

Central Branch Library Expansion Study for the City of Wichita

223 S. Main Street

Wichita, KS

Presented by



LawKingdonArchitecture

TABLE OF CONTENTS

Rendered Aerial – Existing Conditions.....3

Introduction.....4

Executive Summary.....5

Site Considerations.....6

Existing Building Considerations and Limitations.....7-8

Building Expansion Considerations.....9-10

Conclusions.....11

Building Area Analysis.....12

Project Budget Analysis.....13

1st Floor Plan (Area Requirements).....14

Mezzanine Floor Plan (Area Requirements)15

2nd Floor Plan (Area Requirements)16

Basement Plan (As Existing)17



Rendered Aerial – Existing Conditions



LawKingdon Architecture

Central Library Expansion Study
Wichita, KS

INTRODUCTION

LawKingdon Architecture was requested to perform a feasibility study to evaluate the potential of expanding and remodeling Wichita's existing Central Library as an alternative to constructing a new Central Library on another site.

This Feasibility Study utilizes the information set forth in the Building Program Documents prepared by HB&M/Providence in 2010 to establish the building and program requirements for a new Wichita Central Library located at a new site.

The intent of this study is only to provide a preliminary feasibility review of a possible facility expansion on the existing Central Library site, and it is not to be interpreted as a design concept or a conceptual building plan.

This feasibility study only addresses the potential for Library expansion. While it references the impact this expansion may have on the possible future expansion of Expo Hall and the shortage of parking for the Century II/Expo Hall Complex, no attempt is made to address those issues in this study.

EXECUTIVE SUMMARY See the following pages for expanded information.

Site Considerations: Existing site features, such as sidewalks and planters must be replaced. Extensive relocation of existing utilities will be required at significant expense. Parking issues and the potential for future expansion of Expo Hall must be considered.

Existing Building Considerations and Limitations: The existing facility must be reduced to bare structure while maintaining its iconic front façade and portions of the South and North facade. Extensive asbestos abatement is required. Some existing stairs and elevators must be relocated. Existing floor-to-floor dimensions are limiting. All library functions must be relocated for 2 years during re-construction.

Building Expansion Considerations: Maintaining the iconic façade does create some design limitations. Primary expansion must be to west with limited growth to north and south. A larger floor area is required for the expanded building. All new insulation, glazing, elevators, electrical systems, plumbing systems, HVAC systems, life safety systems etc. will be required.

Conclusions: Adding to the existing library is technically feasible. However, the following issues must be considered if the same building program is applied equally to both options:

- (1) Enlarge the existing Library, and
 - (2) Construct a new Central Library on a separate site.
- The Existing Library with an addition will potentially be less efficient functionally and over 2% larger in floor area than a new Central Library.
 - Modifying and expanding the existing Main Library will require that all Main Library operations be relocated, creating service interruptions and limitations for 2 years.
 - Expanding the existing Library will block the potential future expansion of Expo Hall as recommended in previous consultant studies.
 - Expanding the existing Library will have a negative impact on an already difficult parking situation for patrons of the Main Library, Century II and Expo Hall.
 - Remodeling and adding to the existing Main Library is estimated to cost \$44,766,250 in today's dollars. This is over 4% more than the estimated cost of \$43,014,400 to construct a new Central Library on a separate site.

SITE CONSIDERATIONS

Parking: Expanding the Library to the south, even by a small amount, will eliminate the existing Library parking which is currently one of the major shortfalls of the existing facility. An enlarged facility will require even more parking. Eliminating on-site Library parking and expanding the building will force even more Library patrons to use the existing Century II and Expo Hall meter lot and compete with patrons of those venues for available parking spaces.

Landscaping: The existing landscaping is outdated and overgrown, and it needs to be replaced.

Front Plaza: The existing front plaza and the elevated deck are in much disrepair. Concrete slabs, planters and walls will need to be replaced. In general, a whole new outdoor experience needs to be designed.

Service/Delivery: All existing deliveries are currently received in the basement via a drive-thru ramp system. This does not satisfactorily meet the needs expressed in the new library program which requires a ground-level delivery and book drop off system. Because the building is elevated, providing ground-level book drops and deliveries becomes more complicated and adds to expense.

Utilities: If the Library is to expand to the west, numerous existing underground utility lines must be relocated. Preliminary studies indicate that a storm sewer, sanitary sewer, water line, AT&T line, Cox Cable line, City fiber optic line, Kansas Gas main line and a primary Westar line that serves a portion of downtown must all be relocated. The estimated cost of relocating these lines is a minimum of two million one hundred thousand dollars (\$2,100,000.00) and could go higher with more detailed investigation.

Streets and Traffic Ways: The architectural design will need to evaluate if the existing street from Main to Expo Hall and between the Library and Century II can remain or if it will need to be modified or relocated.

Expansion of Expo Hall: A previous consultant's study commissioned by the City determined the need for a large contiguous flat floor addition to Expo Hall. This addition to Expo Hall was recommended to occur to the east due to site restrictions in the other three directions, functional requirements, and related economic considerations.

EXISTING BUILDING CONSIDERATIONS AND LIMITATIONS

Building Size: The existing Central Library was constructed in 1965 and is a 2-story concrete structure with a mezzanine and a basement which total approximately 89,966 SF

Iconic Design: The existing building is considered iconic to Wichita, and careful consideration should be given to any modifications. The building should maintain its iconic character and integrity while providing the expansion necessary.

Floor Plans: The existing floor plans are not adaptable or sufficient size to satisfy the new architectural program requirements.

Glazing: All glazing in the existing building is single pane and should be replaced in a remodeled/expanded facility.

Asbestos: The existing building contains extensive amounts of asbestos which must be removed with a cost estimated at \$850,000.

Floor-to-Floor Heights: The existing floor-to-floor heights will have to be maintained because of the existing structure. These heights are less than ideal and will restrict the height of the floors that are added in the expansion. Also, the two-story spaces on the first level and the small 2nd floor mezzanine will restrict some of the possible uses in those areas.

Elevators and Stairs: The existing elevators and stairs are inadequate and are not located in a proper position to service an expanded project. Therefore they will have to be replaced.

Electrical Systems: All electrical systems throughout the building including lighting must be replaced. The utility company will require a new transformer that is pad mounted outside the building and a service upgrade may be required.

EXISTING BUILDING CONSIDERATIONS AND LIMITATIONS (Continued)

HVAC Systems: The existing mechanical system utilizes chilled water for cooling and hot water for heating that is supplied through underground pipes from the Century II energy plant. Heat exchangers and large air handlers in a ducted forced air system deliver tempered air throughout the building.

The Century II energy plant does not have the capacity to provide chilled/hot water adequate for the needs of an expanded facility; however it may still be used for emergency backup if desired.

All components in the existing HVAC system were installed 45 years ago when the building was constructed and must be replaced.

Plumbing: The original plumbing piping and fixtures are still in use. All components in the existing plumbing systems must be replaced

Wireless Communication: Wireless communication is limited and sometimes blocked at various locations in the existing building due to interference induced by the building's construction. This may be a continuing limitation in the expanded building because of the existing structure that is retained.

Fire Alarm: The existing fire alarm system is dated and must be replaced.

Audio/visual, Data and Sound Systems: All audio/visual, data and sound systems are dated and must be replaced.

Relocation: All library functions must be temporarily relocated to another location. The total time period required for moving the library function to another location prior to construction, operating the library in that location during construction, and moving the library back into the expanded facility following construction is estimated to be about 2 years.

BUILDING EXPANSION CONSIDERATIONS

Maintaining Iconic Design: Any expansion needs to integrate with and gently address the existing building. It needs to be neutral in design while complimenting the original building and maintaining its iconic facade. To be successful, additions to the existing building need to be set back on the south and north to maintain the original design character. With this in mind, future building expansion should be primarily to the west and only secondarily to the north and south. Therefore it is recommended that the front façade, approximately one-third of the north and south facades and the structural system (floors, columns and roof deck) be retained and utilized in the remodeled facility.

Building Access: In expanding the building, the location of the main entry will be determined in the architectural design, and may or may not utilize the existing east entry as the primary entry.

Floor Plans: The existing building floors must be expanded to accommodate the spaces defined in the Building Program Documents prepared by HB&M/Providence. For the purposes of this study, various functions were tentatively assigned to various floors for the purpose of assuming approximate expanded floor areas. Also, new locations were determined for the elevators and stairs that were more appropriate for the expanded facility.

Building Area: Modifying the existing Central Library to meet the requirements of the Building Program Documents may take more square footage than constructing a new facility because of efficiencies that are lost in working with the existing structure.

Insulation Factors: Energy efficient building insulation and multi-pane glazing will be required throughout.

Elevators: All new elevators will be required.

Electrical Systems: All new electrical systems including wiring, lighting, and other electrical components will be required.

BUILDING EXPANSION CONSIDERATIONS (Continued)

HVAC Systems: An all new stand-alone energy efficient HVAC system will be required.

Plumbing: All new plumbing systems including piping, fixtures and other plumbing components will be required.

Fire Alarm: An all new fire alarm system is required.

Audio/visual, Data and Sound Systems: All new audio/visual, data and sound systems are required.

Wireless Communication: An attempt must be made to mitigate the current building's blocking of wireless communication.

Relocation: The Main Library staff and materials will have to vacate the existing building and be relocated to another facility for an extended period of time.



CONCLUSIONS:

Feasibility: While it is possible to expand and remodel the existing Library building to satisfy the Building Program Documents on the existing site, major difficulties must be addressed and additional expenses must be incurred.

Site Development: Expansion of the existing Main Library will eliminate the potential for future expansion of Expo Hall in the manner recommended by previous consultant studies.

Parking: Existing parking shortages will be made worse by expanding the Library on this site. Evaluation of adding a parking garage is recommended.

Building Size: The Building Program Documents for a New Central Library outline the need for a 156,416 SF facility. An expanded Main Library on the existing site should meet the same functional requirements. However incorporating the existing structure into an expanded building creates reduced efficiencies, and an estimated 3,350 SF must be added. This would make the expanded building 159,766 SF, or 2.14% larger than a new building constructed to meet the same functional requirements.

Relocation: The cost of relocating the library functions for 2 years is estimated at \$1,480,000.

Parking: No cost is included for any modification to existing parking except for the adjacent parking that is eliminated in the course of expanding the existing building.

Total Cost: The total cost for expanding the existing Main Library, including relocation costs, is estimated to be \$44,766,250 in today's dollars. This is over 4% more than the estimated \$43,014,400 cost for constructing a new Main Library on another site.

BUILDING AREA ANALYSIS

EXISTING MAIN LIBRARY

89,966 SF

MAIN LIBRARY (at a New Site)

Per the Building Design Program prepared by
HB+M/PROVIDENCE

156,416 SF

74% increase over Existing Main Library

ADDITION TO EXISTING MAIN LIBRARY

Adapting space requirements as defined in
the Building Design Program prepared by
HB+M/PROVIDENCE

Existing Building	89,966 SF
Addition to 1st Floor	43,000 SF
Addition to 2nd Floor Mezzanine	6,000 SF
Addition to 3rd Floor	21,000 SF

78% increase over Existing Main Library

Total Area of Existing + Addition

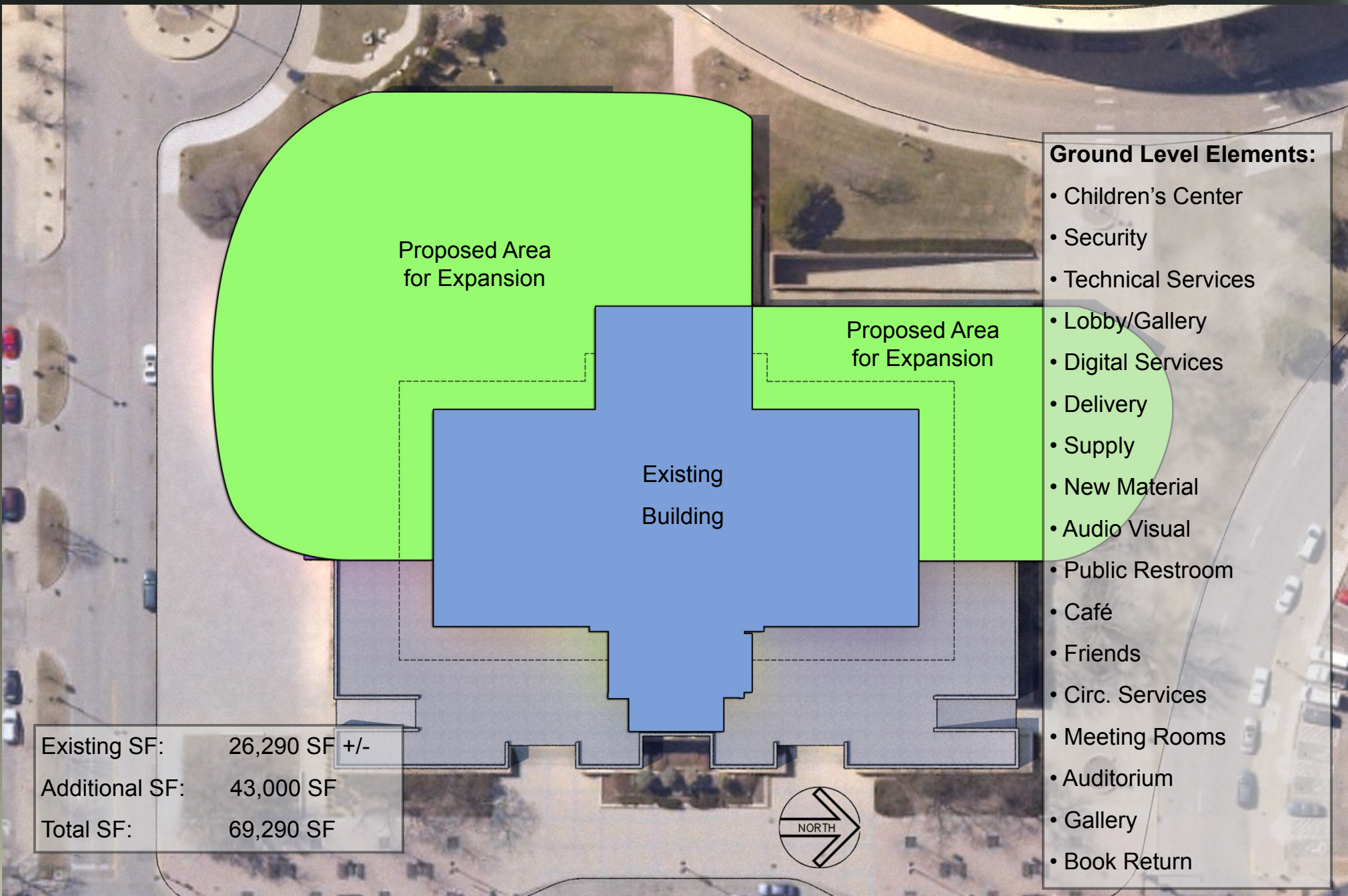
159,966 SF

2.27% Larger than a New Main Library

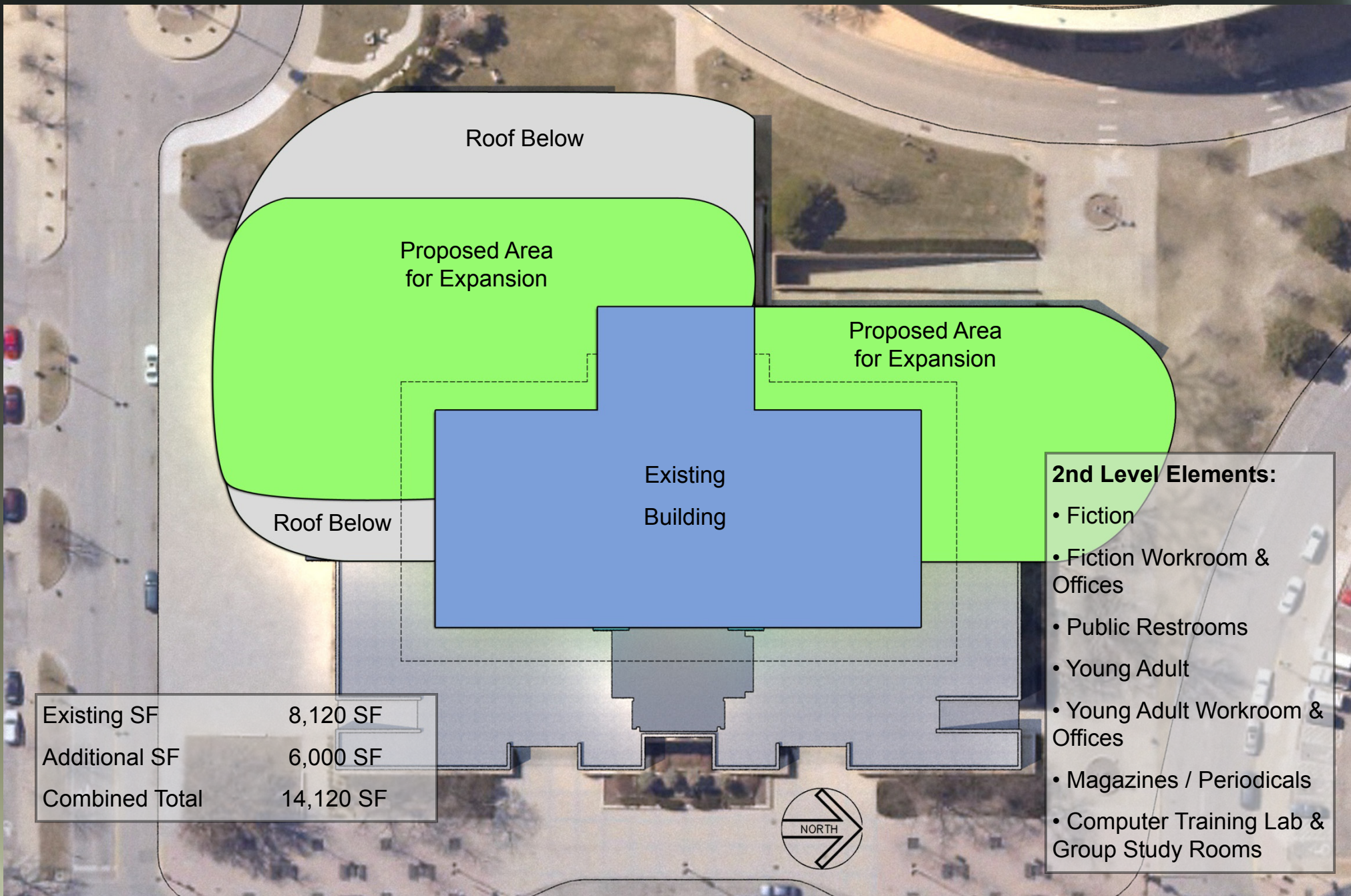
NOTE: An attempt was made to fit the 22 library functional areas as defined in the HB+M/PROVIDENCE Building Program Documents into the three floor levels of the expanded Existing Main Library for this study. However, no actual design was developed, and the numbers presented here are subject to change when a formal design process is initiated. Working within the limitations imposed by the existing site and building structure creates planning obstacles that cause the revised building area to grow beyond what is required in a new facility, and may reduce its functional efficiency compared to a new facility.

PROJECT BUDGET ANALYSIS

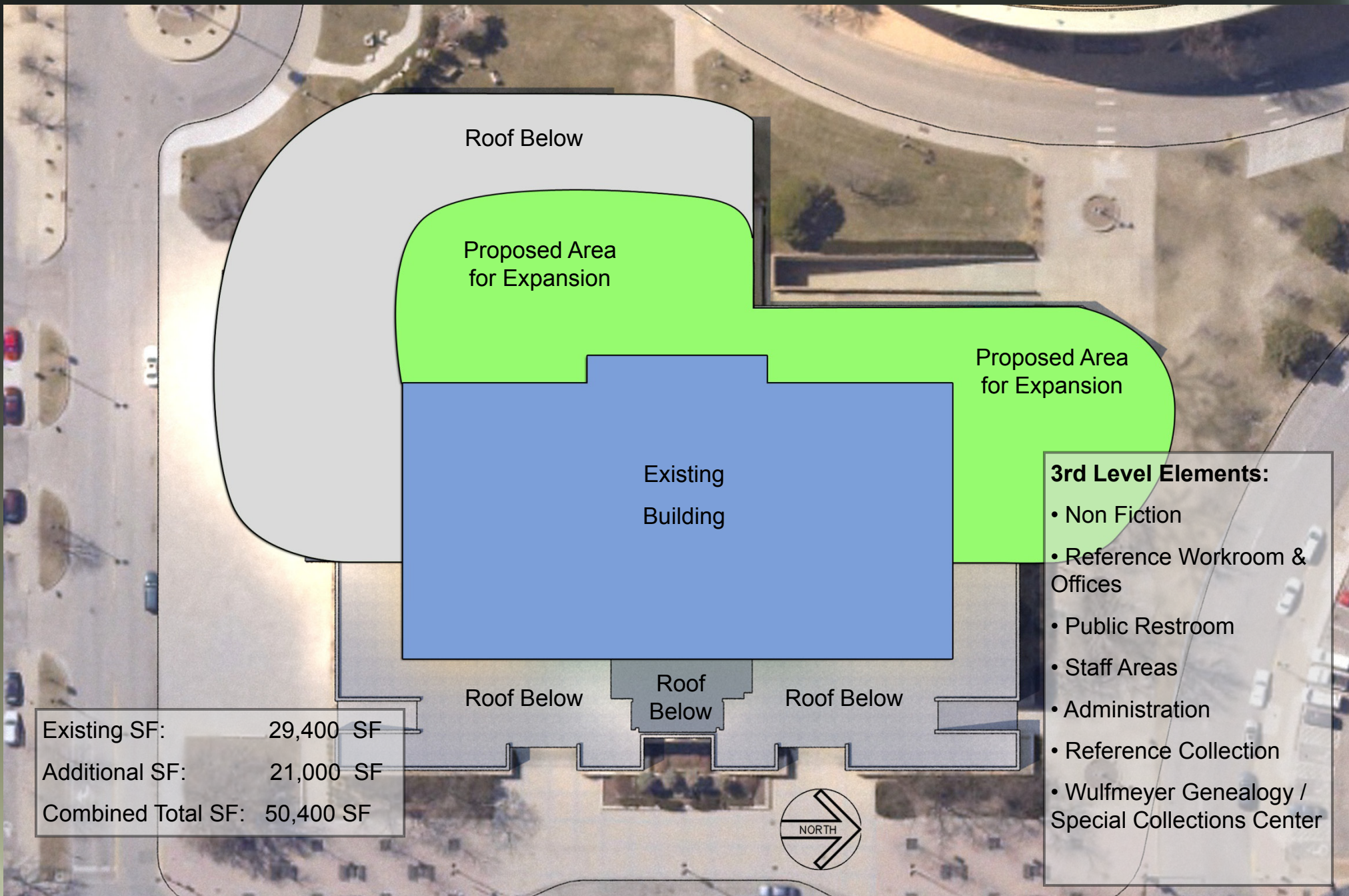
Budget Categories	Cost Basis	Construct New Building per HBN/Providence (156,416 SF Bldg. Area)	Remodel & Add To Existing Building (159,966 SF Bldg. Area)
Land Cost is not included			
Site Development	\$15/SF	\$2,346,240	\$1,800,000
Demolition	\$10/SF		\$900,000
New Construction	\$175/SF	\$27,372,800	\$12,250,000
Remodeling Construction	\$125/SF		\$11,250,000
Library Interiors	\$30/SF	\$4,692,480	\$4,800,000
Utilities Relocation			\$2,100,000
Asbestos Abatement			\$850,000
SUBTOTAL - CONSTRUCTION BUDGET		\$34,411,520	\$33,950,000
Fees & Expenses	15%	\$5,161,728	\$5,092,500
Contingency	10%	\$3,441,152	
Contingency	12.50%		\$4,243,750
Temporary Library Relocation			\$1,480,000
SUBTOTAL - PROJECT BUDGET			
(Calculated in 2011 Dollars)		\$43,014,400	\$44,766,250



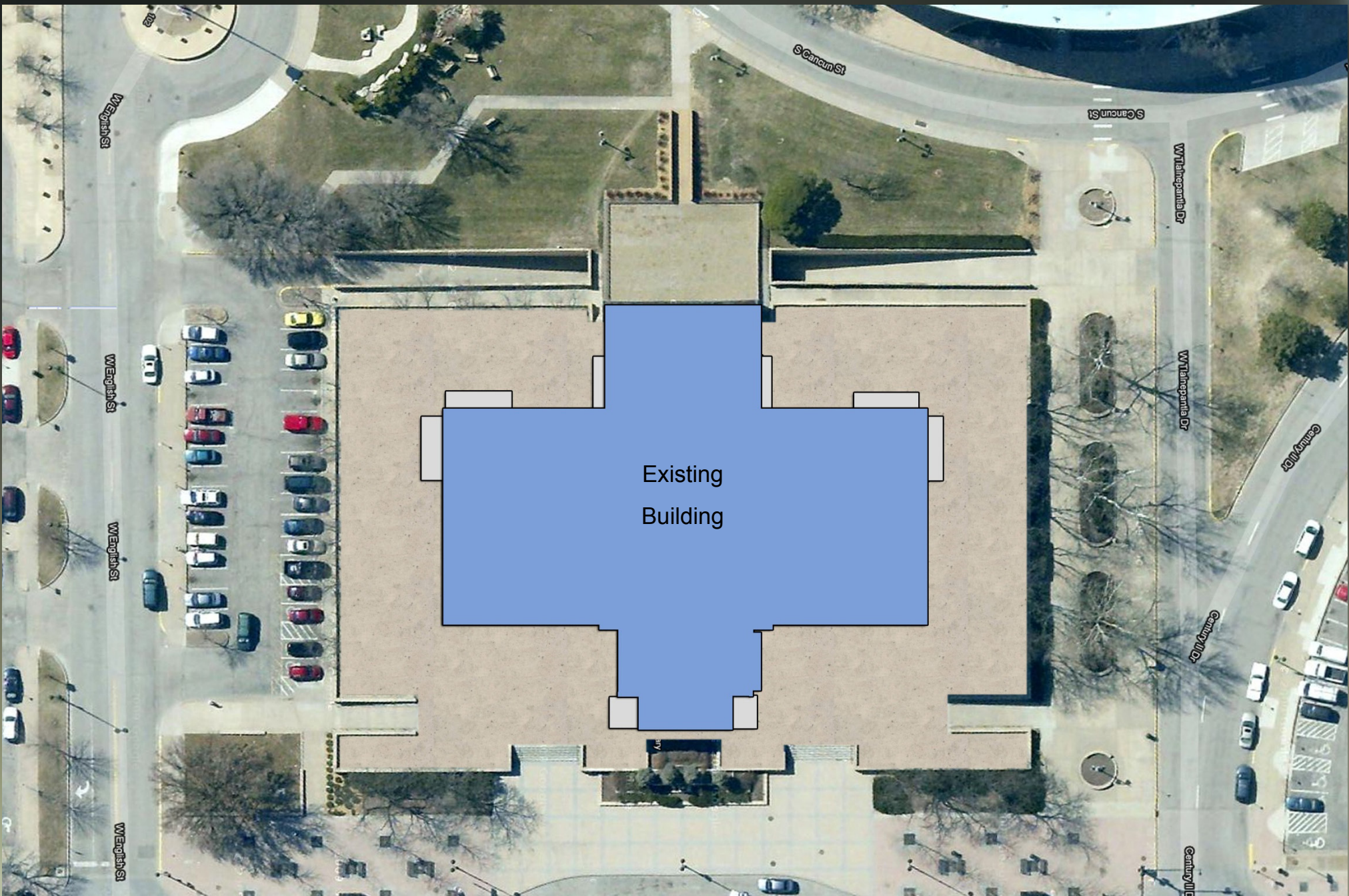
1st Floor Plan (Area Requirements)



Mezzanine Floor Plan (Area Requirements)



2nd Floor Plan (Area Requirements)



Basement Plan (As Existing)

