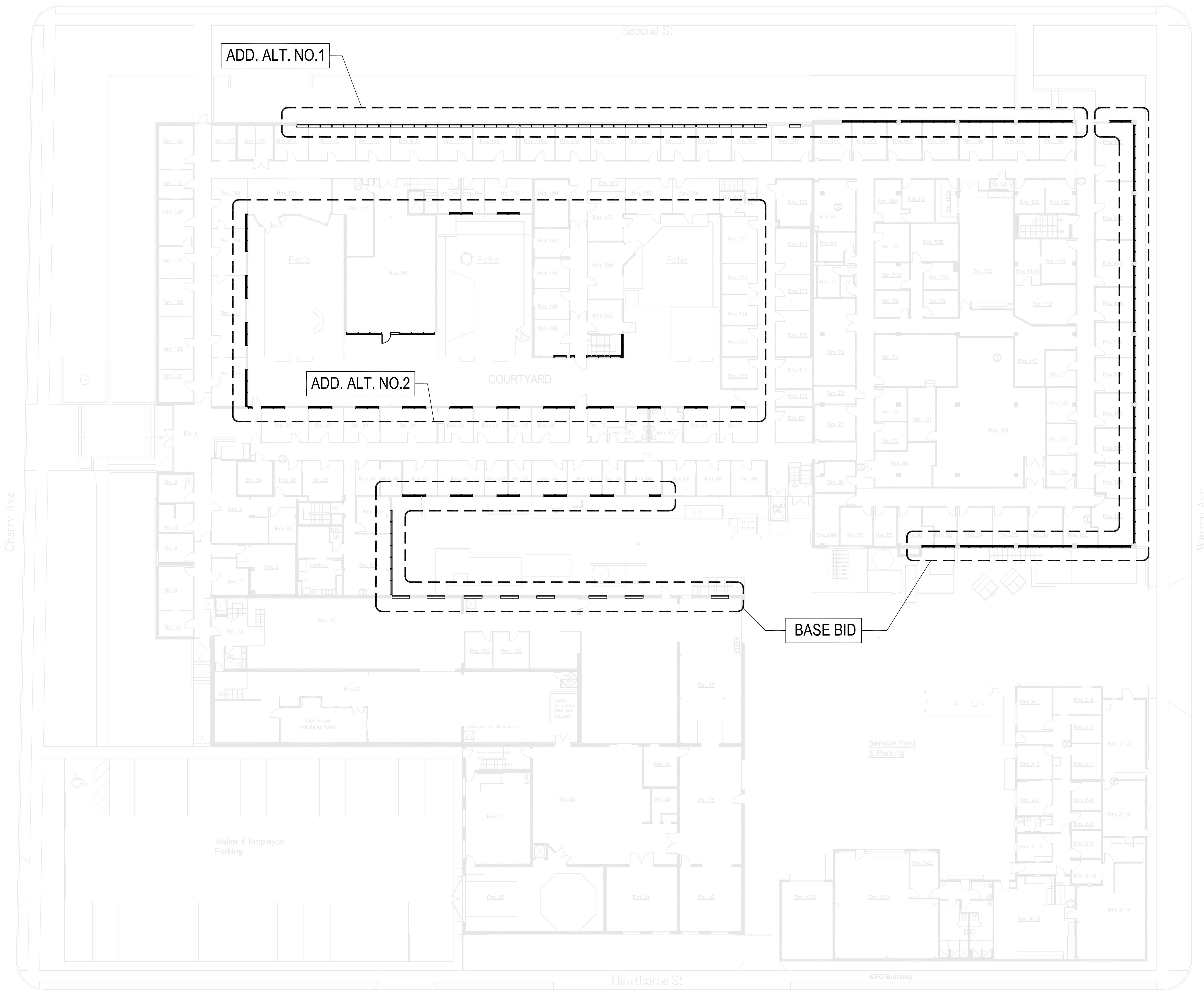
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TECHNICAL SPECIFICATION

Sheet Number
G1002

M3PN 230276

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FIRST FLOOR PLAN
SCALE: 1/16" = 1'-0"

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