F Page & Turnbull Report

FRED C. NELLES YOUTH CORRECTIONAL FACILITY
RE-USE FEASIBILITY STUDY FOR 8 HISTORIC BUILDINGS

Whittier, Los Angeles County, California

FINAL REPORT: Volume 1 of 2

Prepared for
State of California
Department of General Services Real Estate Division (DGS)

PAGE & TURNBULL
imagining change in historic environments through design, research, and technology

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FRED C. NELLES CORRECTIONAL FACILITY
FEASIBILITY STUDY

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I. INTRODUCTION

I.1 PURPOSE

This feasibility study of eight (8) properties at the Fred C. Nelles Youth Correctional Facility (Nelles) at 11850 E. Whittier Boulevard in Whittier, California has been prepared for the California Department of General Services. The 73.8 acre property is located on the southern corner of Whittier Boulevard and Sorenson Avenue, between the major transit corridors of Whittier Boulevard, Interstate 605, and Washington Boulevard, near Whittier's uptown district. The site was operated as a correctional facility for juvenile offenders until June of 2004 when the state decided to surplus the property. This study will serve as a tool for the current owner, the State of California Department of General Services (DGS), to determine if it is feasible to re-use the historic resources on the site for new and viable uses. The study focuses on:

- Building 5: Gym
- Building 8: Assistant Superintendent's Residence
- Building 14: Garage (Maintenance Building)
- Building 19: Auditorium
- Building 20: Administration
- Building 21: Superintendent's Residence
- Building 22: Old Infirmary
- Building 26: Chapels

These buildings have been identified as part of a potential historic district as part of an environmental review process, along with a series of landscape elements. The feasibility options studied in this report will serve as due diligence for consultations between the State of California Department of General Services (DGS) and the State Office of Historic Preservation in determining the future of the buildings. As potential historic resources, each of the intended reuse options considered for the rehabilitation of the buildings were approached with the intent of being consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties.

This is an architectural feasibility study – it determines if the existing structures can be made to reasonably accommodate a desired new use, based on programmatic and design criteria that are required in order for the facility to function for its proposed purpose. Site, architectural, and systems requirements have been studied to determine "best fit" options. The study includes an evaluation of the existing site and structures to determine current condition and necessary systems and infrastructure upgrades, and a description of new or upgraded systems that will be required. The concepts are evaluated to determine if rehabilitation could provide an appropriate architectural response to the desired program use. The study also includes a cost analysis that estimates the construction costs of the proposed concepts. The cost analysis is used by the client to determine if the proposed conceptual schemes are practical, satisfactory and/or economically viable options. This determination can be informed by the economic feasibility analysis that has also been prepared as part of this study.

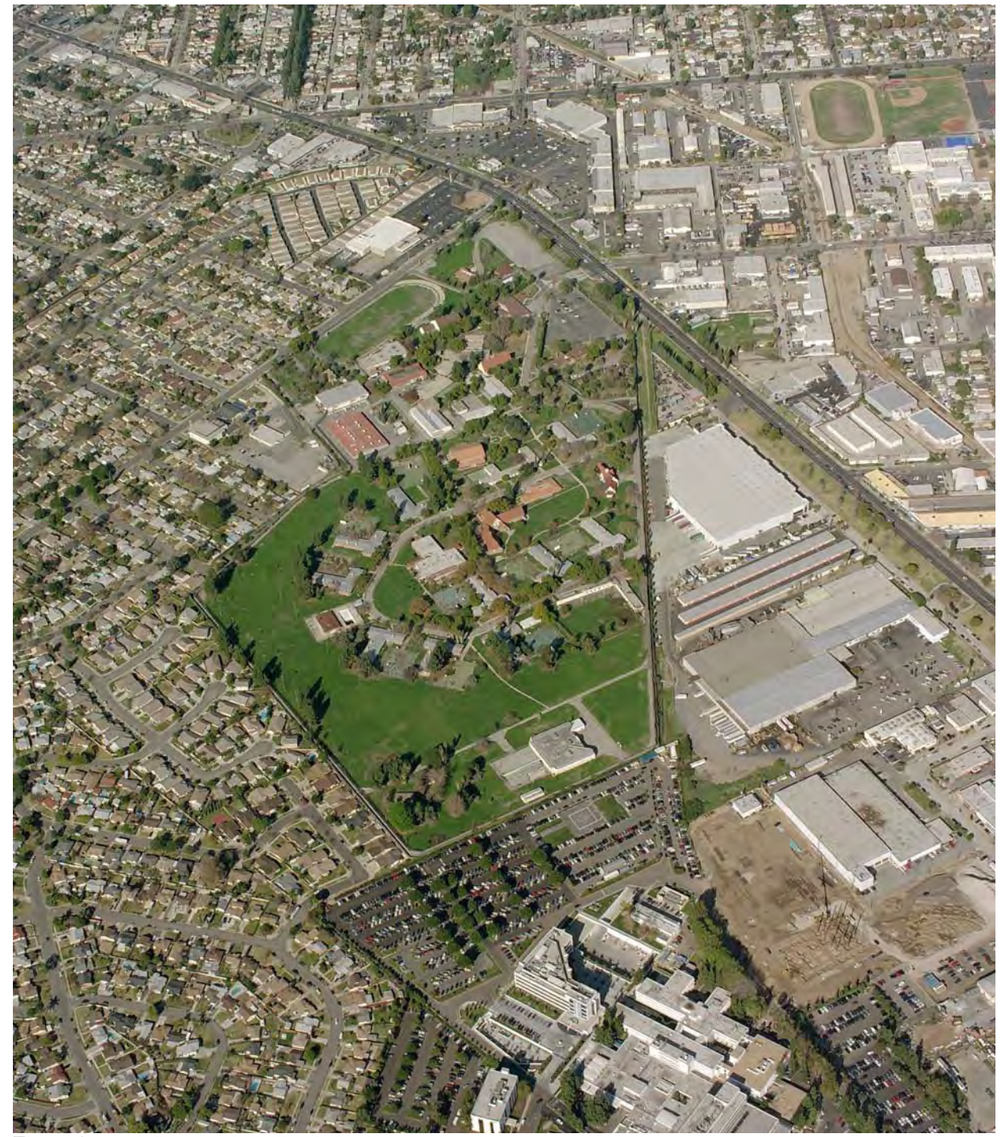

Figure 1: Aerial Photograph, Nelles Redevelopment Site. Source: Fuscoe Engineering

Page & Turnbull has examined necessary code requirements for rehabilitation as well as architectural requirements for the buildings' repair and reuse. The project team includes a structural engineer to provide a structural assessment of the building, a civil engineer to define required systems and infrastructure upgrades, and a cost consultant to prepare a

rehabilitation cost analysis for the re-use schemes. A real estate economist was part of the project team and assisted with determining appropriate uses to study, and comparing the conceptual cost estimates with market conditions to determine economic feasibility. The assessments and the cost estimates have been developed at a conceptual level and reflect re-use strategies developed in coordination with the Client Team. Re-use options that have been studied for this report are:

Table 1: Proposed Re-Use of Subject Properties

Property No.	*Name*	*Year Built*	*Architect*	*Original Use*	*Current Use*	*Proposed Use*
5	Gymnasium	1934	State Architect Alfred Eichler	Gymnasium	Gymnasium	Chapel
8	Assistant Superintendent's Residence	1926	State Architect George McDougall	Residence	Residence	Residence
14	Garage	1931	Deputy Chief W.K. Daniels	Garage	Garage	Community Grocery
19	Auditorium	1923	State Architect George McDougall	Chapel Auditorium	Auditorium	Community Theater
20	Administration	1929	Deputy Chief W.K. Daniels	Offices	Offices	Offices
21	Superintendent's Residence	1920	State Architect George McDougall	Residence	Offices	Residence
22	Old Infirmary	1929	Deputy Chief W.K. Daniels	Hospital	Infirmary	Offices
26	Chapels	1933	Deputy Chief W.K. Daniels	Kitchen & Commissary	Chapels & Training Center	Community Center
43	Fred C. Nelles Historic District	1891	Various	Reform School	Correctional Facility	Housing Development

This report provides the following information:

- The historic, environmental, and planning status of the facility
- An overview of the Nelles Youth Correctional Facility, including:
  - A brief historic context
  - Historic significance statement
- Documentation for each of the eight (8) subject properties, containing:
  - Architectural descriptions
  - A summary of alterations
  - Character-defining features
  - Existing Conditions Drawings
  - Historic and current photographs
  - Proposed Re-Use Scheme
  - Rehabilitation Cost Estimate
- An Appendix containing:
  - Historic resources evaluation criteria
  - Detailed code analysis for each building
  - Cost estimate details for each building
  - Economic analyses*

* A separate report, entitled *Analysis of Potential Feasibility of Re-Use of Eight Historic Structures Located on the Grounds of the Former Fred C. Nelles Youth Correctional Facility, Whittier, Los Angeles County, California*, dated October, 2011 and authored by Gruen Gruen + Associates has been prepared as part of this study and is included in the Appendix.

Fred C. Nelles Facility Site Map

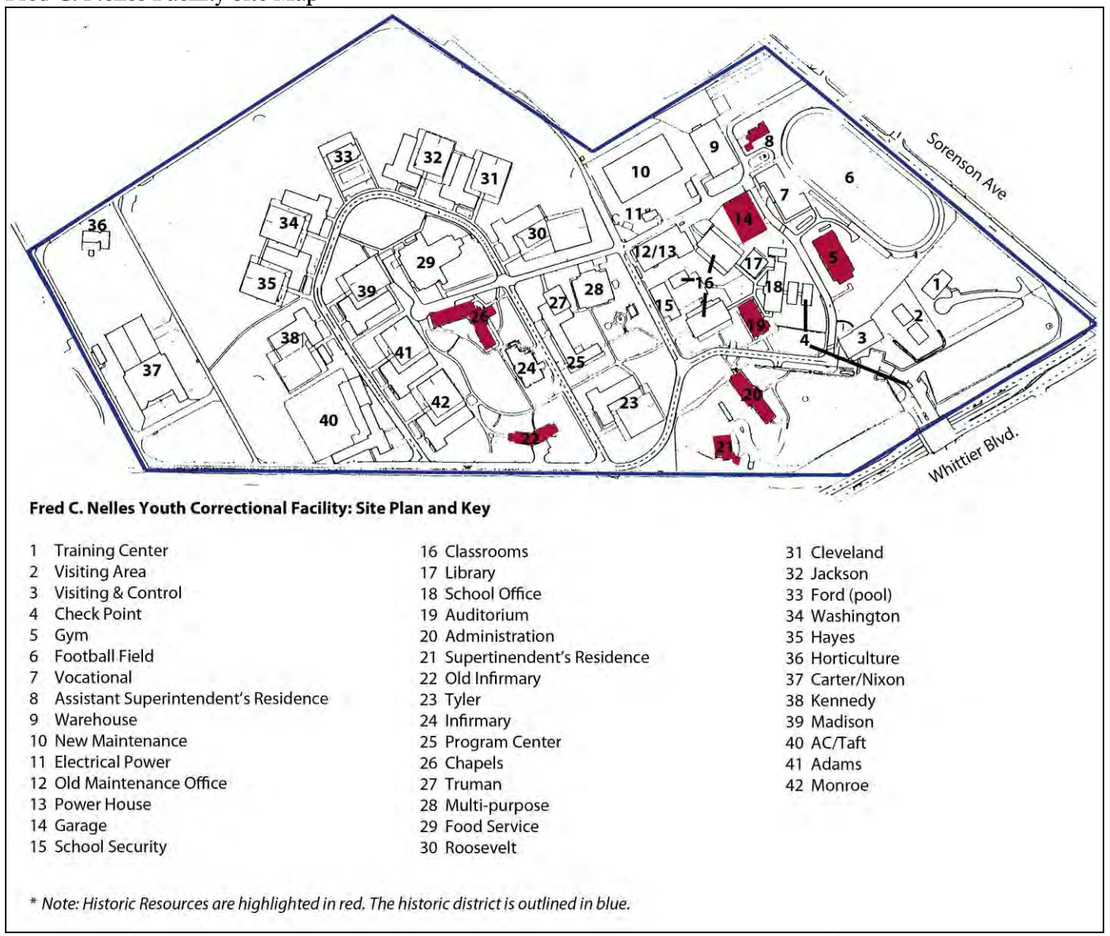

Figure 2: The historic buildings are highlighted in red and numbered within the district. The blue line highlights the boundaries of the proposed district. Site map annotated by Page & Turnbull. The buildings have been numbered for convenience and do not reflect the numbers assigned by the Nelles Facility.

1.2 PROJECT TEAM

The rehabilitation alternatives proposed in this study were produced collaboratively by the project team consisting of:

- Page & Turnbull, Inc. (preservation architect)
  1000 Sansome Street, Suite 200
  San Francisco, CA 94111

- Structural Focus (structural engineer)
  19210 S. Vermont Avenue
  Building B, Suite 210
  Gardena, CA 90248

- Fuscoe Engineering, Inc. (civil engineers)
  16795 Con Karman, Suite 100
  Irvine, CA 92606

- Mack5 (cost estimator)
  1900 Powell Street, Suite 470
  Emeryville, CA 94508

- Gruen Gruen + Associates (Real Estate Economics & Investment Evaluation)
  595 Market Street, Suite 1180
  San Francisco, CA 94105

1.3 METHODOLOGY

The Feasibility Study was informed by the completion of the following tasks:

- Review of existing documentation, including:
  - Aerial Photographs
  - Topographic Base Map
  - As-Built Drawings for all 8 buildings
  - Existing Utilities Exhibits
  - Historic Resources Assessment, Fred C. Nelles Youth Correctional facility, Whittier, California. Page & Turnbull, Inc., May, 2005
  - Historic Resources Assessment. Chattel Architecture, 27 April, 2005
  - Historical Architectural Assessment. EDAW Inc., April, 2005
  - Whittier Commercial Corridor Redevelopment Plan Amendment, Draft Program Environmental Impact Report, Section 4.9: Cultural/Scientific Resources. 2005
  - City of Whittier: City Concept Plan, 2005
  - Whittier Commercial Corridor Redevelopment Plan Amendment Final Program EIR, 2005
  - City of Whittier: Whittier Boulevard Specific Plan, 2005 & Updated 2011
    - Land Use and Development Regulations
    - Design Guidelines
    - Existing Conditions
    - Revitalization Strategy
  - City of Whittier Code of Ordinances: Title 18- Zoning
  - Brookfield Homes Conceptual Land Use Plan, Nelles Redevelopment Site, 21 September, 2010
  - Geotechnical Feasibility Study, Proposed Redevelopment, Fred C. Nelles Site, 25 February, 2005. Lawson & Associates Geotechnical Consulting, Inc. for Brookfield Homes
  - A.L.T.A./A.C.S.M. Land Title Survey, Jan. & Feb., 2005, June, 2010 W.O. 1873-75T. Prepared for Brookfield Homes by Hunsaker & Associates
  - Phase I Environmental Site Assessment, Fred C. Nelles Youth Correctional Facility, Whittier, California, April 2005. Prepared for Brookfield Homes by CH2MHill (Privileged and Confidential)
  - Cost Estimate for Abatement and Demolition, Fred C. Nelles Youth Correctional Facility, Whittier, California, March 2005. Prepared for Brookfield Homes by CH2MHill
  - State of California: Amended and restated MOU 09/20/2005

- Consultation with Gruen Gruen + Associates (Real Estate Economics & Investment Evaluation) regarding the intended re-use options and programs.

- Consultation and coordination with Project Team. Discussions included overview of the existing conditions of the buildings, limitations associated with building structure and anticipated program of the Project.

- Site visits on July 26, 2011 to visually assess each building, record current conditions, and verify building measurements for the code and rehabilitation analysis.

- Code analysis of the eight buildings based on the 2010 California Building Code (CBC), and the California Historic Building Code (CHBC)

- Preparation of architectural diagrams and drawings exploring the conceptual use and layout for each building.

- Completion of systems (architecture, structural, civil) narratives which describe the rehabilitation scope for each proposed re-use.

- Review of the project documents, including photographs, reports and proposed conceptual sketches by Mack5 to assist in preparation of the Preliminary Cost Estimate.

- Independent review by Gruen Gruen + Associates of the conceptual cost estimate to provide an analysis of the economic feasibility of re-using the eight historic resources, given market conditions.

Structural Focus completed a seismic evaluation and feasibility study for the proposed re-use of eight existing historic buildings at the Fred C. Nelles Youth Correctional Facility Campus. The study is based on various existing building drawings that were made available for review (architectural and some structural), conceptual drawings of the proposed re-use schemes received on September 7, 2011, and one site visit on July 26, 2011. During the site visit, all of the eight buildings to be evaluated were able to be observed. Most of the buildings were not occupied, but due to the presence of existing finishes, ceilings, etc. not all portions of the existing structures were able to be observed in each building.

All of the eight buildings evaluated are qualified Historic Buildings and therefore subject to the provisions of the California Historic Building Code (CHBC). The preliminary evaluations of the buildings at the Nelles Campus were conducted based on the requirements of the CHBC. The CHBC requires that the gravity force resisting system and load path of a building be evaluated. If there is a complete load path, there are no signs of distress, and the anticipated dead and live loads will not exceed those typically present, then the gravity "structure may be assumed adequate as having withstood the test of time". The CHBC also requires that the lateral (wind and seismic) force resisting system and load path of a building be evaluated. The evaluation may be based on the ultimate capacity of the members, force demand levels as stated in the CHBC, and broad judgment by the engineer.

As an additional guideline, the American Society of Civil Engineers document ASCE 3-03, "Seismic Evaluation of Existing Building" was used to evaluate the buildings. This document provides a three-tiered framework for the seismic evaluation of existing buildings, wherein potential structural deficiencies can be identified for further investigation or mitigation. At this time only a "Tier 1" analysis corresponding to a life-safety performance level has been conducted for each of the buildings. The Tier 1 analysis consists of a series of checklists that allow for a rapid evaluation of the structural elements of the building. Some basic calculations have been performed to complete various "quick checks." Where deficiencies are noted, further investigation or mitigation has been recommended in order to bring the building to a "collapse prevention" performance level which is consistent with the intent of the CHBC.

A geotechnical feasibility study for the Nelles site has been previously performed by Lawson & Associates Geotechnical Consulting, Inc. in 2005 and the report has been made available for review. The report outlines the important geotechnical characteristics of the area including seismicity (potential for strong ground shaking), liquefaction potential, and surface fault rupture. It also provides preliminary recommendations for site-work, foundations, drainage, etc. Based on the report the Nelles facility is generally located in a "geologically favorable area."

No exploratory investigation (i.e. demolition, coring, removal of architectural finishes, etc.) or material testing was performed as part of this evaluation. As necessary, assumptions have been made to supplement the available information.

Fuscoe Engineering Inc. completed an infrastructure assessment and recommendation investigation evaluating the existing and anticipated water, sanitary sewer, storm drain, roadway, electrical and telecommunication infrastructure requirements associated with the re-use of the eight existing historical buildings. The investigation is based on Fuscoe's understanding of the scope of the project as shown on site drawings supplied by the client, on-site assessment of the visible facilities, interviews on July 26, 2011 by members of Fuscoe Engineering staff with on-site personnel inquiring about any known historical issues and past reports on the site by other consultants for alternative development concepts. No exploratory investigation was performed as part of this report. As needed, reasonable assumptions, based on professional experience, have been made where information in not available. This report assumes that the site will be left, to the extent practical, intact with existing roadway alignments unchanged.

In order to evaluate the potential market responsiveness and financial feasibility of private re-use alternatives including residential, office, and grocery store options, **Gruen Gruen + Associates** (GG+A) conducted research and analysis to identify:

- the primary advantages and disadvantages of the location and buildings from the perspective of potential buyers/users.
- the market conditions and prevailing rents or sales prices within the relevant market for comparable types of uses.
- whether users are likely to be obtainable and whether such users could afford to retrofit the buildings and thereafter pay all operating and maintenance costs.
- given estimates of obtainable rents or sales prices, construction and related costs to prepare the structures for re-use alternatives, and other financial variables, whether it would be profitable for a developer or user to undertake to re-use each structure. Because the price of the land highly influences feasibility, for purposes of the analysis, to permit comparison across re-use alternatives, GG+A assumes that the sites for each structure would be available at no cost. The exclusion of such a significant cost factor lowers the threshold for feasibility.

1.4 LIMITATIONS

The preliminary findings presented in this report are based upon professional judgment and on limited observations, reviews and analysis as described herein. Hidden conditions and a lack of comprehensive field surveys, testing, and detailed analysis make it difficult to fully evaluate the rehabilitation and reuse requirements. Normal care has been taken within the confines of scope and contract budget. A full and detailed analysis is recommended upon moving forward to the next phase of the evaluation effort. No warranties are either expressed or implied.

II. EXECUTIVE SUMMARY

Page & Turnbull, Inc. was retained by the California Department of General Services to conduct a review of historic resources at the Fred C. Nelles Youth Correctional Facility (Nelles) at 11850 E. Whittier Boulevard in Whittier, California, with the intent of understanding the existing, as viewed conditions of the buildings and site in order to determine the architectural and economic feasibility of reusing these structures for new uses. Based on this review, eight buildings and some landscape elements were identified as historic resources. These resources are the focus of this feasibility report.

This report includes a brief description of the properties as well as a list of character-defining features that describe the significance of the building's historic fabric. The feasibility analysis examines the reuse of each building and provides the background information necessary for the Client to examine the economic feasibility of returning the buildings to functional use. This study examines the program/use, site and building constraints, code compliance issues, and provides conditions assessments that define rehabilitation requirements. A structural analysis highlights seismic concerns and other deficiencies relative to the structural performance of each building. The civil engineering analysis defines required systems and infrastructure upgrades that will be necessary for reuse. A conceptual cost estimate for each reuse option is also provided. Finally, an economic analysis summarizes the potential feasibility of each re-use option.

Current Use	*Proposed Use*	*GSF*
Superintendent's Residence	Residence	4,710 sf
Auditorium	Community Theater	5,965 sf
Infirmary	Office	4,615 sf
Asst. Superintendent's Residence	Single Family Residence	1,700 sf
Administration Building	Office	7,755 sf
Chapel	Community Center	11,885 sf
Maintenance Building (Garage)	Grocery Store	11,295 sf
Gymnasium	Church	15,610 sf

In general, all of these buildings have been well-maintained and retain most of their character-defining features. All eight buildings were constructed between 1920 and 1934, within the period of significance of the proposed historic district (1912-1941). All are individually eligible for listing on the National Register of Historic Places, contributors to an eligible National Register Historic District, and part of the California Landmark #947 designation

These buildings are considered to be historic resources for purposes of the California Environmental Quality Act (CEQA), and any proposed project (either rehabilitation or demolition) would require an evaluation for compliance with the Secretary of the Interior's Standards for the Treatment of Historic Properties. In the case of rehabilitation, those features that have been called out in this document as character-defining should be retained and rehabilitated. In the case of demolition, the loss of these features will likely require mitigation under CEQA.

The property is included in the Whittier Boulevard Specific Plan area, within the "Workplace District" which is intended to accommodate business, professional, medical and dental offices, light manufacturing and assembly, as well as live-work, residential and retail development. All of the re-use options studied for this report are presumed to be allowable uses in the district under current zoning or the goals of the Specific Plan. They also appear to be consistent with the city's General Plan goals.

The Page & Turnbull team conducted site visits and code reviews of the buildings to identify the base requirements if they are to be rehabilitated for new uses. For the most part, the buildings are in very good condition on the exterior and can be architecturally adapted for new uses. Any rehabilitation would require repairs to affected interior finishes as well as upgrades to address code deficiencies. The most significant architectural challenges are triggered by seismic strengthening requirements and the sensitive insertion of new program and systems. Accessibility from the exterior of non-residential uses will need to be adequately resolved to meet ADA requirements. The primary layout of the eight buildings will remain much the same as currently exists; minimal changes have occurred to these buildings since their original construction. The Infirmary and Maintenance buildings need the most attention in order to rehabilitate existing interiors to acceptable standards. The residential buildings will require all new kitchens and bathrooms; all other rooms will require minimal work. All buildings will need new restrooms and fixtures in order to accommodate new tenants. The interior of the Infirmary and Chapel will require significant demolition and new construction in order to make the proposed programs work.

From an architectural standpoint, the eight schemes can be summarized as follows:

Superintendent's Residence: The Superintendent's Residence will remain a single family home. The proposed work at this time consists of remodeling of the existing kitchen and pantry area, laundry room, and upstairs and downstairs bathrooms. Also, the rest of the homes' interiors and exteriors will be generally refinished/refurbished.

Auditorium: The use of the Auditorium will essentially remain the same - its proposed re-use is that it becomes a "community theater." The scope of work includes the following: demolition of the northeast stairs, demolition of one set of stage stairs to allow installation of a new accessible stage lift, demolition and replacement of plumbing and bathroom fixtures, demolition of partition walls near entry, relocation of the mechanical/fan room, new access to the balcony/storage area, new ticket window at entry, accessible access, and refinish/renovate interior and exterior finishes and walls. No other major modifications or features are proposed at this time for the re-use of this building as a community theater.

Infirmary: The proposed re-use for the Old Infirmary building is a new office space. The scope of work is a basic tenant improvement which will include the demolition of the majority of existing partition walls, fixtures and furnishings to allow for the build out of new offices and rooms. Also, a new exit door is to be installed and the existing sunroom is to be demolished. No other major modifications or features are proposed at this time for the re-use of this building as a community theater.

Assistant Superintendent's Residence: The Assistant Superintendent's Residence will remain a single family home. The only proposed work at this time is the remodeling of the existing bathrooms and kitchen, as well as refinishing/renovating the building interior/exterior finishes.

Administration Building: The Administration building will continue to be used as an office building. The proposed scope of work is a basic tenant improvement which will result in the demolition of a majority of the existing corridor and partition walls, as well as other basic fixtures and furnishings to allow for the build out of new offices and rooms. No other major modifications or features are proposed for the Administration building.

Chapel: The proposed re-use for the Chapel building is a new community center. The scope of work is to include the following: demolition of the interior partitions, demolition and relocation of existing stairway at choir loft, removal of chapel furnishings, demolition of entry vestibule, and build-out of mixed use spaces. No other major modifications or features are proposed at this time for the re-use of this building as a community center.

Maintenance Building: The proposed re-use for the Old Maintenance Garage building is a new community grocery store. The scope of work is to include the following: demolition of the interior partitions and mezzanines, infill of an existing wall opening, new loading dock/lifts for delivery, and build-out for some small offices, restrooms, and storage space. No other major modifications or features are proposed at this time for the re-use of this building as a grocery store.

Gymnasium: The proposed re-use for the Gymnasium building is a church. The scope of work includes the following: demolition of the entire 1962 southwest addition area, demolition of interior partition walls, demolition of plumbing, doors, and other non-structural items, reconstruct the patio area at southwest corner to match original building construction, new openings in first floor for elevator and stairway to ground floor/basement, new windows in exterior walls at ground level, and build out of new rooms/offices in the existing building (on the first floor and in the basement). No other major modifications or features are proposed at this time for the re-use of this building as a community theater.

For a summary of required structural upgrades, please refer to the appropriate sections in this report.

Cost Summary: Mack5 has estimated that construction costs for the rehabilitation of Nelles' eight historic buildings and adjacent site areas will be approximately $17.1 million. This total includes all new building systems and site improvements; it excludes soft costs and project costs such as fees, professional services, and furnishings. The estimate assumes a 24 month construction schedule. Fuscoe Engineering has summarized the new infrastructure work that will be needed as part of the rehabilitation projects. This is estimated to cost approximately $5 million. This estimate does not include the infrastructure costs for a full development scenario that is being considered for the entire property.

Estimated construction costs for each reuse scheme is summarized as follows.

Proposed Sitework	***Estimated Costs***
Demolition	$1,320,000
Sitework	$2,184,563
Prorates, Bonds, Insurance, Overhead, Etc.	$1,577,053

Current Use (Proposed Use)	***Estimated Building Rehabilitation Costs***
Superintendent's Residence (Single Family Residence)	$960,301 ($204/gsf)
Auditorium (Community Theater)	$1,150,714($193/gsf)
Infirmary (Office)	$1,321,478 ($286/gsf)
Asst. Superintendent's Residence (Single Family Residence)	$309,702 ($182/gsf)
Administration Building (Office)	$1,858,619 ($240/gsf)
Chapel (Community Center)	$3,914,381 ($329/gsf)
Maintenance Building (Grocery Store)	$2,190,822 ($194/gsf)
Gymnasium (Community Church)	$5,389,915 ($345/gsf)

Economic Feasibility Analysis: Real estate economists have predicted that none of the postulated re-use options are economically feasible due to the present and likely market conditions of Whittier, including insufficient residential and nonresidential demand relative to supply, competitive disadvantages found to apply, the special purpose design of several of the buildings for a unique institutional use, and the costs of the retrofits which exceed the value that can be applied to the refurbished space, even after excluding land or property purchase costs, carrying and other costs. The financial feasibility gap found to apply strongly indicates that the reuse options will not be viable for developers or users to profitably undertake, operate, and sustain. It is reasonable to assume that, in order for any of these significant buildings to be re-used, it would require the donation of the building along with the donation of the capital costs associated with the retrofit, and the need to find a user that is willing and financially capable to take responsibility for the on-going operation and maintenance of the facility. Based on the research summarized in the report, very few, if any, such users are likely to exist and the other conditions underlying the assumption specified in the preceding sentence can be expected to occur only in a rather unique and special circumstance.

Federal Historic Rehabilitation Tax Credits are not likely to be a viable strategy for financially mitigating the expense of preserving the historic structures. Federal Historic Rehabilitation Tax Credits are only available for properties held for the production of income or used in a trade or business. Accordingly, Federal Historic Rehabilitation Tax Credits could not be used in connection with the preservation of the Superintendent's Residence and Assistant Superintendent's Residence as single-family residences. In addition, Federal Historic Rehabilitation Tax Credits are typically unavailable to non-profit, tax-exempt entities such as the City of Whittier, Whittier library district, Whittier College, religious organizations or community groups if such entities became owners of properties proposed to be adaptively reused as a community center, library branch, auditorium or church. Moreover, qualified rehabilitation expenditures do not include the cost of acquiring the building or expenditures related to a building such as parking lots, sidewalks, landscaping as well as costs such as demolition costs, appliances, cabinets, and various soft costs. As a result, considerable costs estimated for the reuse options would be excluded in determining the amount of the available Federal Historic Rehabilitation Tax Credit.

III. BACKGROUND INFORMATION

III. I BRIEF HISTORICAL OVERVIEW

The Fred C. Nelles Youth Correctional Facility (also known as the Fred C. Nelles School) is the oldest extant juvenile detention center in California, operating from 1891 to 2004. Opening on July 1, 1891 as the "Reform School for Juvenile Offenders," this facility was intended to provide "discipline, education, employment, reformation and protection" to juvenile delinquents.[1] Located on 80-acres of donated land in Whittier, California, the former youth facility consists of a complex of buildings, structures and sites, which are rendered in a variety of architectural styles including Tudor Revival, English Manor, French Renaissance and Modern. This collection of buildings includes dormitories (known as cottages), staff residences, school buildings, an auditorium, a gymnasium, and several support structures.[2] The period of significance (1912-1941) was established to reflect the tenure of school Superintendent Fred C. Nelles, who oversaw numerous and significant changes at the institution, in addition to the Superintendents who followed him and sustained his legacy. The facility is significant because of its history and integrity, and its Period of Significance is 1912-1941, which coincides with the tenure of school Superintendent Fred C. Nelles and those who followed him that continued his legacy.

Early History
The school initially consisted of a large barn, a conservatory, a gardener's residence, a powerhouse and trades building, a ten-room girls cottage, and a large four-story administration building which contained all of the school's primary functions such as the boys dormitories, kitchen, chapel and classrooms. Originally, the Reform School for Juvenile Offenders was divided by sex, with the girls located in cottages and the boys located in the Administration Building (also known as the "Castle"). During these early years, a fully functioning farm accompanied the complex of school buildings. The farm provided food for the institution, while also teaching the children about discipline and hard work. In addition to farm labor, the children were educated in the industrial arts or trades, such as carpentry, painting, printing, animal husbandry and dairying, tailoring, or shoemaking.[3] This gave the children "real world" knowledge, which they could utilize back in society. In 1893, the School's name was changed to the 'Whittier State School," due to the negative connotations associated with the word "reform." For the next ten years, the School operated under its agricultural discipline philosophy and even incorporated measures utilized by adult detention facilities. Of note was the use of the Oregon Boot, which prevented cadets (as they were referred to) from running away by shackling a 15 to 25 pound weight to one of their legs.[4] During this time period, the School developed into a small self-sustaining community and slowly obtained additional buildings such as a pool, print shop, and trades building.[5]

Fred C. Nelles as Superintendent
In 1912, the Board of Trustees hired Los Angeles businessman Fred C. Nelles as the Superintendant of the Whittier State School. From this point onward, the School focused upon a program of rehabilitation and resocialization. Nelles' new philosophy involved reintegrating the children into society. The new philosophy was exemplified in the abolition of all forms of corporal punishment (including the infamous Oregon Boot) in 1913.[6] [7]

In addition to philosophical changes, the Whittier State School underwent dramatic changes to its physical landscape and enrollment population. In 1913, the Administration Building (the "Castle") suffered a damaging fire, and was subsequently demolished in 1920.[8] In 1915, the Juvenile Court Act was revised to exclude boys over 16 years old. Finally in 1916, all of the girls at the School were transferred to the newly founded Ventura School for Girls, thus fulfilling Nelles' desire for a separate institution for girls.[9]

Overall, Nelles' changes to the school can be characterized as humane and judicious. Renowned as his most significant achievement, Nelles instituted a cottage system, whereby the boys were separated into cottages based on age, maturity, attitude, and delinquency.[10] Each cottage had a house mother/father and was made to simulate a home environment. Instead of corporal punishment, Nelles instituted a lost privilege system, in which rebellious boys and runaways lived under closer supervision and worked on tasks such as road building and ditch digging.[11] His other major achievements at the School included the founding of the Journal of Delinquency and the recognition of the research fields of juvenile delinquency and mental retardation. In 1919, Nelles successfully introduced the first staff psychiatrist and psychologists to the School.[12] With these individuals, Nelles established a department for the study of mental defects, which would later influence the establishment of the State Bureau of Juvenile Research in 1921.[13] Nelles also instituted clinical procedures for the evaluation of "feeble-minded" boys, who were transferred to the Sonoma State Home, as early as 1914. The introduction of these types of clinical programs at Whittier State School represents one of the earliest by a state agency.[14] [15]

Facility after Fred C. Nelles
In 1927, Fred C. Nelles died of Lou Gehrig's Disease. He was succeeded by four superintendents: Kenyon Scrudder (1927-1931), Claude S. Smith (1931), Dr. George Sabaski (1931-1933), and Judge E.J. Miline (1933-1941), who continued his rehabilitation philosophy. These superintendents focused on specific programs, such as vocational arts and the development of social skills, to resocialize and rehabilitate the boys.[16] In addition, these superintendents furthered Nelles' earlier aspirations for clinical programs and developmental research by acquiring adolescent psychologists and aid from the State Bureau of Juvenile Research.[17]

In 1941, the State adopted the Youth Authority Act and established the Youth Correction Authority (California Youth Authority), which oversaw activities at the Whittier State School.[18] Also in 1941, the Whittier State School was renamed the Fred C. Nelles School for Boys, in honor of its pioneering superintendent. From the 1940s onward, the Fred C. Nelles School for Boys operated in the same capacity as other delinquency schools. During the 1950s and 1960s, the School underwent a massive building program in which a new school was constructed along with a series of new cottages, program buildings, and detention facilities. In the late 1980s, the School's first true detention facility was constructed with the Carter-Nixon Building, which mirrored the design of adult penitentiaries. Later, the School dropped the "for Boys" portion of its name and became the Fred C. Nelles School. Soon after, the Fred C. Nelles School was renamed the "Fred C. Nelles Youth Correction Facility." Finally, in December 2004, the site was closed as mandated by Governor Arnold Schwarzenegger, who declared the Fred C. Nelles Youth Correction Facility as state surplus property. [19]

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[1] *Whittier State School, Hospital and Receiving Building (Fred C. Nelles School, Personnel Building), HABS No. CA 2400-A* (August 1994) 5.
[2] HRA P&T 2005
[3] Rudy Valdez, *Whittier, A Picture Postcard History* (Whittier, California: Mondragon Press, 1987) 37.
[4] California Youth Authority*, 1891-1991: The First 100 Years, the Fred C. Nelles School, Whittier, California* (n.d.) 31.
[5] HRA P&T 2005
[6] California Youth Authority*, 1891-1991: The First 100 Years, the Fred C. Nelles School, Whittier, California* (n.d.) 30.
[7] HRA P&T 2005
[8] The cornerstone of the original Administration Building was saved and reutilized in the current Administration Building, which was completed in 1923.
[9] HRA P&T 2005
[10] California Youth Authority*, 1891-1991: The First 100 Years, the Fred C. Nelles School, Whittier, California* (n.d.) 1.
[11] Benjamin F. Arnold and Artilissa Dorland Clark, *History of Whittier* (Whittier, California: Western Printing Corporation, 1933) 138.
[12] Samuel M. Kason, "Fred C. Nelles School- Fact Sheet" unpublished history (n.d.) 4.
[13] "Descriptive booklet of Fred C. Nelles School," (n.d.)
[14] J. Harold Williams, *Department of Research Bulletin No. 1- Defective, Delinquent, and Dependent Boys* (Whittier State School, Department of Printing Instruction, December 1915) 22.
[15] HRA P&T 2005
[16] *Whittier State School, Hospital and Receiving Building (Fred C. Nelles, Personnel Building), HABS No. CA 2400-A* (August 1994) 8.
[17] HRA P&T 2005
[18] California Youth Authority*, 1891-1991: The First 100 Years, the Fred C. Nelles School, Whittier, California* (n.d.) 32.
[19] HRA P&T 2005

Historic Images

1933 Aerial Photograph of the Fred C. Nelles Correctional Facility. Photograph courtesy of the California Youth Authority.

The first Administrative Building (1891-1916) at the Whittier State School in 1904. Photograph courtesy of the City of Whittier Public Library. Available: http://digi.whittierlibrary.org/awweb/main.jsp?flag=browse&smd=1&awdid=14 (Accessed 08/22/11)

The Girls' Department of the Whittier State School, no date. Photograph courtesy of the Whittier Public Library.

III.2 SIGNIFICANCE & CURRENT HISTORIC STATUS

Historic Significance Statement
The following historic context statement is from the Chattel Architecture Historic Resource Assessment prepared in support of the Whittier Commercial Corridor Redevelopment Plan Amendment Final Program EIR, 2005:

> Based upon its history and integrity, the Fred C. Nelles Youth Correctional Facility appears eligible for listing as an historic district in the National Register under criteria A (1), B (2), and C (3) with the most important period of significance lasting from 1912 to 1941. Although there are a number of non-contributing buildings on the campus, the boundaries of the National Register-eligible historic district should reflect those of the institution as a whole, as described below. In addition, the campus appears to be be potentially eligible under criteria D (4) (additional information and archaeological testing would be necessary to determine whether this criterion is applicable).
>
> The subject site is significant under criterion A for being the first juvenile reform school in California, in addition to its role in the development of innovative behavioral modification techniques and psychological studies related to juvenile delinquency and reform school environments. Under criterion B, the subject site is significant for its association with Fred C. Nelles, school Superintendent from 1912-1927, who inspired future school superintendents and national scholars of juvenile delinquency and initiated the creation of a deinstitutionalized campus of community-oriented and "human-scaled" buildings. Under criterion C, the subject site is significant as a collection of institutional buildings built in various period revival styles between 1920 and 1934 that retain a high degree of integrity. Under criterion D, the subject site is potentially significant for its ability to yield information important in history as a former site of agriculture, including farming and raising livestock, as well as the site of a community of approximately 300 to 500 people for over 115 years.
>
> The period of significance (1912-1941) was established to reflect the tenure of school Superintendent Fred C. Nelles, who oversaw numerous and significant changes at the institution, in addition to the Superintendents who followed him and sustained his legacy. Nelles and his immediate successors improved the day-to-day operation of the school using a more personalized and less severe disciplinary approach to administration; successfully developed many of the school's physical facilities in the form of a community-oriented cottage system and deinstitutionalized, human-scale buildings; and instituted a psychological survey of boys in the facility's custody ("wards"), one of the first clinical programs organized at a state correctional school, to determine the differing needs of the wards. Many of the recommendations outlined in the survey and resulting report reflected principles of the eugenics movement, which called for the hereditary improvement of the general population through selective breeding, most popular in the United States from approximately 1910 to 1930, and resulting in the involuntary sterilization of tens of thousands of "feeble-minded" individuals in state institutions across the country. Nelles advanced this movement by embracing many of the report's recommendations, including classification and segregation of the wards based on mental assessments, and establishment of a school Research Department headed by Stanford psychologist Dr. Lewis M. Terman. This department began publication of the first periodical in the United States devoted to the scientific study of delinquency. The research teams enlisted by Nelles went on to design psychological tests for the U.S. Army during World War I and formed the California Bureau of Juvenile Research in 1921.
>
> Based upon the above-referenced findings, it appears that the subject property retains integrity necessary to maintain its listing in the California Register as California Historic Landmark No. 947, in addition to remaining eligible for listing in the National Register as an historic district. The boundaries of the district should reflect those of the institution.

Historic Status
Historic Resources Surveys were conducted at the Fred C. Nelles Facility in 1994, 2005, and 2011. School Superintendent Samuel M. Kason approved registration of the site as a California Historical Landmark (No. 947) and it was listed in 1982. Early surveys identified nine resources that under the original California Historic Resource Status Code 4, "might become eligible for listing on the National Register." In 2003, the Status Codes were revised by the State Office of Historic Preservation (OHP), and the National Register Status Code was converted to 7N, "needs to be re-evaluated."

Table 1: Previous Survey Findings, 1994

Property No.	*Name*	*Year Built*	*California Historical Resource Status Code* *	*Historical Resource*		*Historic District Contributor*	
				Yes	No		
5	Gym	1934	7N	✓		✓	
8	Assistant Superintendent's Residence	1926	7N	✓		✓	
14	Garage	1931	7N	✓		✓	
19	Auditorium	1923	7N	✓		✓	
20	Administration	1929	2D2	✓		✓	
21	Superintendent's Residence	1920	2D2	✓		✓	
22	Old Infirmary	1929	7N	✓		✓	
26	Chapels	1933	7N	✓		✓	
n/a	Personnel Quarters	1923	7N	✓		✓	*demolished*
43	Fred C. Nelles Historic District		7N	✓		n/a	

Source: Historic Property Data File for LA County, July 14, 2011, California Office of Historic Preservation.

In 1994, Historic American Building Survey (HABS) Documentation was prepared and the Personnel Quarters building was demolished.

The forty-three (43) properties in the Nelles facility were surveyed again in March of 2005 by Chattel Architecture, who prepared a Historic Resources Assessment in support of the Whittier Commercial Corridor Redevelopment Plan Amendment, Final Program Environmental Impact Report (FEIR). The FEIR, which discussed redevelopment plans for Subarea B, which includes the Fred C. Nelles facility, was certified on July 5, 2005. According to the determinations made in the FEIR, the site is a National Register eligible historic district, and contains eight buildings that are both district-contributors and individually eligible for the National Register of Historic Places (**Table 2: Historic Resources Summary of FEIR Survey Findings, 2005**). Although California Historical Resource Status Codes were not assigned to the properties, the status codes in the following table were deduced from the findings of the report.

The Chattel report identified a period of significance from 1912-1941 to "reflect the tenure of school Superintendent Fred C. Nelles, who oversaw numerous and significant changes at the institution, in addition to the Superintendents who followed him and sustained his legacy." The period of significance does not include later (mid-modern) buildings at the facility.

Page & Turnbull conducted a Historic Resource Assessment in November 2005 in which the historical significance of the existing buildings and site were evaluated. Page & Turnbull re-surveyed the Nelles facility in July of 2011 and found that there were few, if any, changes to the forty-three (43) properties or to the site since the 2005 survey. The Page & Turnbull survey included those buildings that were not yet 50 years old at the time of the 2005 survey; these resources were constructed outside of the established period of significance and Page & Turnbull did not find them to be individually-eligible historic resources.

Table 2: Historic Resources Summary of FEIR Survey Findings, 2005

Property No.	*Name*	*California Historical Resource Status Code **	*Historical Resource*		*Historic District Contributor*
			Yes	No	
1	Training Center	6Z		✓	
2	Visiting Area	6Z		✓	
3	Visiting & Control	6Z		✓	
4	Check Point	6Z		✓	
5	Gym	3B	✓		✓
6	Football Field	6Z		✓	
7	Vocational	6Z		✓	
8	Assistant Superintendent's Residence	3B	✓		✓
9	Warehouse	6Z		✓	
10	New Maintenance	6Z		✓	
11	Electrical Power	6Z		✓	
12	Old Maintenance Office	6Z		✓	
13	Power House	6Z		✓	
14	Garage	3B	✓		✓
15	School Security	6Z		✓	
16	Classrooms	6Z		✓	
17	Library	6Z		✓	
18	School Office	6Z		✓	
19	Auditorium	3B	✓		✓
20	Administration	3B	✓		✓
21	Superintendent's Residence	3B	✓		✓
22	Old Infirmary	3B	✓		✓
23	Tyler	6Z		✓	
24	Infirmary	6Z		✓	
25	Program Center	6Z		✓	
26	Chapels	3B	✓		✓
27	Truman	6Z		✓	
28	Multi-purpose	6Z		✓	
29	Food Service	6Z		✓	
30	Roosevelt	6Z		✓	
31	Cleveland	6Z		✓	
33	Ford (pool)	6Z		✓	
34	Washington	6Z		✓	
35	Hayes	6Z		✓	
36	Horticulture	6Z		✓	
37	Carter/Nixon	6Z		✓	
38	Kennedy	6Z		✓	
39	Madison	6Z		✓	
40	AC/Taft	6Z		✓	
41	Adams	6Z		✓	
42	Monroe	6Z		✓	
43	Fred C. Nelles Historic District	3	✓		n/a

* California Historical Resource Status Codes, See Appendix A. no codes were assigned in the FEIR, however, status codes are deduced by Page & Turnbull from those findings.

Source: Fred C. Nelles Youth Correctional Facility Historic Resource Assessment, Chattel Architecture, 2005.

The 2005 FEIR stated that, in the event of redevelopment, a preservation plan should be created and, at a minimum:

1. The majority of the contributing resources of the historic district should be maintained.
2. Contributing resources should be rehabilitated, restored, and reconstructed in a manner that is consistent with historic district character.
3. Historic archaeological resources should be identified and possibly recovered.
4. Contributing resources to be demolished or altered in a manner not in conformance with the *Secretary's Standards* should be photo documented and interpreted.
5. As part of the specific plan prepared for Subarea B, design guidelines should be prepared and implemented. Such guidelines should include an analysis of cultural landscapes and builder's handbook of architectural style and scale for new building as well as site development standards.
6. The hierarchy of contributing buildings should be retained, and historic and new street cross-sections should maintain historic district character.
7. Landscapes, open space, and older trees should be retained.
8. The setting of contributing resources should be respected in the design of future development.

The eight (8) subject properties and Fred C. Nelles Historic District are eligible for the National Register; therefore, redevelopment of the site is subject to conformance with Section 106 of the National Historic Preservation Act of 1966 (as amended) and the requirements of CEQA and the CEQA Guidelines (California 2005) as they apply to cultural resources. Refer to **Appendix A: Criteria for Historic Significance Findings** for an overview of the requirements of the National Register of Historic Places and CEQA.

III.3 HISTORIC STRUCTURES

Historic Significance of Architectural Resources

The following significance statements are from the Chattel Architecture Historic Resource Assessment prepared in support of the FEIR, 2005:

Building 21 Superintendent's Residence

Based upon its association with the Whittier State School, its association with Fred C. Nelles (as a place of residence) and its architectural significance as a fine example of Tudor Revival architecture that maintains a high degree of integrity, the Superintendent's Residence appears to be a contributing resource to the National Register-eligible and California Register-listed historic district. In addition, the building appears individually eligible for listing in both the National and California Registers for its association with the Whittier State School, its association with Fred C. Nelles, and for its architecture.

Building 19 Auditorium

Based upon its association with the Whittier State School and its architectural significance as a fine example of Cape Dutch-influenced architecture that maintains a high degree of integrity, the Auditorium appears to be a contributing resource to the National Register-eligible and California Register-listed historic district. In addition, the building appears individually eligible for listing in both the National and California Registers for its architecture and association with the Whittier State School.

Building 22 Old Infirmary

Based upon its association with the Whittier State School and its architectural significance as a fine example of Cape Dutch-influenced architecture that maintains a high degree of integrity, the Infirmary appears to be a contributing resource to the National Register-eligible and California Register-listed historic district. In addition,

the building appears individually eligible for listing in both the National and California Registers for its architecture and association with the Whittier State School.

Building 8 Assistant Superintendent's Residence
Based upon its association with the Whittier State School and its integrity, the Assistant Superintendent's Residence appears to be a contributing resource to the National Register-eligible and California Register-listed historic district. In addition, the building appears individually eligible for listing in both the National and California Registers for its association with the Whittier State School.

Building 20 Administration
Based upon its association with the Whittier State School, its association with Fred C. Nelles (as a place of work), and its architectural significance as a fine example of Tudor Revival architecture that maintains a high degree of integrity, the Administration Building appears to be a contributing resource to the National Register-eligible and California Register-listed historic district. In addition, the building appears individually eligible for listing in both the National and California Registers for its association with the Whittier State School, its association with Fred C. Nelles, and for its architecture.

Building 26 Chapels
Based upon its association with the Whittier State School and its architectural significance as a fine example of Tudor Revival architecture that maintains a high degree of integrity, the Chapels Building appears to be a contributing resource to the National Register-eligible and California Register-listed historic district. In addition, the building appears individually eligible for listing in both the National and California Registers for its architecture and association with the Whittier State School.

Building 14 (Maintenance) Garage
Based upon its association with the Whittier State School and its integrity, the Maintenance Garage appears to be a contributing resource to a National Register-eligible and California Register-listed historic district. In addition, the building appears individually eligible for listing in both the National and California Registers for its association with the Whittier State School.

Building 5 Gymnasium
Based upon its association with the Whittier State School and its architectural significance as a fine example of Romanesque Revival architecture that maintains a high degree of integrity, the Gymnasium appears to be a contributing resource to the National Register-eligible and California Register-listed historic district. In addition, the building appears individually eligible for listing in both the National and California Registers for its architecture and association with the Whittier State School.

III.4 HISTORIC LANDSCAPE ELEMENTS

The Historic Resource Assessment Report prepared by Chattel Architecture in support of the FEIR, 2005 identified landscaped areas of historic significance around the Superintendent's Residence, Administration Building, Assistant Superintendent's Residence, and Gymnasium. The significant landscape around the Gym includes the adjacent athletic field. The following excerpts from the HRA explain the historic significance of each landscape area to the historic district:

Landscaping surrounding Superintendent's Residence and Administration Building (L1)
Historic photographs indicate that this garden was installed at the time of construction of the Superintendent's Residence in 1920. Construction of both the residence and garden occurred while Nelles served as Superintendent. Although the plantings have almost certainly been changed over the years, the garden surrounding the Superintendent's Residence and Administration Building is intact and appears to be a contributing landscape resource to the National Register eligible and California Register-listed historic district.

Landscaping around Assistant Superintendent's Residence (L2)
Historic photographs indicate that this garden was installed at the time of construction of the Assistant Superintendent's residence in 1926. Construction of both the residence and garden occurred while Nelles served as Superintendent. Although the plantings have almost certainly been changed over the years, the garden surrounding the Assistant Superintendent's Residence is intact and appears to be a contributing landscape resource to the National Register-eligible and California Register-listed historic district.

Landscaping around Gymnasium including Athletic Field (L3)
Constructed in conjunction with the Gymnasium, the athletic field, which includes a track and football field, provided space for the school's wards to exercise and participate in outdoor sporting events. Although alterations have been made to paving and spectator seating areas, the field is associated with the function of the school and its wards, and retains integrity to the period of significance. As such, the Athletic Field appears to be a contributing landscape resource to the National Register-eligible and California Register-listed historic district.

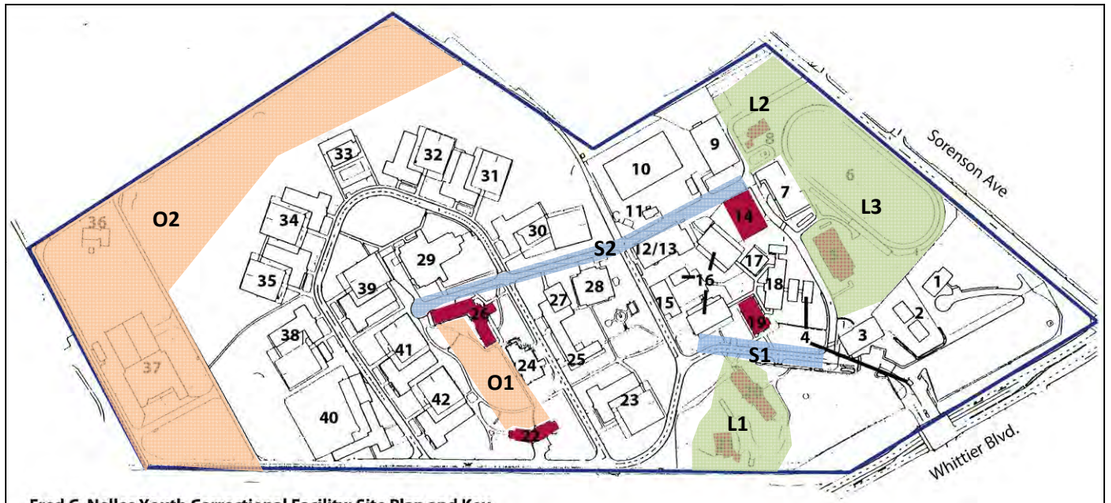
Streetscape 1 (S1)
Based upon review of historic site plans and aerial photographs, the angled street that runs from the entrance south between the Administration Building and Auditorium appears to be the most intact segment of the campus' historic street system. Established as late as 1920, this segment of the street system was previously lined with palm trees. Although these trees have been removed, the street retains integrity of location and provides a significant view corridor, which incorporates a number of the campus' historic buildings, from the entrance to the interior of the campus. This streetscape appears to be a contributing landscape resource to the National Register-eligible and California Register-listed historic district.

Streetscape 2 (S2)
Based upon review of historic site plans and aerial photographs, the street that runs from the Maintenance Garage southeast past the Chapel Building is an intact segment of the campus' historic street system. The southern portion of this streetscape is lined with mature trees while the northern portion contains minimal landscaping befitting the industrial nature of the surrounding buildings Established in the early-1930s, this segment of the street system connects many of the school's functional buildings and appears to be a contributing landscape resource to the National Register-eligible and California Register-listed historic district.

Open Space 1 (O1)
Review of historic site plans and aerial photographs indicates that the space between the Infirmary and Chapel Building has historically been open. With the exception of a minimal intrusion from the construction of a new infirmary building, this open space remains intact. The open space protects the historic relationship between the Infirmary and Chapels Building, both contributing resources to the historic district, and as such appears to be a contributing landscape resource to the National Register-eligible and California Register-listed historic district.

Open Space 2 (O2)
Review of historic site plans and aerial photographs indicates that the area around the southern and western boundaries of the campus have historically been undeveloped. In the early years of the school, and through the period of significance, much of this area served as agricultural land, including areas used for farming and raising livestock, maintained by the wards. Although this open space has diminished over the years through construction of the new cottages (c. 1962) and a high security building at the southern edge of the campus (c. 1980), it remains the largest continuous open space on the campus and contributes to the campus' sense of openness and historically rural setting. Since this area has never been developed, it is possible that this land could provide important archaeological information related to the history of the school and its wards. For its potential to contribute information important to history and its historic openness, it appears that this space is a contributing landscape resource to the National Register-eligible and California Register-listed historic district.

Figure 2: Fred C. Nelles Facility Site Map with Historic Landscape



Fred C. Nelles Youth Correctional Facility: Site Plan and Key

1 Training Center
2 Visiting Area
3 Visiting & Control
4 Check Point
5 Gym
6 Football Field
7 Vocational
8 Assistant Superintendent's Residence
9 Warehouse
10 New Maintenance
11 Electrical Power
12 Old Maintenance Office
13 Power House
14 Garage
15 School Security
16 Classrooms
17 Library
18 School Office
19 Auditorium
20 Administration
21 Supertinendent's Residence
22 Old Infirmary
23 Tyler
24 Infirmary
25 Program Center
26 Chapels
27 Truman
28 Multi-purpose
29 Food Service
30 Roosevelt
31 Cleveland
32 Jackson
33 Ford (pool)
34 Washington
35 Hayes
36 Horticulture
37 Carter/Nixon
38 Kennedy
39 Madison
40 AC/Taft
41 Adams
42 Monroe

Note: The building numbers used here are for convenience only, and do not match the numbers used by the State.

Figure 2: The historic buildings are highlighted in red and numbered within the district. The blue line highlights the boundaries of the proposed district. Historic landscapes are highlighted and numbered in green. The historic streetscapes are highlighted in blue, and the historic open spaces are highlighted in orange. Site map annotated by Page & Turnbull.

IV. REUSE CONSIDERATIONS

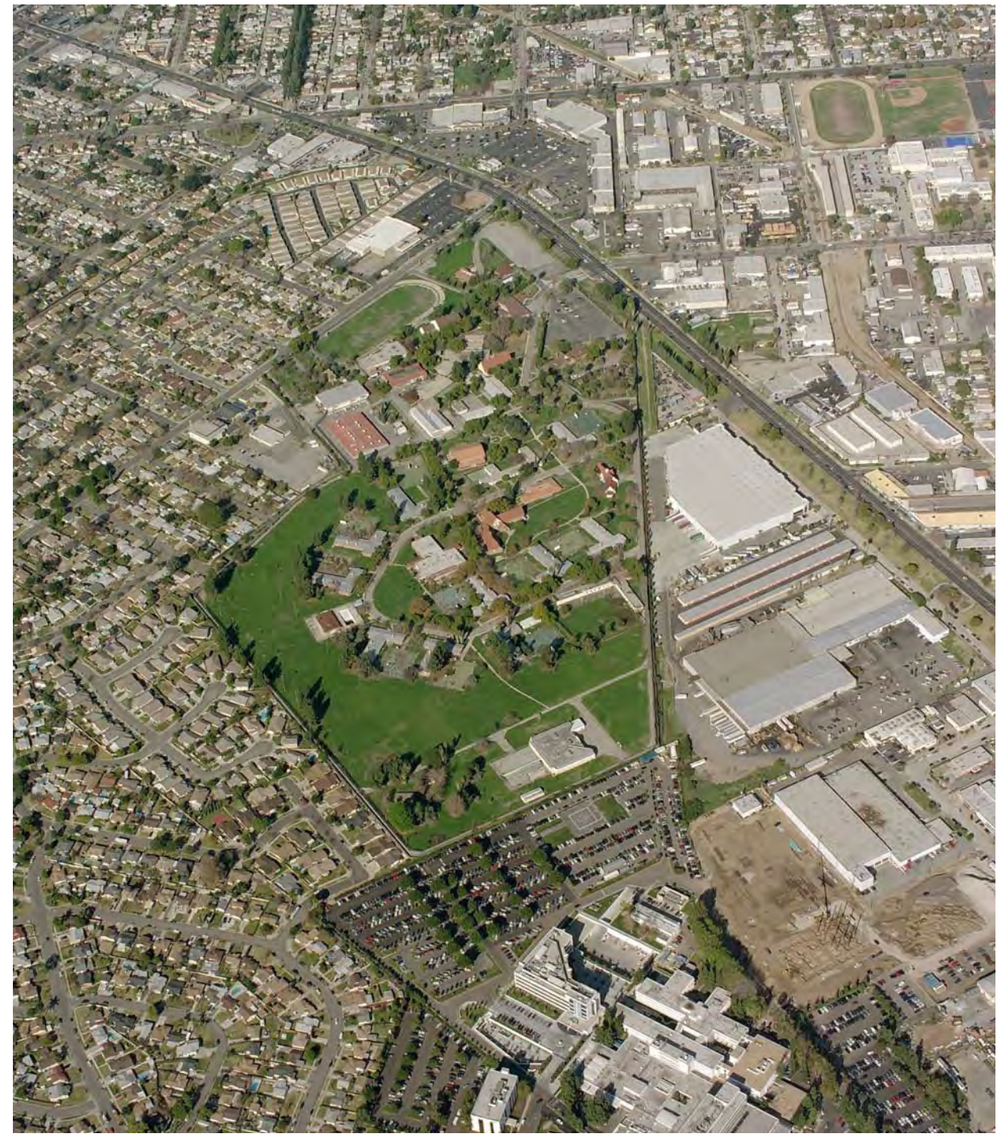
IV.1 DEVELOPMENT FRAMEWORK

The Fred C. Nelles Correctional Facility has been addressed as part of recent planning studies sponsored by or supported by the City of Whittier. These studies are helpful in understanding the issues that will need to be addressed as future development of the Nelles site is considered. Useful documents include:

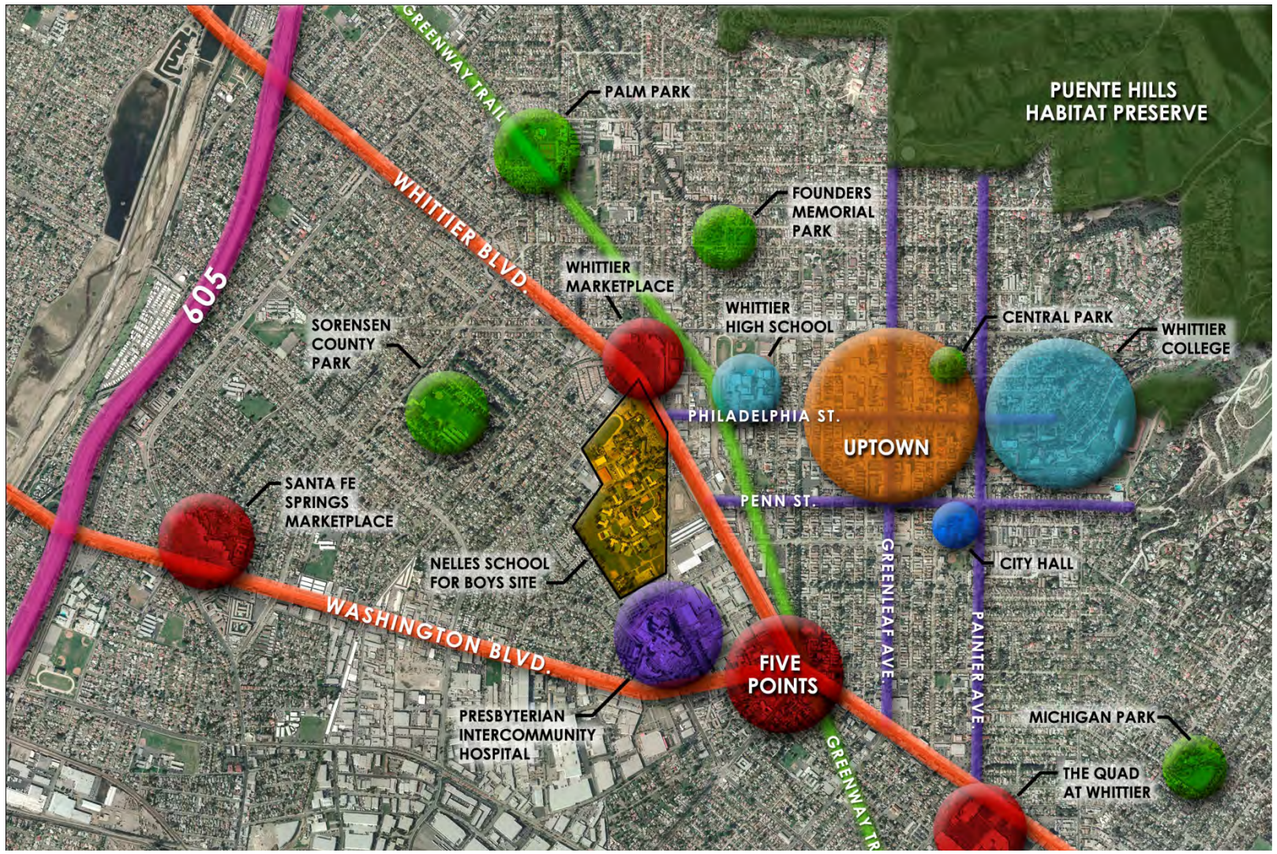
- City of Whittier: City Concept Plan, 2005
- Whittier Commercial Corridor Redevelopment Plan Amendment Final Program EIR, 2005
- City of Whittier: Whittier Boulevard Specific Plan

In these studies, historic preservation goals have been articulated for the Nelles property. This feasibility study assumes that the City of Whittier will be supportive of the proposals included herein and will encourage cooperation in allowing the proposed uses, as well as any variance, or code conformance issues that may be needed in order to re-use the site's historic buildings.

Brookfield Homes prepared a Conceptual Land Use Plan, Nelles Redevelopment Site, dated 21 September, 2010. This plan is included below and has been referenced in order to propose an alternative site plan for this feasibility study. Page & Turnbull has included a site plan that allows the eight historic buildings to remain while also providing for increased densities and land uses proposed by Brookfield Homes. Not all historic site features can be retained as part of the desired site program, but it is possible that much of the historic character can be preserved and enhanced. Further study and negotiations with the developer may result in site plan solutions that are sensitive to both the interests of preservation and economic development.



Aerial Photograph, Nelles Redevelopment Site. Source: Fuscoe Engineering



PROJECT
NORTH

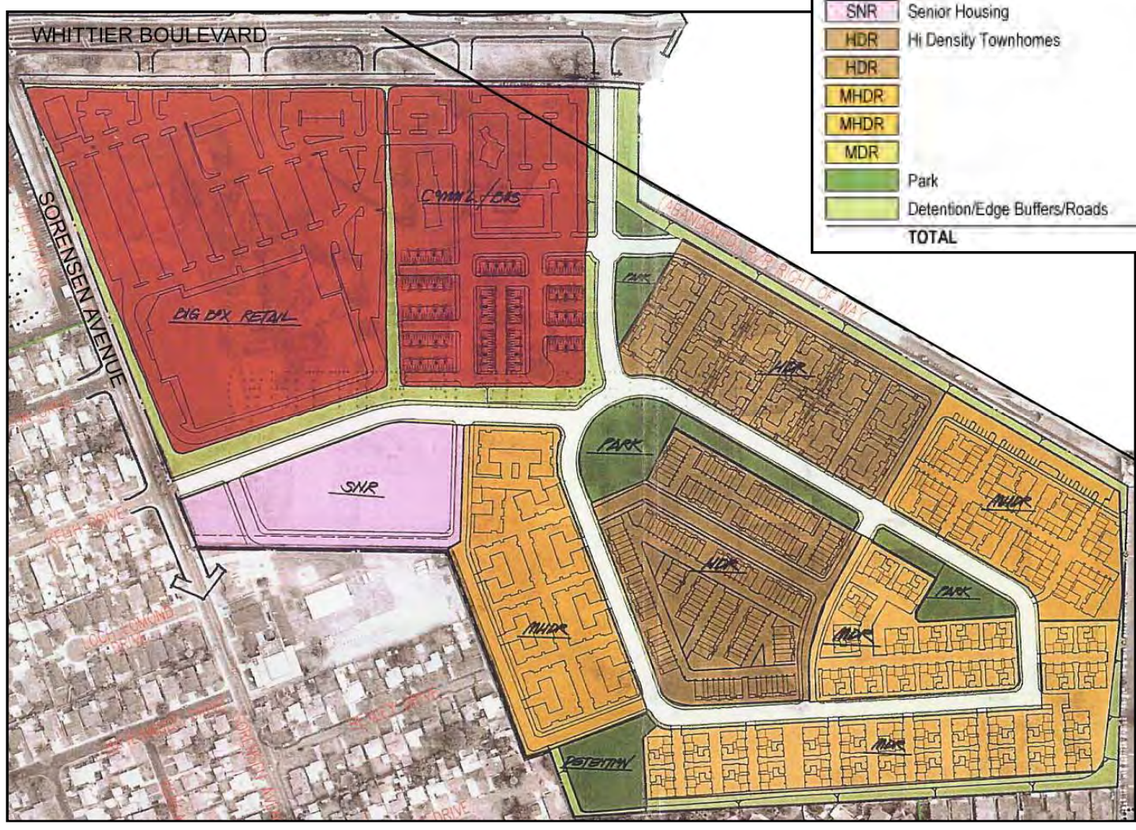
CITY OF WHITTIER CONCEPT PLAN

From project presentation dated July 5, 2011
Author: Unknown
Date: Unknown
Scale: Drawing not to scale, for reference only

NOTES

- Nelles site located near the center of town
- Strong relationship to key commercial centers
- Opportunity to provide additional green space for the city

Previous Study Site



LEGEND

	LAND USE	ACREAGE	DENSITY	DU
	Big Box Retail	14.4		
	Office/Historical	8.5		69
SNR	Senior Housing	4.0	25.0	100
HDR	Hi Density Townhomes	7.1	23.4	166
HDR		5.9	20.3	120
MHDR		5.6	20.4	114
MHDR		4.4	17.5	77
MDR		8.7	14.5	126
	Park	3.1		
	Detention/Edge Buffers/Roads	12.1		
	TOTAL	73.8		772

PROJECT NORTH

CITY OF WHITTIER CONCEPT PLAN

From project presentation dated July 5, 2011
Author: Unknown
Date: Unknown
Scale: Drawing not to scale, for reference only

NOTES ON PROPOSED LAND USE

- Plan does not retain the eight (8) historic structures on the elles campus
- Plan does not include historic landscape elements

Previous Study Site

BROOKFIELD HOMES
live the difference

CONCEPTUAL LAND USE PLAN
NELLES REDEVELOPMENT SITE
WHITTIER, CA

NORTH SCALE 1"=150'

JZMK PARTNERS
JOB # 10031 2010-09-21

BROOKFIELD HOMES CONCEPTUAL LAND USE PLAN

From project presentation dated July 5, 2011
Author: JZMK Partners
Date: 2010-09-21
Scale: Drawing not to scale, for reference only

NOTES

- Plan shows site organization with multiple residential areas
- Two of eight historic structures are indicated

Previous Study Site

IV.2 PLANNING AND ZONING FRAMEWORK

The Nelles School Property is currently zoned Civic/Public. Under the current Whittier Boulevard Specific Plan, the site would be rezoned as "Workplace District." The Workplace District designation is an exclusive designation intended for a variety of residential and commercial use opportunities.

Zoning Review: Summary (from City of Whittier Community Development)

SECTION	ITEM	SUMMARY
	APN	8170-013-904
	Zoning	Workplace District
	Status	Historically Significant
	Proposed Use	See chart below
	Area	See chart below
	Date of Construction (DoC)	See chart below

DoC	*Building*	*Square Footage*	*Proposed Use*	*Permitted Use*
1919-20	Superintendent's Residence	3,523 s.f.	Single-Family Residence	NP
1923	Auditorium	6,300 s.f.	Community Theater	NP
1923-28	Infirmary	4,612 s.f.	Office	P
1926	Asst. Super's Residence	1,818 s.f.	Single-Family Residence	NP
1928-29	Administration Building	7,887 s.f.	Office Professional	P
1930-33	Chapel	7,225 s.f.	Community Center	P/+CUP
1931	Maintenance Building	11,322 s.f.	Grocery	P
1934	Gymnasium	9,259 s.f.	Church	P/+CUP

Zoning Requirements for the City of Whittier:

Relevant sections from City of Whittier – (Whittier Boulevard Specific Plan)

SECTION	ITEM	SUMMARY
WBSP Sect. 4.2.1	Land Use	Residential developments within the Workplace District zone are limited to multi-family units, with a minimum density of sixteen (16) unites per acres and maximum density of thirty (30) units per acres. The development of single-family residences is not permitted in the Workplace District zone. The proposed use of the structure may be allowed under Section 1.10 (j) of the WBSP.
WBSP 1.10 (j.)	Historic Resources	Any building or structure within the Whittier Boulevard Specific Plan that has been deemed eligible for landmark designation, is listed as an historic landmark or is a contributing resource within a designated historic district on any Local, State or National Register of Historic Places may, for historic preservation and adaptive re-use purposes only, be permitted any land use to be contained within the historic building or structure, subject to the prior review and approval of a Conditional Use Permit.

IV.3 CALIFORNIA BUILDING CODE SUMMARY

Because the eight buildings covered in this study are considered to be significant historic resources, they would be eligible to use the California Historical Building Code (CHBC). However, new construction, including additions and alterations, must comply with current code requirements.

The California Historical Building Code (CHBC) offers certain benefits including unlimited area and height for fully sprinklered buildings. The CHBC allows existing fire escapes to remain. The CHBC also allows equivalent facilitation. Equivalent facilitation allows building officials to consider the use of alternative methods to meet code requirements if it is determined that complying with regular code would threaten the historical integrity of the building. An application would have to be submitted for consideration by building officials.

The following codes were used for the code analysis in this report:

- California Building Code – 2010 edition
- California Electrical Code – 2010 edition
- California Plumbing Code – 2010 edition
- California Mechanical Code – 2010 edition

Code summaries for each building are included in the Reuse section of this study, and detailed code reviews are included in the Appendix.

IV.4 SECRETARY OF THE INTERIOR'S STANDARDS FOR THE TREATMENT OF HISTORIC PROPERTIES

Introduction

The proposed redevelopment of the Nelles facility was programmatically reviewed under the California Environmental Quality Act (CEQA) in the Whittier Commercial Corridor Redevelopment Plan Amendment, Final EIR adopted in 2005. While the FEIR did not include project-level review of the proposed redevelopment, the historic resources technical report that Chattel Architecture prepared in support of the document outlined seven (7) criteria by which to protect the historic resources at Nelles. Compliance with the *Secretary's Standards for Rehabilitation* (the Standards) is critical to both project-level review of the redevelopment under CEQA and conformance with the redevelopment guidelines established for the site by Chattel Architecture. Full project evaluation is outside of the scope of this Feasibility and Reuse Study; however, the following section discusses the appropriateness of the uses proposed for the historic resources at Nelles, according to the Standards.

This Feasibility Study does not evaluate the full redevelopment project according to the criteria established in the FEIR nor does it address Section 106 compliance. In the event that a federal nexus for the project is identified, Section 106 consultation should commence.

Proposed Project

The Nelles complex is slated for redevelopment and the purpose of this re-use study is to explore how the historic properties at the facility may be appropriately incorporated into the new design. Table 3 below traces the original use, most current use, and proposed uses of the historic properties. The properties are currently vacant.

Table 3: Proposed Re-Use of Subject Properties

Property No.	*Name*	*Year Built*	*Architect*	*Original Use*	*Current Use*	*Proposed Use*
5	Gymnasium	1934	State Architect Alfred Eichler	Gymnasium	Gymnasium	Chapel
8	Assistant Superintendent's Residence	1926	State Architect George McDougall	Residence	Residence	Residence
14	Garage	1931	Deputy Chief W.K. Daniels	Garage	Garage	Grocery Store
19	Auditorium	1923	State Architect George McDougall	Chapel Auditorium	Auditorium	Community Theater
20	Administration	1929	Deputy Chief W.K. Daniels	Offices	Offices	Offices
21	Superintendent's Residence	1920	State Architect George McDougall	Residence	Offices	Residence
22	Old Infirmary	1929	Deputy Chief W.K. Daniels	Hospital	Infirmary	Offices
26	Chapels	1933	Deputy Chief W.K. Daniels	Kitchen & Commissary	Chapels & Training Center	Community Center
43	Fred C. Nelles Historic District	1891	Various	Reform School	Correctional Facility	Housing Development

The Secretary of the Interior's Standards for Rehabilitation (the Standards) are the benchmark by which Federal agencies and many local government bodies evaluate rehabilitative work on historic properties. The Standards are a useful analytic tool for understanding and describing the potential impacts of substantial changes to historic resources. Compliance with the Standards does not determine whether a project would cause a substantial adverse change in the significance of an historic resource. Rather, projects that comply with the Standards benefit from a regulatory presumption that they would have a less-than-significant adverse impact on an historic resource. Projects that do not comply with the Standards may or may not cause a substantial adverse change in the significance of an historic resource.

The Standards acknowledge that some changes are typically necessary to ensure the continued use of a historic property. Regarding alterations and additions for the new use of a historic property, the guidelines for Rehabilitation state:

> Some exterior and interior alterations to a historic building are generally needed to assure its continued use, but it is most important that such alterations do not radically change, obscure, or destroy character-defining spaces, materials, features, or finishes. Alterations may include providing additional parking space on an existing historic building site; cutting new entrances or windows on secondary elevations; inserting an additional floor; installing an entirely new mechanical system; or creating an atrium or light well. Alteration may also include the selective removal of buildings or other features of the environment or building site that are intrusive and therefore detract from the overall historic character. The construction of an exterior addition to a historic building may seem to be essential for the new use, but it is emphasized in the **Rehabilitation** guidelines that such new additions should be avoided, if possible, and considered only after it is determined that those needs cannot be met by altering secondary, i.e., non-character-defining interior spaces. If, after a thorough evaluation of interior solutions, an exterior addition is still judged to be the only viable alternative, it should be designed and constructed to be clearly differentiated from the historic building and so that the character-defining features are not radically changed, obscured, damaged, or destroyed.

The Standards were used to evaluate the proposed reuse of the eight historic properties at Nelles. The 10 Rehabilitation Standards are listed below:

1. A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.
2. The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.
3. Each property shall be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, shall not be undertaken.
4. Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.
5. Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a property shall be preserved.
6. Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.
7. Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.
8. Significant archeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.
9. New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.
10. New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

A preservation architect designed the reuse of the eight (8) historic properties to comply with the Standards. The proposed reuse of each building will require minimal changes to its historic fabric and any alterations made will not create a false sense of historical development. In particular, the exterior character-defining features of the buildings will be minimally altered. On the interior of the buildings, some walls will be removed and the configuration of some spaces changed; however, the historically significant features of the interior, such as the reception hall of the Administrative Building and the sanctuaries of the Chapel will be preserved. Therefore, on both the exterior and interior of the buildings, distinctive features, finishes, and examples of craftsmanship will be preserved. Damaged historic fabric will be repaired, or, if deteriorated beyond repair, will be replaced in kind. The proposed reuse of the buildings should not require significant ground-disturbing activities such as foundation work; however, proper measures should be taken during construction activities to protect archaeological resources. The reuse plans do not call for additions to the historic properties. Any exterior alterations to the buildings will complement their character-defining features.

While the reuses proposed in this feasibility study include the preservation of key landscape features, such as some historic roads through the complex and plantings immediately around the historic properties, it does not specifically evaluate the relationship between the historic properties and the proposed housing redevelopment for the facility. The section below discusses the preservation guidance Chattel Architecture provided regarding the redevelopment of the facility in the technical report that was prepared in support of the 2005 FEIR.

Project Evaluation

Chattel Architecture developed criteria to review the proposed redevelopment of Nelles that was adopted in 2005 as part of the FEIR. The following seven (7) guidelines were drafted specifically to protect the historic properties at Nelles in light of the facility's pending redevelopment:

1. The majority of the contributing resources of the historic district should be maintained.
2. Contributing resources should be rehabilitated, restored, and reconstructed in a manner that is consistent with historic district character.
3. Historic archaeological resources should be identified and possibly recovered.
   Contributing resources to be demolished or altered in a manner not in conformance with the *Secretary's Standards* should be photo documented and interpreted.
4. As part of the specific plan prepared for Subarea B, design guidelines should be prepared and implemented. Such guidelines should include an analysis of cultural landscapes and builder's handbook of architectural style and scale for new building as well as site development standards.
5. The hierarchy of contributing buildings should be retained, and historic and new street cross-sections should maintain historic district character.
6. Landscapes, open space, and older trees should be retained.
7. The setting of contributing resources should be respected in the design of future development.

This reuse and feasibility study encourages the maintenance, rehabilitation, and reuse of the eight (8) historic properties on the site, thereby satisfying criteria 1 and 2. The proposed site plan in this study attempts to preserve the buildings and most of the significant site features, while still allowing for new development and density. It presumes retention of heritage trees (Criteria 6) and makes a good faith effort to address all significant landscape features except for the athletic field (L2) and Open Space 2 (O2). These spaces could be retained if the density of the development was revised, potentially meeting Criateria 7. However, this study does not fully address criteria 3, 4, 5, or 6, which offer guidance regarding the relationship of the larger site development in relation to the historic properties. To fully comply with the criteria established in the FEIR, the development team must: prepare a plan for archaeology (Criteria 3); create design guidelines for the new development defining cultural landscapes and defining development standards (Criteria 4); consider the hierarchy of historic properties in relation to new development (Criteria 5); and create a plan to retain historic landscapes, open space, and older trees (Criteria 7).

Historic Properties: Section 106 Consultation

In the event that there is a Federal nexus for the project—Federal funding, permitting or other discretionary review—the larger development project must also initiate Section 106 consultation. Under Section 106, the proposed rehabilitation must be assessed against the Criteria of Adverse Effect (36 CFR Section 800.5(a)(1)) and Examples of Adverse Effects ((36 CFR Section 800.5(a)(2))

Under Section 106, Title 36 Code of Federal Regulations (CFR) Part 800 defines adverse effects on historic properties as follows:

> *Criteria of adverse effect.* An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling or association. Consideration shall be given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of the property's eligibility for the National Register. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or be cumulative.

According to 36 CFR Section 800.5(a)(2), examples of adverse effects on historic properties include, but are not limited to:

(i) Physical destruction of or damage to all or part of the property;
(ii) Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation and provision of handicapped access, that is not consistent with the Secretary's Standards for the Treatment of Historic Properties (36 CFR part 68) and applicable guidelines;
(iii) Removal of the property from its historic location;
(iv) Change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance;
(v) Introduction of visual, atmospheric or audible elements that diminish the integrity of the property's significant historic features;
(vi) Neglect of a property which causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to an Indian tribe or Native Hawaiian organization; and
(vii) Transfer, lease, or sale of property out of Federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance(36 CFR Part 800.5 (a) (2)).

Under 36 CFR Part 800.5 (b), a finding of "no adverse effect" may be proposed when the effects of the undertaking "do not meet the criteria of paragraph (a) (1) [above]of this section or the undertaking is modified or conditions are imposed, such as the subsequent review of plans for rehabilitation by the SHPO/THPO to ensure consistency with the Secretary's Standards for the Treatment of Historic Properties (36 CFR part 68) and applicable guidelines, to avoid adverse effects."

Conclusion

The new uses proposed for the eight (8) historic resources at Nelles were designed by preservation architects to comply with the Standards. The proposed reuse of the historic resources also supports Criteria 1 and 2 developed by Chattel Architecture in support of the FEIR: the majority of the historic resources at the site will be maintained and those resources will be rehabilitated, restored, and reconstructed in a manner that is consistent with the character of the historic district. Through collaboration with the developer and redevelopment project team, it is possible for Page & Turnbull to also satisfy additional Criteria and respect the setting of contributing resources in the design of future development.

V. EXISTING CONDITIONS

V.0 SITE AND SETTING

The Fred C. Nelles Youth Correctional Facility is a collection of approximately forty-five buildings, located on an 73.8-acre parcel in Whittier, California. The site is characterized by several large landscaped areas and athletic fields, which are intermingled among a network of paths and roadways. The grounds feature a wide range of vegetation including palms, eucalyptus, magnolia, pine, cedar, ash, orange, lemon, fig, avocado, and grapefruit trees.[20] The site's athletic fields consist of a large football/soccer field surrounded by an asphalt track and a long open grassy field, which is divided into five individual softball fields.

The Fred C. Nelles site has evolved from a collection of individual cottages surrounding a central administration building into its current incarnation, which is characterized by eight historic buildings dating from the 1920s through the 1940s, and additional buildings from the 1950s, 1960s, 1980s, and 1990s. Historically, Fred C. Nelles School featured a fully functioning farm, which was located on the grounds in the area currently occupied by the baseball fields and horticulture classrooms. The majority of the historic paths and roadways on the site have been altered, although two pieces of the historic road network remain: a section of road running from the Visiting Control Center to the Administration Building and a section of road running from Assistant Superintendent's Residence to the Chapel.

The following existing site plan highlights the historic structures as well as the contributing landscapes, streetscapes and open spaces. The condition of the site as a whole was not within the scope of this study, however the sites surrounding each building has been described in greater detail in the following sections.

Existing Conditions Photographs & Drawings

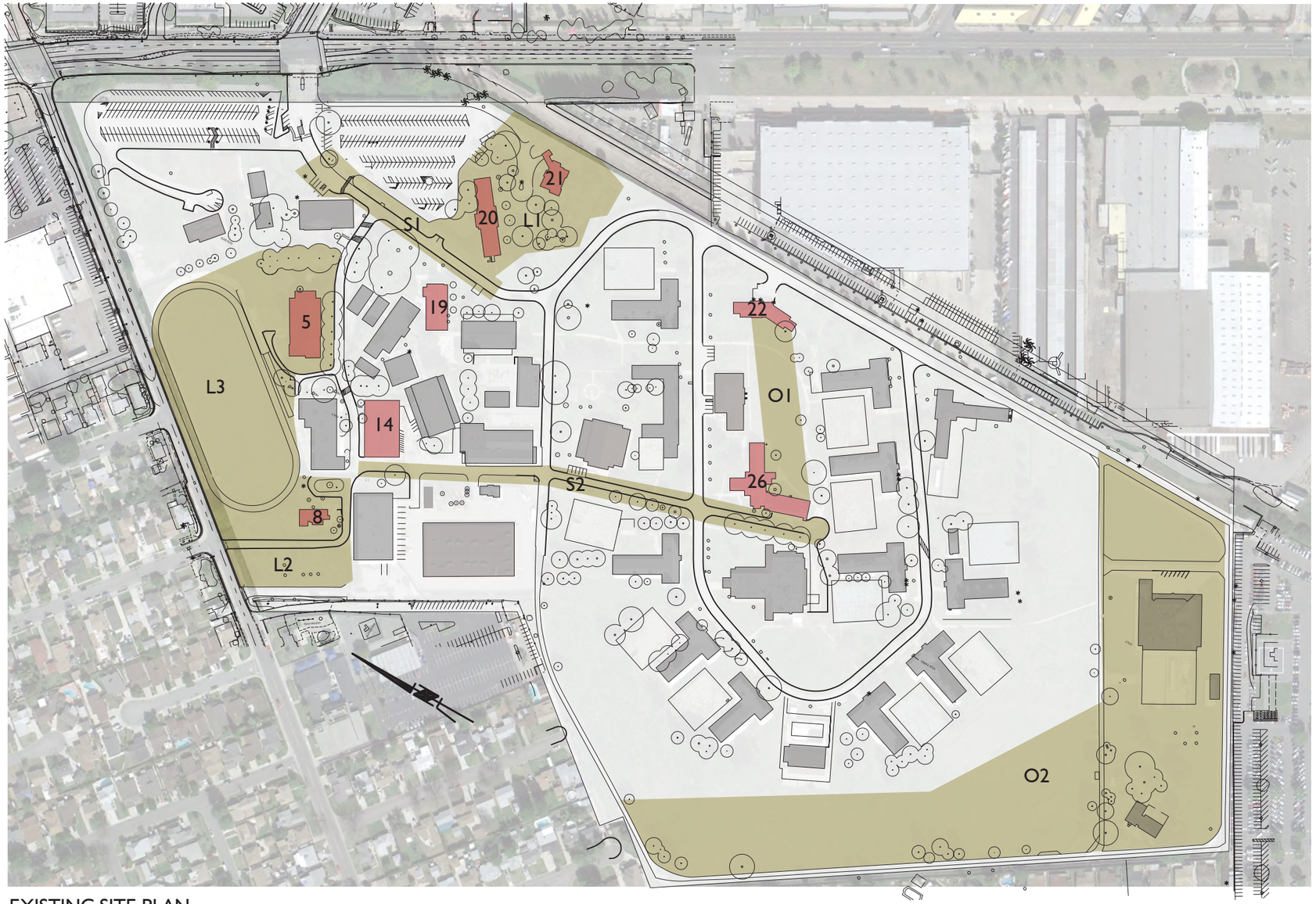
- Existing Aerial Photograph
- Existing Site Plan

[20] State of California, Department of General Services – Real Estate Services Division, Professional Services Branch, Design Services Section, *Fred C. Nelles Tree Survey* (drawings dated December 10, 2004).

AERIAL PHOTOGRAPH - 2011
NTS

PROJECT NORTH

Existing Site



EXISTING SITE PLAN
Scale: NTS

PROJECT NORTH

EXISTING SITE PLAN

NOTES

- Drawing based on historic resource assessment completed by Page & Turnbull in 2005

LEGEND

5- GYMNASIUM
8 - ASSIST. SUPPER. RESIDENCE
14 - MAINTENANCE GARAGE
19 - AUDITORIUM
20 - ADMINISTRATION BUILDING
21 - SUPERINTENDENT'S RESIDENCE
22 - INFIRMARY
26 - CHAPEL (FORMER DINING HALL)
**Building numbers used here are the same numbers used in previous historic studies*

L1 - Landscaping surrounding Superintendent's Residence & Administration Building
L2 - Landscapeing around Assistant Superintendent's Residence
L3 - Landscaping around Gymnasium including Athletic Field
S1 - Streetscape 1
S2 - Streetscape 2
O1 - Openspace between Chapel & Infirmary
O2 - Openspace at southern & western boundaries

SIGNIFICANT
NOT SIGNIFICANT
CONTRIBUTING LANDSCAPE

Existing Site

V.1 BUILDING 21 - SUPERINTENDENT'S RESIDENCE

Superintendent's Residence, looking southeast. Photograph by Page & Turnbull, 2011

In 1994 and 2005, the Superintendent's Residence was evaluated for historic significance. It was determined to be eligible for listing on the National Register as a district contributor and an individual building. It was also listed individually on the California Register in 1997. Therefore, the Superintendent's Residence is a historical resource for the purposes of CEQA.

Architecture/Site

DESCRIPTION/EXISTING CONDTIONS [21]

The Superintendent's Residence is a grand two-story U-shaped wood and masonry house designed in the Tudor Revival style with Chateauesque and Stick influences. Designed by State Architect George McDougall, the Superintendent's Residence was constructed between 1919 and 1920. It is located near the eastern edge of the site, south of the main entrance and currently sits outside of the property's security fence. The Residence is oriented toward the facility's main entrance and sits along a circular paved driveway. It is surrounded by a mature landscape, and a back yard with patio and lawn bordered with trees and bushes, benches and a fountain. The building is configured in an asymmetrical plan with two one-story wings that extend from the central portion of house.

The exterior features a concrete foundation, wide, red stretcher bond brick walls, a molded box cornice with returns, and a cedar shake/shingle roof with a high peaked center hip gable, and a variety of cross gables and eaves. Dormers project from the roof on multiple elevations. The exterior walls of the northern wing are half-timbered with plaster and wood. There are two red brick chimneys, one along the eastern edge of the residence and one along the front of the west façade. There are two wood and stucco garages: one attached to the north end of the house, and a second detached garage.

All windows are recessed into the masonry openings, primarily casement windows with wood frames and sashes. There is a projected front entrance vestibule with a wood entry door flanked on either side by nine-light fixed wood windows. Two original wrought iron lamps hang on the exterior: a large lamp suspended from the end of the gable corner west of the entrance, and a small lamp over the entry to the house.

Along the rear (south façade), the two wings of the building extend to create a u-shaped patio. The patio is covered by a shed roof supported by wood posts with cross brackets. The rear entrance has a wood and glass panel door with a carved concrete frame and an arched pediment with organic detailing and the date "1920" inscribed. Additionally, multiple sets of French doors open onto the patio from the house.

The first-floor interior of the Superintendent's Residence features an entry hall, living room, dining room, sitting rooms, kitchen, service porch, sewing room, guest bedroom and bathroom. The entry hall is wood-paneled with an oak staircase leading to the second floor. There is a half bath under the stair, and a servant stair adjacent to main stair, separated by a paneled wall with a door opening to the utilitarian areas of house (kitchen). The living room features a brick fireplace with a molded wood mantle and paneled wood chimney breast. The second floor is comprised of four bedrooms, a master suite with a fireplace, a dressing room, and a marble bathroom. There is a basement beneath half of the structure with a furnace and storage space. The interior maintains the original wood floors (except on the second floor, where they have been covered with carpet), baseboards, chair rails, cornice moldings, doors and door and window trim. The walls and woodwork throughout the house have been heavily repainted.

Alterations and Additions[22]

Throughout the lifetime of the building, relatively few changes have occurred. Most alterations have taken place in the building's bathrooms and kitchen. Carpet was installed over the wood floors on the second level, and multiple layers of paint have built up on the walls and woodwork over time. On the exterior, the shed roof over the rear patio is not an original feature.

Proposed Rehabilitation

The building will be rehabilitated according to the Secretary of the Interior's Standards. Wood floors will be refinished, the kitchen and bathrooms will be completely refurbished, and all exterior and interior finishes will patched or replaced as needed.

[21] HRI 1980, HRA P&T 2005, CHATTEL HRA 2005

[22] HRI 1980, HRA P&T 2005, CHATTEL HRA 2005

Character-Defining Features

Exterior

- Rectilinear plan with attached garage
- One-and-one-half story massing
- Hipped roof with dormers
- Masonry construction with half-timbered wings
- Wood casement, multi-light windows
- Wood entry door

Interior

- Wood flooring
- Wood trim, doors and moldings
- Fireplace

Site

- Garden
- Sandstone remnants from the 1891 Administration building
- Water feature

Historic Images

Rear façade of Superintendent's Residence, looking east, 1930
(Source: Historic Resources Assessment, Chattel Architecture 2005)

Superintendent's Residence, looking east, 1930
(Source: Historic Resources Assessment, Chattel Architecture 2005)

Superintendent's Residence (right) and Administration Building (left) Aerial Photograph, 2010 (Source: Google Maps)

Structural (Structural Focus)

BUILDING DESCRIPTION

The existing Superintendent's Residence is a two-story unreinforced brick-masonry (URM) building with a partial basement, constructed in 1920. The building is U-shaped in plan, with a footprint area of approximately 2500 square feet. The building has a steeply pitched cross-gabled roof clad in wood shingles. The ground floor is the main living area, with most of the bedrooms located upstairs on the second floor. The house has two brick fireplaces, with very tall brick chimneys - one near the entrance on the north side of the building, and one on the west side. Protruding at an angle to the northeast corner of the main U portion of the residence is a one-story wood framed garage. There is also a detached garage, which is likely a later addition to the building. At the rear of the house is a concrete patio area. The patio area is covered with a wood canopy structure supported on wood posts that is newer and not part of the original construction. Aside from the wood canopy, no major additions, modifications or retrofits appear to have been made to the residence.

The building's gravity system consists of 1x straight wood roof sheathing spanning between trussed wood roof and ceiling joists at two foot spacing, supported by the exterior brick URM bearing walls and some interior wood stud walls. The second floor is wood floor over 2x joists spanning between exterior bearing walls and interior stud walls. The ground floor is mainly 2x joists spanning to concrete foundation walls with some areas being slab on grade.

The building's lateral force resisting system consists of straight 1x wood sheathing acting as the roof and floor diaphragms spanning horizontally to the exterior URM walls which resist the lateral shear loads.

The foundation system consists of perimeter and interior concrete stem walls and reinforced strip footings. The basement area has concrete retaining walls and the floor is a concrete slab on grade.

The attached garage area is a 1x sheathed roof over wood rafter spanning to wood bearing walls. The lateral force resisting system is wood sheathed walls and the foundation is concrete strip footings with a concrete slab on grade.

EXISTING CONDITIONS

The building appears to be generally in good condition. The wood framing members are generally in good condition, with little signs of damage and deterioration. The floors show some signs of unevenness, but it is not very noticeable. The existing finishes are in good shape with a few areas of ceiling and wall cracking. There are a few localized areas of damage to the brick on the exterior. Where the roof framing can be observed there appears to be no signs of deterioration.

Existing Structural Deficiencies

A preliminary evaluation has identified the following deficiencies for the Superintendent's Residence:

1. Load Path/Transfer to Shear Walls. For proper seismic performance, there must be present a complete lateral-force-resisting system that forms a continuous load path for the entire structure – from all roof/floor levels, all the way to the foundation. Diaphragms should be connected for transfer of loads to the shear walls. Examination of the existing building drawings did not show direct connections from the 1x roof sheathing to the existing URM walls.

2. Wall Anchorage. The masonry walls should be anchored to the roof and floors for out-of-plane loads with proper hold downs and straps that transfer the forces into the diaphragm. No such hold downs or straps were observed during the site visit or upon review of the existing drawings. The walls are likely not adequately anchored to the roof diaphragm. During an earthquake, the heavy walls and roof may separate causing a loss of vertical support of the roof structure which may lead to a partial collapse. Also, at the second floor level the drawings appear to show the diaphragm attaching to a wood ledger bolted to the brick, however this is not an adequate connection as it induces cross grain bending in the wood.

3. Diaphragm Spans/Sheathing. At the roof and floor levels, straight 1x sheathing acts as a diaphragm to distribute seismic forces to the URM shear walls. The existing 1x sheathing is flexible and has limited capacity, especially at long spans between lateral-force resisting elements and in building diaphragms with large aspect ratio's (length-to-width).

4. Shear Stress Check. Using the "quick check" procedure of ASCE 31, the URM walls appear to be overstressed for seismic loads.

5. Existing Brick Chimneys. Tall unreinforced brick chimneys have limited strength and ductility and usually perform poorly during seismic events. The anchorage of the existing brick chimneys to the roof and floor framing is not known and likely inadequate. The chimneys can become damaged and pose a serious falling hazard during an earthquake.

6. Masonry Units. There are some small areas of deterioration of the brick units.

7. Stiffness of Wall Anchors. It could not be verified if the anchors were installed taut from the wood plate to the masonry wall.

8. Joist and Beam Supports. In the basement, various floor framing is supported on walls and foundations with no blocking, bearing plates, or adequate positive connections to supports. During an earthquake the framing can become dislodged resulting in a loss of gravity stability and/or support.

9. Cross Ties. The building does not appear to have continuous cross ties. Cross ties are needed to develop the out-of-plane walls forces into the diaphragm. Mitigation of this deficiency is not needed provided that the out-of-plane wall forces are adequately developed into the diaphragm.

Existing Conditions Photos

- Existing Exterior Photos
- Existing Interior Photos

COVERED PORCH AT SOUTH SIDE OF BUILDING

DOORS ON SOUTHWEST ELEVATION

GARDEN FOUNTAIN

VIEW FROM NORTHWEST

ROOF DETAIL

PAVED PATHWAY

SANDSTONE BENCH

FRONT ENTRANCE

REAR ENTRY WITH DETAIL

WINDOWS ON NORTHWEST ELEVATION

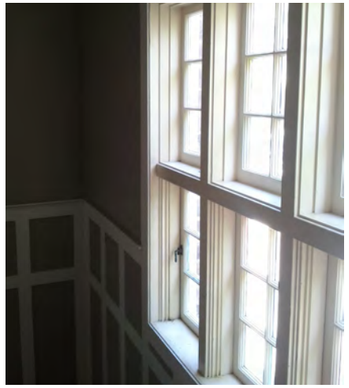
Building 21
Superintendent's Residence

CRACKED CEILING IN LIVING ROOM

ENCLOSED PORCH

BEDROOM #6

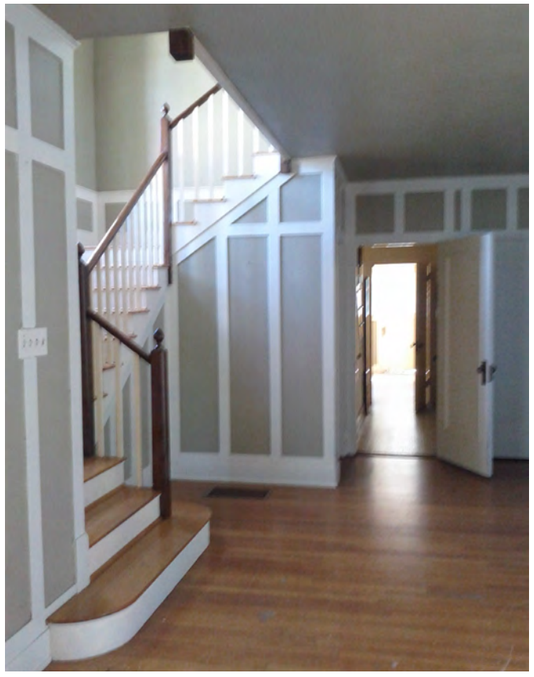
BEDROOM #3


STAIR HALL

ORIGINAL HARDWARE

KITCHEN

BATH #3


STAIR HALL

Building 21
Superintendent's Residence

V.2 BUILDING 19 - AUDITORIUM

Auditorium, looking southwest. Photograph by Page & Turnbull, 2011.

In 1994, the Auditorium was evaluated for historic significance. It was determined to be eligible for listing on the National Register as a district contributor and an individual building. It was also listed individually on the California Register in 1997. Therefore, the Auditorium is a historical resource for the purposes of CEQA.

Architecture/Site

BUILDING DESCRIPTION/EXISTING CONDITIONS[23]

The Auditorium is located southwest of the facility's main gate, in a prominent location along the main entrance road. The surrounding landscape consists of broad lawns, palm trees and mature plantings. Constructed in 1923 and designed by State Architect George McDougall, the building exhibits a Tudor Revival style with Spanish Colonial and Picturesque influences.

The Auditorium is a one-and-a-half story poured in place concrete structure with a stucco exterior, configured in a rectangular plan with a small cross gable projection at the north elevation. The roof is clad in red barrel clay tiles. The high pitched roof, plan configuration and massing are typical of ecclesiastical architecture.

[23] HRI 1980, HRA P&T 2005, CHATTEL HRA 2005

Windows are primarily located on the north and south elevations, with steel frame window sashes and operational, horizontal, awning-type panes. The main entrance at the east elevation is symmetrically placed on the façade, and features a recessed arch entryway with a pair of contemporary metal doors. The doors are flanked by small one-over-one fixed wood sash windows glazed with wire glass. The windows have a small half-round opening that originally was used as a pass-through for tickets, etc. and is now infilled with glass. There is a small circular inset opening centered on the façade in the peak of the roof with decorative foliate carving. The gable projection on the north elevation features several small windows and a contemporary metal door on the east facing elevation.

The structure, style and materials of the Auditorium are related to the nearby Gymnasium, with similar concrete construction and finish materials, as well as a simplified arched entrance. The high pitched roof and the building plan of the Auditorium are closely associated with the Infirmary and Chapel. It is likely that the Auditorium was built during the 1930s around the same time as the construction of the Gymnasium. The building was designed to relate to the preexisting architectural character of the facility.[24]

The main entry doors open into a one-story entrance foyer with small restrooms flanking either side. Above this space is a balcony that formerly housed a projection room. The auditorium is accessed from the foyer through a set of double-doors. The open-beamed, vaulted-ceiling space has a raked, slanted floor featuring rows of fixed wood and metal folding chairs, a raised stage with two wood doors with decorative metal strap hinges leading to two dressing rooms accessed by interior stair vestibules at each side of the stage, and a basement under the stage.

Alterations and Additions

According to historic photographs and site plans, the Auditorium was originally attached to a pre-existing, neighboring structure. Early photographs show a one and a half story tower at the intersection of the two buildings. In 1952, the conical tower was removed along with the side dormers and school building connector. [25] The side windows were also significantly reduced in size at this time, and a stair enclosure was built where the tower once stood. Additionally, the exterior metal doors appear to be contemporary replacements. The original brick exterior was covered by stucco, though the date of this alteration is unknown.[26]

Interior modifications include: vinyl tile floor covering in auditorium, extensive repainting throughout and the installation of contemporary electrical utilities and lighting.[27] In 1954, black out drapes were installed and the proscenium wall was altered. A suspended ceiling (which has since been removed) and new seats were added and the rear wood box seating was removed in 1965.

[24] HRA EDAW 2005
[25] HRA P&T 2005
[26] HRI 1980
[27] HRA EDAW 2005

Character-Defining Features

Exterior
- Rectilinear plan
- One-and-one-half story massing
- Front gable roof with terra cotta cladding
- Simple, recessed, arched entry

Interior
- Open plan (auditorium space)

Site
- None

Auditorium Aerial Photograph, 2010
(Source: Google Maps)

Structural (Structural Focus)

BUILDING DESCRIPTION

The dates on the existing building drawings indicate that the Auditorium was constructed about 1923. The building was originally constructed as a one-story unreinforced brick-masonry (URM) wall structure with cast-in-place concrete buttresses along the north and south elevations. Around the year 1953 it was remodeled at which time they also retrofit the existing walls by removing the outer course of brick on the exterior walls and applying new structural "gunite" concrete to the walls. The building is rectangular in plan, approximately 110 feet long by 48 feet wide with a footprint area of approximately 5300 square feet. The steep gabled roof is about 42 feet tall and is clad with red clay tiles. At ground floor is sloped from the main entrance on the east end of the building, where there are a few built out rooms, down to the built-up wood stage area at the west end. Below the stage area there is a basement/fan room.

The building's gravity system consists of wood beams over long span steel trusses; the trusses are supported on concrete pilasters located within the brick URM walls. At the east and west end of the building, framing bear directly on the URM walls.

The building's lateral system consists of straight 1x wood roof sheathing acting as the diaphragm spanning between the exterior concrete and brick URM shear walls to resist lateral loads.

No existing structural drawings were made available for the Auditorium building. However, given the year of construction and the similarity to other buildings on the Nelles Campus the foundation system likely consists of reinforced concrete strip footings around the perimeter of the building with reinforced concrete spread footings below the concrete buttresses. The Auditorium floor is a sloping concrete slab on grade.

EXISTING CONDITIONS

The building appears to be in good condition. The wood and steel roof framing members are in good condition, with no visible signs of damage or deterioration. There are no large cracks on the exterior walls or interior finishes. Some cracking of the existing floor slab was observed near the front of the stage.

Existing Structural Deficiencies

A preliminary evaluation has identified the following deficiencies for the Auditorium building:

1. Load Path/Transfer to Shear Walls. Diaphragms should be connected for transfer of loads to the shear walls. Examination of the existing building drawings did show blocking members on the architectural drawings, but there was no information about connection hardware or nailing of the 1x roof sheathing to the existing walls.

2. Wall Reinforcing. Walls that do not have at least a minimum amount of reinforcing steel have limited capacity in resisting seismic forces. No information was available showing the size and spacing of steel reinforcement of the concrete walls.

3. Wall Anchorage. The walls should be anchored to the roof for out-of-plane forces with proper hold downs and straps that transfer the loads into the diaphragm. No such hold downs or straps were observed during the site visit or upon review of the existing drawings. The walls are likely not adequately anchored to the roof diaphragm. During an earthquake, the heavy walls and roof may separate causing a loss of vertical support of the roof structure which may lead to a partial collapse.

4. Foundation Dowels. Wall reinforcement should be doweled into the building foundation. Without adequate anchorage to the foundation, the capacity of the shear walls to resist seismic forces is limited.

5. Diaphragm Spans/Sheathing. At the roof level the straight 1x sheathing acts as a diaphragm to distribute seismic forces to the shear walls. The existing 1x sheathing is flexible and has limited capacity, especially at long spans between lateral-force resisting elements and in building diaphragms with large aspect ratio's (length-to-width).

6. Stiffness of Wall Anchors. It could not be verified if the anchors were installed taut from the wood plate to the walls.

7. Anchorage of Brick to Concrete. Proper wall anchorage should be provided from the brick to the concrete to prevent the brick from separating and becoming a falling hazard during a seismic event.

8. Cross Ties. The building does not appear to have continuous cross ties. Cross ties are needed to develop the out-of-plane walls forces into the diaphragm. Mitigation of this deficiency is not needed provided that the out-of-plane wall forces are adequately developed into the diaphragm.

9. Beam, Girder and Truss Supports. Framing supporting large areas of roof should not bear on unreinforced masonry or unreinforced concrete as the primary support for vertical loads. At the east and west ends of the building roof framing is supported directly by the existing URM walls, and the long span steel roof trusses are supported on concrete pilasters – no information was available showing the size and spacing of steel reinforcement.

10. Potential Non-Structural Deficiencies.
    - Clay tile roof. Where existing roof tiles are loose or are not properly secured they pose a falling hazard around the perimeter of the building.

Existing Conditions Photos

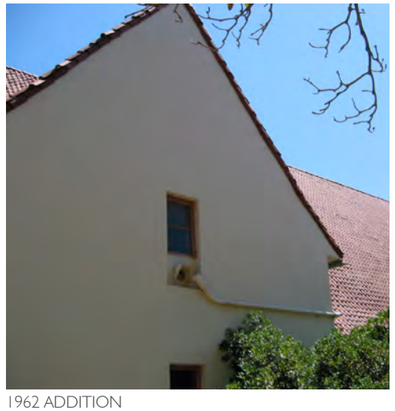
- Existing Exterior Photos
- Existing Interior Photos

ARCH AT MAIN ENTRY WITH SIGN

TYPICAL WINDOW

SOUTHWEST ENTRY

VIEW FROM NORTH


1962 ADDITION

MAIN ENTRY

VIEW FROM NORTHWEST

VIEW FROM SOUTHWEST

Building 19
Auditorium

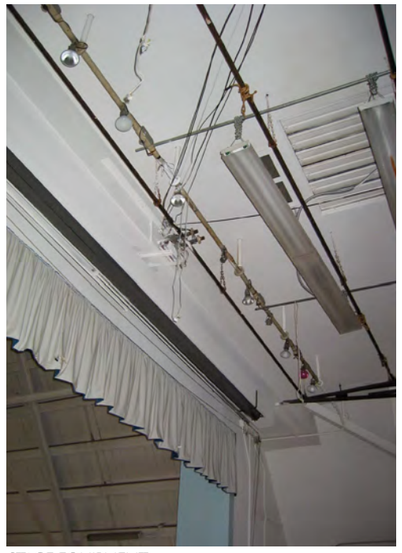
BASEMENT MECHANICAL SPACE

VIEW LOOKING TOWARDS STAGE

VENTS BENEATH STAGE

VIEW LOOKING TOWARDS ENTRY

SIDE EXIT


STAGE EQUIPMENT

FLOOR

FAN ROOM

Building 19
Auditorium

V.3 BUILDING 22 - OLD INFIRMARY

Infirmary, looking west, Photograph by Page & Turnbull, 2011.

In 1994 and 2005 the Infirmary was evaluated for historic significance. It was determined to be eligible for listing on the National Register as a district contributor and an individual building. It was also listed individually on the California Register in 1997. Therefore, the Infirmary is a historical resource for the purposes of CEQA.

Architecture/Site

BUILDING DESCRIPTION/EXISTING CONDITIONS[30]

The Infirmary is located in the center of campus near the eastern boundary of the site. When constructed, the building was oriented to the west where it sat along a circular driveway. Although this driveway still exists, the orientation of the Infirmary changed to the east elevation when a paved parking area was added circa 1950. The structure is surrounded by a lawn, and to the southwest a large open space extends between the Infirmary and the Chapel.

Designed by Deputy Chief W.K. Dainels, the Infirmary was constructed in 1929 in the Spanish Revival style with Tudor Revival influences. The one-story masonry building features cement plaster walls, and a steep gabled roof clad in red barrel clay tile. The form of the building is an open "V" shape. Windows are generally arranged in groups of two to four with simple wood surrounds and casement sashes.

The primary façade features a large central chimney covered in cement plaster, an entrance pavilion with a stepped crenellated edge, and a central door opening with a shouldered stone arch and oak entry door. To the left of the door is a rectangular bay window.

The cross gable also projects on the east (originally rear) façade. The entry here has a multi-pane, glass door and is flanked by large, four-part wood casement windows. The doorway surround has a plain decorative plaster hood and quoins. South of the gable projection is a grouping of windows which were altered to accommodate a metal door with two transom windows. North of the gable projection, a stair descends parallel to the building to a below-grade entry. The stair has a metal pipe rail, and a shed roof projects from the wall to cover the stair.

The north elevation contains a bay window with half-hipped roof. A flat-roofed, wood-framed sun porch addition projects from the south elevation, with window openings on three sides that are currently boarded over, a metal door and a red barrel tiles at the parapet.

The interior of the Infirmary is composed of a double-loaded corridor extending the entire length of the space. Patient rooms are located in the south wing, with functional windows, a toilet and a sink. Dental treatment rooms, a pharmacy, operating room and offices are also organized along the center hall. The hallway has a dropped acoustic tile ceiling with fluorescent light fixtures. There is a reception room featuring a decorative beamed ceiling lit by a large bay window on the west elevation. The kitchen sits at the intersection of the two wings.

The interior floor plan is largely unchanged. The original plaster walls remain and there are a number of built-in cabinets. Original fixtures, trim, multi-pane glass and metal doors, wall and ceiling finishes also are intact. The surgery room was rehabilitated in 1952. The floors throughout the building were covered with asbestos tile and the building was heated with radiators and re-plumbed at an unknown time.[31]

Alterations and Additions

In 1936, the one-story sun porch was added to the south wing of the building. The approach to the building and main entry was changed from the east to the west when a paved parked area was added most likely in the 1950s.

The interior is essentially intact, changes include the installation of asbestos floor covering, the installation of suspended acoustic tile ceiling and fluorescent lighting in the hall, and the addition of radiator heating and new plumbing.[32]

[30] HRI 1980, HRA P&T 2005, CHATTEL HRA 2005

[31] HRA EDAW 2005
[32] HRA EDAW 2005

Character-Defining Features

Exterior

- "V" floor plan
- One-story massing
- Simple cement walls
- Gabled roof with terra cotta tile
- Wood, multi-light door with quoining surround

Interior

- Sun Porch
- Double-loaded corridor

Site

- Open space connection to Chapel

Historic Images

Infirmary, looking north, 1930 (Source: Historic Resources Assessment, Chattel Architecture 2005)

Infirmary, interior hall, 1930 (Source: Historic Resources Assessment, Chattel Architecture 2005)

Old Infirmary (center) Aerial Photograph, 2010 (Source: Google Maps)

Structural (Structural Focus)

BUILDING DESCRIPTION

The existing Old Infirmary is a one-story reinforced concrete building originally built as a hospital in the late 1920's, the existing building drawings are dated 1928. The building, shaped like a narrow bent rectangular in plan, is approximately 140 feet along its bent length and 25 and 30 feet wide - with a footprint area of approximately 4600 square feet. The building has a raised concrete floor and partial basement/heater room. The floor plan is laid out with what at one time was the "reception/waiting room" at the center of the building where the main entrance is located. From this area, a large corridor runs north/south along the center of the building and leads into the various offices and patient rooms. The corridor walls are constructed of hollow-clay tile. The corridor/hallway has an acoustic tile ceiling and the other rooms have a hard plaster ceiling. The steep cross gabled roof is clad with red clay tiles and has varying eave heights; and at the intersection of the cross gables is a large chimney. In 1936, a "sunroom" was constructed on the south end of the building. The addition is 1 story tall and structurally attached to the existing concrete building. The sun room is wood framed with wood posts and windows along its entire perimeter. Aside from this addition, no major modifications or retrofits are appeared to have been made to the building.

The building's gravity system consists of 1x straight wood roof sheathing spanning between trussed wood roof and ceiling joists at two foot spacing, supported by the exterior reinforced concrete bearing walls and interior reinforced concrete beams and columns that line the main corridor. The floor is a one way reinforced concrete beam and slab system supported by the concrete walls and interior concrete columns.

The building's lateral system consists of straight 1x wood roof sheathing acting as the diaphragm spanning between the reinforced concrete shear walls to resist lateral loads.

The foundation system consists of perimeter reinforced concrete strip footings. Interior concrete columns are supported on isolated concrete spread footings. The basement area has concrete retaining walls and the floor is a concrete slab on grade.

EXISTING CONDITIONS

The Infirmary appears to be in fair to poor condition. The building appears to have been vacant for some time and is generally deteriorated. Paint and finishes are peeling off of the walls and the ceilings show signs of deterioration, possibly from leaks in the roof. This may also be an indication of potential deterioration of roof and ceiling framing, neither of which was observed at the time of this report due to limited access and visibility of the ceiling space. The floors appear to be level, though the finishes are somewhat deteriorated. The exterior of the building is in good shape with minimal visible cracks and deterioration - except for the window and door frames which are showing signs of deterioration. The sunroom addition is in bad condition with extensive damage and partial collapse of the roof framing members.

Existing Structural Deficiencies

A preliminary evaluation has identified the following deficiencies for the Old Infirmary:

1. Wall Reinforcing. Walls that do not have at least a minimum amount of reinforcing steel have limited capacity in resisting seismic forces. Based on the existing structural drawings the ratio of reinforcing steel to gross concrete area and the spacing of the vertical reinforcing steel is not adequate.

2. Wall Anchorage. The walls should be anchored to the roof for out-of-plane forces with proper hold downs and straps that transfer the loads into the diaphragm.

3. Diaphragm Spans/Sheathing. At the roof level the straight 1x sheathing acts as a diaphragm to distribute seismic forces to the shear walls. The existing 1x sheathing is flexible and has limited capacity, especially at long spans between lateral-force resisting elements and in building diaphragms with large aspect ratio's (length-to-width).

4. Deterioration of Wood. The roof of the sun room is partially collapsed and members that are not broken are deteriorated and sagging. Signs of water damage to the existing ceiling may also indicate possible water damage and deterioration to roof and ceiling framing.

   Hollow Clay Tile Walls. The main corridor/hallway partition walls are constructed of hollow clay tile. Hollow clay tiles are brittle and proper bracing is needed for out-of-plane forces on these walls during a seismic event.

5. Cross Ties. The building does not appear to have continuous cross ties. Cross ties are needed to develop the out-of-plane walls forces into the diaphragm. Mitigation of this deficiency is not needed provided that the out-of-plane wall forces are adequately developed into the diaphragm.

6. Existing Chimney. The existing drawings indicate the chimney is wood framed with a cement plaster finish. Although it is not as much of a concern as an unreinforced masonry chimney, proper detailing and anchorage is required to support the tall chimney and prevent it from becoming a falling hazard during an earthquake.

7. Stiffness of Wall Anchors. It could not be verified if the anchors were installed taut from the wood plate to the walls.

8. Potential Non-Structural Deficiencies.
   - Clay tile roof. Where existing roof tiles are loose or are not properly secured they pose a falling hazard around the perimeter of the building.
   - Hollow clay tile partitions. The main corridor/hallway partition walls are constructed of hollow clay tile. Hollow clay tiles are brittle and proper bracing is needed for these walls to withstand the out-of-plane forces during a seismic event. Broken and dislodged tile units pose a falling and tripping hazard.

Existing Conditions Photos

- Existing Exterior Photos
- Existing Interior Photos

VIEW FROM NORTHEAST

VIEW FROM NORTHWEST

VIEW FROM EASTERN FACADE OF SOUTHERN WING

VIEW FROM SOUTHWEST

SUN PORCH AT SOUTHERN FACADE

TYPICAL WINDOW

TYPICAL DOOR

Building 22
Infirmary

BAY WINDOW AT RECEPTION

SUN PORCH WINDOW

ORIGINAL HARDWARE

TYPICAL SINK

STERILIZING ROOM

NORTHERN BAY WINDOW

CENTRAL CORIDOR

BUILT-IN FIXTURES

INTERIOR DAMAGE

SUN PORCH

Building 22
Infirmary

V.4 BUILDING 8 - ASSISTANT SUPERINTENDENT'S RESIDENCE

Assistant Superintendent's House, looking east, Photograph by Page & Turnbull, 2011.

In 1994, the Assistant Superintendent's Residence was evaluated for historic significance. It was determined to be eligible for listing on the National Register as a district contributor and an individual building. It was also listed individually on the California Register in 1997. Therefore, the Assistant Superintendent's Residence is a historical resource for the purposes of CEQA.

Architecture/Site

BUILDING DESCRIPTION/EXISTING CONDITIONS[33]

Although less grand than the Superintendent's Residence, the Assistant Superintendent's Residence was sited in proximity to one of the entrances of the facility. In the original site plan, a number of other cottages were planned in the vicinity of the Assistant Superintendent's Residence, however these plans were never realized. Later alterations to the site have separated the School grounds from the Assistant Superintendent's Residence by the School's security fence. The residence is surrounded by open landscape with a large lawn and mature trees.

[33] HRI 1980, HRA P&T 2005, CHATTEL HRA 2005

Designed by State Architect George McDougall, the Assistant Superintendent's Residence was constructed in 1926 in the California Ranch style with Craftsmen influences. The one-story masonry building is clad in stucco, and is configured in an L-shaped plan. There is a high hipped, gable roof with ridge vents, multiple cross gables and varying eave heights. The roof is clad in asphalt shingles. There is a large, central chimney clad in stucco. Windows are generally grouped with two to four wood multi-light casement and fixed sash configurations.

The west façade (front) features a large, arched wood entry door with decorative metal strap hinges and a small four-light inset window. There is a metal post-and-beam porch extending across the northern half of the façade with a molded plastic roof resting on a concrete pad. There is a large, multi-light wood frame window installed where there was once a secondary entrance door in the south bay of the projecting gable.

On the south elevation, a glass and wood door with multiple-light sidelights and an arched surround swings out onto a small concrete paver patio. A concrete path extends from the patio to the paved driveway that wraps around three sides of the house. There is a low brick wall that terminates in an outdoor fireplace. East of the wall is a single-bay detached garage. It is rectangular in plan, wood framed with board and batten wood siding and a gable roof.

The interior of the Assistant Superintendent's Residence contains a living room, dining room, kitchen and three bedrooms. The plan is organized around the living room which features a tall fireplace. The original wood floors have been covered with carpet throughout, and linoleum flooring has been installed in the kitchen. The kitchen retains the original large stove hood. The plaster walls and ceilings throughout the house are intact, and the original wood trim, moldings, windows and doors remain.

Alterations and Additions

Exterior alterations include the addition of the front and side porches and the replacement of the original red barrel clay tile roof with asphalt shingles. The detached garage was added sometime after the 1930s. [34]

Interior alterations include the installation of carpeting and linoleum floor coverings, and the remodeling of the kitchen at an unknown time. The sun porch on the east elevation has been altered with the addition of a closet. Utilities and lighting fixtures throughout the house have been replaced.

Character-Defining Features

Exterior

- "L" shaped plan
- One-story massing
- Hipped gable roof and central chimney
- Grouped, wood, multi-light windows
- Arched entry with wood door

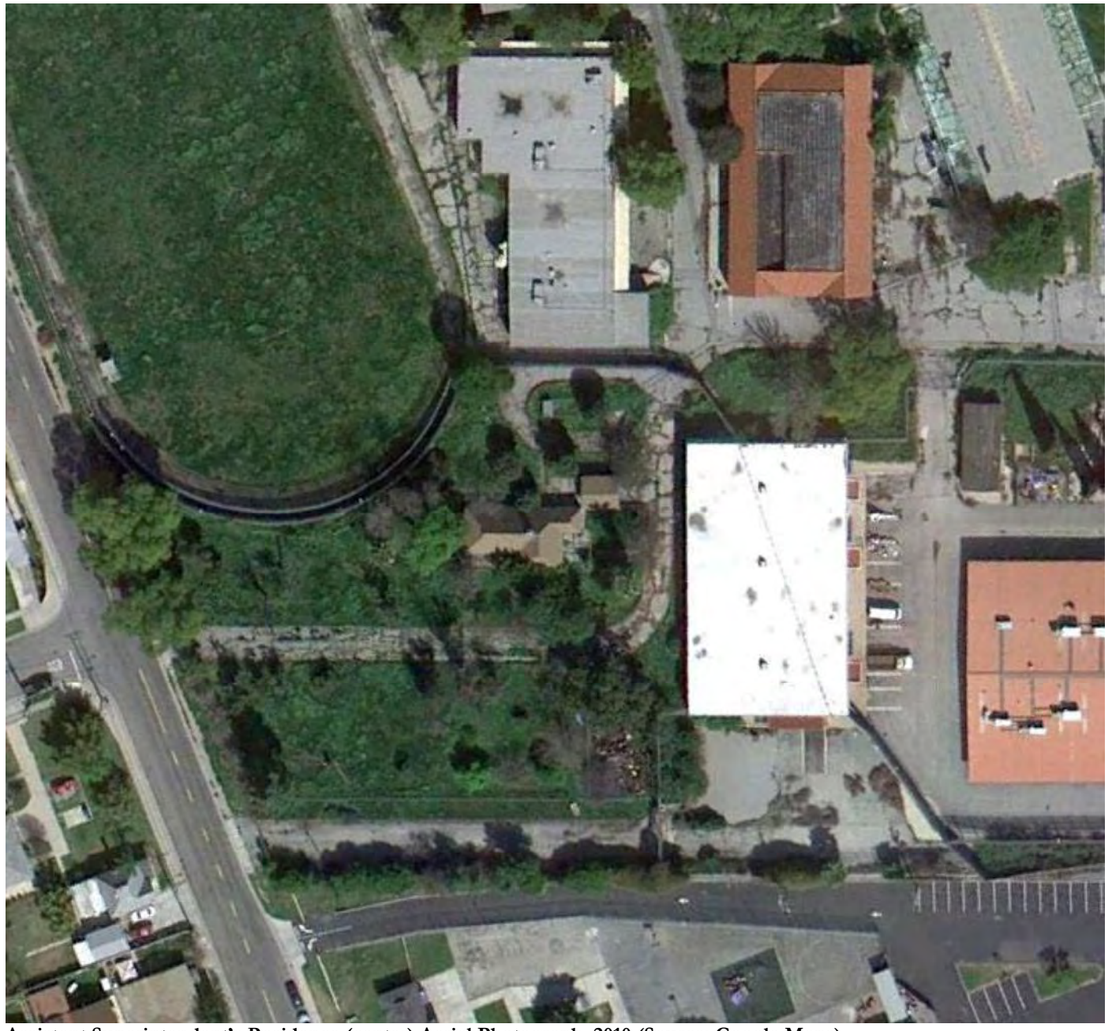
Interior

- Wood floors
- Wood trim, moldings, and doors

Site

- Sits within contributing Open Space
- Fronts onto contributing Streetscape

[34] HRA P&T 2005



Assistant Superintendent's Residence (center) Aerial Photograph, 2010 (Source: Google Maps)

Structural (Structural Focus)

BUILDING DESCRIPTION

The existing Assistant Superintendent's Residence is a one-story wood framed structure built in 1926. The exterior walls have 1x wood sheathing covered with smooth stucco/cement plaster. There is also an interior plaster finish on the walls. The building is generally rectangular in plan, with the living room area giving it a slight L-shape. It is approximately 67 feet by 25 feet wide with a footprint area of approximately 1800 square feet. The house has a high hipped roof with a flat plaster ceiling. In the center of home there is a brick fireplace with a tall chimney rising through the roof and there is a small partial basement used as a heater and storage room. No major modifications or retrofits are appeared to have been made to the building.

There is also a separate garage of similar construction located on the southeast corner of the building. The original drawings do not show the garage and it assumed to be non-historical addition constructed at a later period. The garage is not part of the evaluation of the Assistant Superintendent's Residence.

The house's gravity force resisting system consists of 1x sheathing at the roof level spanning between roof rafters supported by wood framed interior and exterior bearing walls. The ceiling is also supported by wood ceiling joists spanning to the interior and exterior walls. The raised wood floor framing consists of diagonal sheathing spanning between wood joists. The walls and floors are supported on a foundation system which consists of perimeter and interior concrete grade beams and stem walls.

The lateral force resisting system for the Superintendent's Residence consists of 1x wood roof sheathing, acting as a diaphragm, spanning between the exterior wood sheathed and plastered walls which act as shear walls to resist lateral forces. The lateral forces are transferred from the shear walls to the wood sill plate bolted to the concrete foundation and into the ground below.

EXISTING CONDITIONS

The building appears to be in generally good condition. There is no excessive sagging of the roof or ceiling and minimal cracking of the interior and exterior finishes. Some areas of the floor were slightly unlevel. Where the perimeter foundation can be observed from the partial basement, there are signs of some minor water intrusion stem and deterioration of the existing wood sill plate. At the northwest corner a tree had fallen on the existing wood trellis, and most of the framing is badly damaged – though there appears to be no damage to the house itself.

Existing Structural Deficiencies

A preliminary evaluation has identified the following deficiencies for the Assistant Superintendent's Residence:

1. Load Path/Transfer to Shear Walls. For proper seismic performance, there must be present a complete lateral-force-resisting system that forms a continuous load path for the entire structure – from all roof/floor levels, all the way to the foundation. Diaphragms should be connected for transfer of loads to the shear walls. Examination of the existing building drawings did not show direct connections from the 1x roof sheathing to the existing walls.

2. Shear Stress Check. Using the "quick check" procedure, the shear stress in the shear walls appear to be overstressed for seismic loads.

3. Damaged Wood Trellis. A fallen tree damaged most of the framing of the exterior wood trellis. Joists are broken and the tree is still resting on some of the remaining framing. The damage appears to be localized to the trellis however, the tree and damaged framing is a falling hazard to pedestrians and could cause damage to the house itself.
4. Existing Brick Chimney. The anchorage of the existing brick chimney to the roof and ceiling framing is not known. The chimney is likely un-reinforced and not properly braced to the existing structure and therefore could be a falling hazard during an earthquake.

5. Diaphragm Spans. At the roof level the sheathing acts as a diaphragm to distribute seismic forces to the perimeter shear walls. The existing 1x sheathing has limited capacity, especially at long spans between lateral-force resisting elements.

Existing Conditions Photos

- Existing Exterior Photos
- Existing Interior Photos

FRONT ENTRY

EXTERIOR FIRE PLACE

WOOD TRELLIS & WINDOWS WEST OF FRONT ENTRY

REAR ENTRY ON EAST FACADE

VIEW FROM SOUTHEAST

AIR CONDITIONING UNIT ON NORTH ELEVATION

DETATCHED GARAGE SOUTHEAST OF RESIDENCE

WINDOW SILL

Building 8
Assistant Superintendent's Residence

LIVING ROOM

ENCLOSED PORCH

SLEEPING PORCH WITH CLOSET

FRONT BEDROOM WINDOW

BEDROOM CLOSET

BATH

ENTRY FOYER

KITCHEN

Building 8
Assistant Superintendent's Residence

V.5 BUILDING 20 - ADMINISTRATION BUILDING

Administration Building, looking south, Photograph by Page & Turnbull, 2011.

In 1994, the Administration Building was evaluated for historic significance. It was determined to be eligible for listing on the National Register as a district contributor and an individual building. It was also listed individually on the California Register in 1997. Therefore, the Administration Building is a historical resource for the purposes of CEQA.

Architecture/Site

BUILDING DESCRIPTION/EXISTING CONDITONS[35]

The Administration Building was designed and constructed in 1929 by Deputy Chief W.K. Daniels. The original Administration Building, known as the "Castle" was previously destroyed by fire. The original cornerstone of Whittier State School is preserved on front lawn of the new Administration Building. The building is located south of the facility's main entrance gate, oriented parallel to the main entrance with its front façade facing north. There is a large parking lot in front of the building, and the building is located outside of the main security fence.

[35] HRI 1980, HRA P&T 2005, CHATTEL HRA 2005

The one-and-a-half story red English bond brick building with concrete foundation was designed in the Tudor Revival style with Gothic Revival influences. The building is configured in a long, narrow rectangle with a projecting cross gable. The Administration Building features a high hipped roof clad in wood shingles. There are multiple asymmetrical cross gables and dormers, and a red brick chimney along the front façade projecting gable. Windows are primarily multi-pane, wood casement sashes arranged in groups.

The north (front) façade's projecting cross gable houses the formal entrance and a large multi-pane bay window with leaded glass. The entrance is emphasized by a Gothic-style, corbelled pointed arch and projecting radial concrete stoop. The arched wood entry door features decorative metal strap hinges.

Three cross gables with varying eave heights project from the south (rear) elevation. The center gable is clad with plaster and faux half-timbering. There is a centered doorway with a multi-light transom window. This doorway is symmetrically mirrored on the west elevation, and together they serve the central double-loaded corridor that runs the length of the building.

The interior of the Administration Building contains a double-height reception room with a high beamed wood timber ceiling and arched wall buttresses. There is an Arts and Crafts style brick fireplace and wrought iron light fixture. The floor has been covered with a contemporary tile. The building contains multiple offices and utility rooms located off of the central double-loaded corridor. The original wood doors, windows, trim and moldings are still intact throughout the space.

Alterations and Additions

The exterior of the building and the surrounding landscape remain generally intact. On the interior, minor alterations have occurred over time, including: the installation of vinyl floor tile throughout, the installation of composite wall board in two offices, and in 1980, alterations to the building's air conditioning and heating systems. [36]

Character-Defining Features

Exterior

- Rectilinear plan
- One-and-one-half story massing
- Steeply hipped roof with cross gable
- Recessed, pointed arch entry with wood door
- Projecting bay window
- Wood casement, multi-light windows

Interior

- Double-height reception hall with wood timbered ceiling
- Arts and Crafts brick fireplace
- Double-loaded corridor

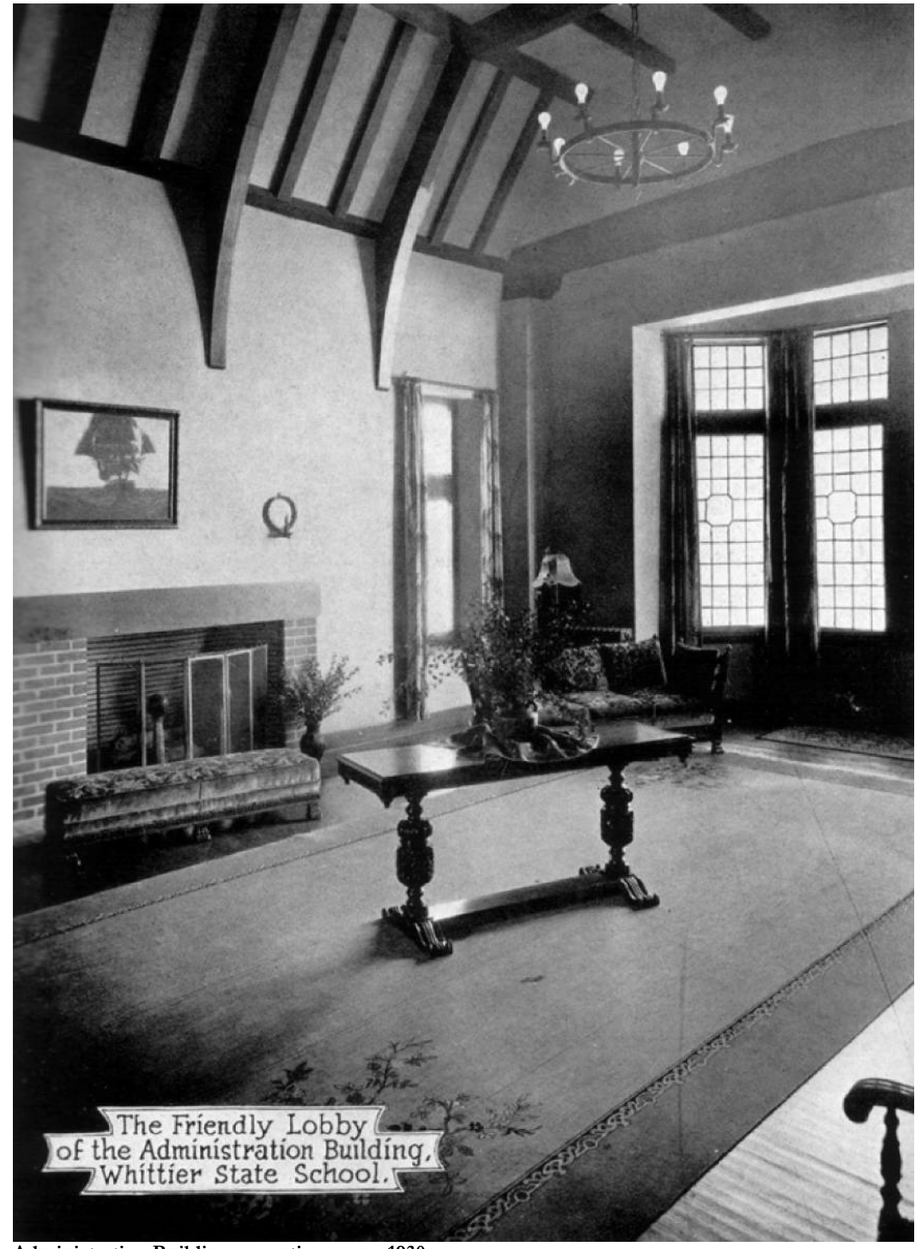
Site

- Gardens

[36] HRA P&T 2005

Historic Images

Administration Building, looking south, 1930 (Source: Historic Resources Assessment, Chattel Architecture 2005)



Administration Building, reception room, 1930
(Source: Historic Resources Assessment, Chattel Architecture 2005)

Administration Building (left) and Superintendent's Residence (right) Aerial Photograph, 2010 (Source: Google Maps)

Structural (Structural Focus)

BUILDING DESCRIPTION

The existing Administration building is a one-story unreinforced brick-masonry (URM) building, constructed in 1929. The building is a long narrow rectangle in plan, approximately 187 feet long by 38 feet wide with a footprint area of approximately 7750 square feet. The hipped wood shingle roof has several large cross gables in the center of the building where the main entrance is located. To the west of the main entrance is a tall brick chimney. The main entry opens to the high ceiling reception area and connects to a long central corridor. This corridor leads to one of the many offices and rooms. The building has a raised wood floor and partial basement at the southwest corner. The basement is likely a later addition as it not shown on the original building drawings. Aside from this addition, no major modifications or retrofits are appeared to have been made to the building.

The building's gravity system consists of 1x straight wood roof sheathing spanning between trussed wood roof and ceiling joists at about foot feet on center. The roof trusses and ceiling joists are supported by the exterior brick URM bearing walls and interior wood stud bearing walls along the main corridor. The ground floor is mainly 2x wood joists spanning to built-up wood beams supported on interior concrete pier foundations and perimeter concrete walls. A small portion of the floor at the main entry is a one way concrete slab and beam system floor, supported on concrete walls below.

The building's lateral force resisting system consists of straight 1x wood sheathing acting as the roof diaphragms spanning horizontally to the exterior URM walls which resist the lateral shear loads.

The foundation system consists of perimeter reinforced concrete strip footings below the brick walls and interior concrete piers and spread footings below the built-up wood beams.

EXISTING CONDITIONS

The building appears to be in generally good condition. The wood roof framing members show little or no signs of deterioration. Access to the rooms was limited, but the floors, ceilings, and walls are in good shape for the most part. There is some cracking in the exterior brick walls - most notably there is a large diagonal and horizontal crack above the main entry arch that appears to have been patched previously. Also, there is a vertical crack near the top of the existing chimney.

Existing Structural Deficiencies

A preliminary evaluation has identified the following deficiencies for the Administration Building:

1. Load Path/Transfer to Shear Walls. For proper seismic performance, there must be present a complete lateral-force-resisting system that forms a continuous load path for the entire structure – from the roof/floor levels, all the way to the foundation. Diaphragms should be connected for transfer of loads to the shear walls. Examination of the existing building drawings did not show direct connections from the 1x roof sheathing to the existing URM walls.

2. Wall Anchorage. The masonry walls should be anchored to the roof for out-of-plane loads with proper hold downs and straps that transfer the forces into the diaphragm. No such hold downs or straps were observed during the site visit or upon review of the existing drawings. The walls are likely not adequately anchored to the roof diaphragm. During an earthquake, the heavy walls and roof may separate causing a loss of vertical support of the roof structure which may lead to a partial collapse.

3. Diaphragm Spans/Sheathing. At the roof, straight 1x sheathing acts as a diaphragm to distribute seismic forces to the URM shear walls. The existing 1x sheathing is flexible and has limited capacity, especially at long spans between lateral-force resisting elements and in building diaphragms with large aspect ratio's (length-to-width).

4. Shear Stress Check. Using the "quick check" procedure of ASCE 31, the URM walls appear to be overstressed for seismic loads.

5. Existing Brick Chimney. Tall unreinforced brick chimneys have limited strength and ductility and usually perform poorly during seismic events. The anchorage of the existing brick chimney to the roof and floor framing is not known and likely inadequate. The chimneys can become damaged and pose a serious falling hazard during an earthquake.

6. Masonry Units. There are some small areas of deterioration of the brick units.

7. Unreinforced Masonry Wall Cracks. There are areas of diagonal, vertical and horizontal cracking on the building exterior.

8. Stiffness of Wall Anchors. It could not be verified if the anchors were installed taut from the wood plate to the masonry wall.

9. Cross Ties. The building does not appear to have continuous cross ties. Cross ties are needed to develop the out-of-plane walls forces into the diaphragm. Mitigation of this deficiency is not needed provided that the out-of-plane wall forces are adequately developed into the diaphragm.

VIEW FROM NORTH

VIEW FROM EAST

SOUTHERN ROOFLINE

MAIN ENTRY

BAY WINDOW AT RECEPTION

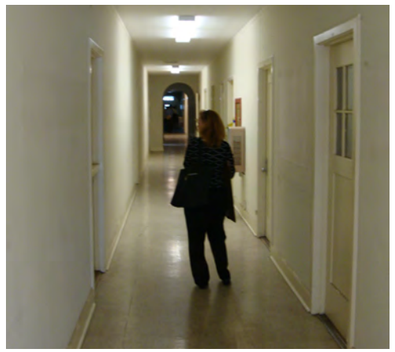
VIEW FROM SOUTH

SOUTHERN FACADE

ENTRY PORCH DETAIL

Building 20
Admin Building

OFFICE WINDOWS


CENTRAL CORIDOR

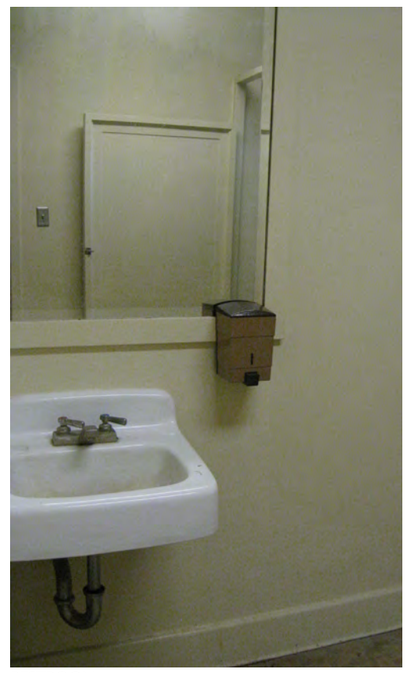
OFFICE WINDOWS

FIREPLACE IN RECEPTION HALL

RECEPTION HALL CEILING

VIEW OF ENTRY FROM RECEPTION

SIDE ENTRY


RESTROOM

WATER DAMAGE AT CEILING

RECEPTION WINDOW

Building 20
Admin Building

V.6 BUILDING 26 - CHAPEL

Chapel, looking south, Photograph by Page & Turnbull, 2011.

In 1994, the Chapel was evaluated for historic significance. It was determined to be eligible for listing on the National Register as a district contributor and an individual building. It was also listed individually on the California Register in 1997. Therefore, the Chapel is a historical resource for the purposes of CEQA.

Architecture/Site

BUILDING DESCRIPTION/EXISTING CONDITIONS[37]

Originally constructed to serve as the Kitchen and Commissary building, the Chapel is located near the center of the campus. It has a large, open space to its north and south sides. The west wing of the Chapel faces one of the main roadways at the facility.

Designed by Deputy Chief W.K. Daniels in 1933, the one-story, T-shaped Chapel features an Eclectic French Renaissance Revival style with Tudor Revival and Stick influences. Built on a concrete foundation, the building has hollow terra cotta block walls faced with English bond brick. The steeply pitched, hipped roof has multiple projecting gables with varying eave heights and is clad in flat red clay tiles laid in a colorful zig-zag pattern. There is an interior chimney rising through the north wing. Windows are arranged in groups of two to four with simple wood surrounds. They are multi-light windows with casement sashes.

The north (front) façade has two gable projections. The taller gable-end is clad in faux half-timbering and a scalloped edge bargeboard. In the west bay of this gable, there is a large wood door with arched head and metal strap hinges, and a molded concrete door surround. The shorter gable-end has a bay window with a half-hipped roof, arched window heads and stained glass panes. There are a series of small buttresses with large windows between them. The interior of this portion of the building features a chapel with exposed wood beams, plastered walls and a contemporary tile floor.

The east end of the north wing also has a large stained glass bay window which lights the interior of the other chapel space in the building. This chapel space is much larger than the previously described chapel. There is an open, wood framed ceiling with pointed-arch masonry ribs. These pointed arches are mirrored in the three wall openings to the rear passage, which are currently infilled with plaster and contemporary double-doors (but were historically open arches). Behind the altar is a stained glass bay window. The walls are plaster and there is contemporary floor tile and a carpeted altar.

Although the south wing of the building appears to be original (1933 plans show it contained the general commissary and bakery), it has been significantly altered over time. Connections between the two wings have been altered. There are plaster walls and contemporary floor tile throughout. The reception hall has been altered with a vinyl floor covering and an acoustic tile dropped ceiling with fluorescent lights. The training center has been heavily altered, the plan modified, with a new interior floor finish, new wall and ceiling finishes, new trim and moldings, new fixtures and contemporary doors.[38]

Alterations and Additions

The exterior of the Chapel retains a high degree of integrity. The north entrance to the reception hall has been modified for required handicapped access, and a window air conditioning unit has been installed. Alterations have been made to the doors and windows on the western façade of the southern wing.

The interior of the building is generally intact. The utilities have been updated (including the electrical system and installation of heating vents). Connections between the two wings of the building have been altered. There is contemporary floor tile throughout. The reception hall has been altered with a vinyl floor covering and an acoustic tile dropped ceiling with fluorescent lights. A choir loft was added to the north chapel in 1962.The training center in the south wing of the building shows evidence of remodeling that detracts from the integrity of the interior in that section of the building.[39]

[37] HRI 1980, HRA P&T 2005, CHATTEL HRA 2005

[38] HRA EDAW 2005
[39] HRA EDAW 2005

Character-Defining Features

Exterior

- "T"-shaped plan
- One-and-one-half story massing
- Steeply pitched hipped roof with cross gables
- Half-timbering in gable ends
- Wood casement multi-light windows
- Bay window with stained glass

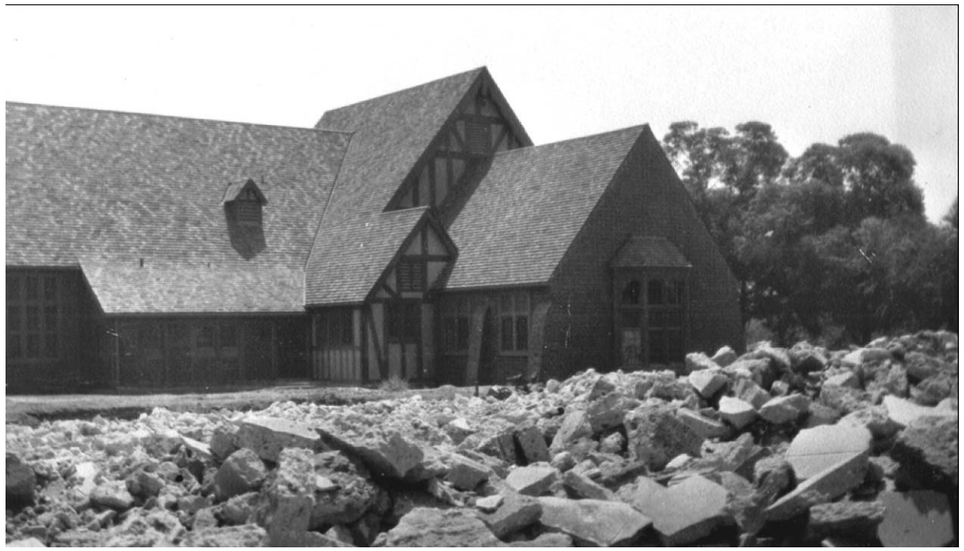
Interior

- Pointed arch masonry ribs on the ceilings
- Open plan of worship space

Site

- Historic open space connection with Infirmary

Historic Images



Chapel, looking south, 1930 (Source: Historic Resources Assessment, Chattel Architecture 2005)

Chapel (center) Aerial Photograph, 2010 (Source: Google Maps)

Structural (Structural Focus)

BUILDING DESCRIPTION

The existing Chapel building is a one-story unreinforced brick-masonry (URM) building, built in the early 1930's. Originally built as a kitchen and commissary building, it was later changed to a Chapel in the 1960's. The building is a slightly opened L-shape with projections at the front and rear entrances and a foot print area of approximately 12000 square feet. The roof consists of tall steep gables and hips that project and intersect at varying heights and is clad with flat red clay tiles. There is a tall brick chimney in the center of the roof of the southwest wing. There is a partial basement in the northwest corner of the building with access to the crawl space beneath the raised floor of the southwest wing. In the 1960's the building underwent renovations to convert the original dining areas in the northeast wing into Catholic and Protestant chapels and at this time the southwest wing (former commissary) became classroom and office space. The building also has a partial mezzanine area that served as the choir loft for the chapels. It appears that no other major modifications or retrofits have been made to the building.

The building's gravity system at the Protestant chapel area consists of 1x straight wood roof sheathing spanning between wood beams supported on large concrete arches. The Catholic chapel area has a similar gravity system, but with heavy timber trussed arches as main gravity support. The classroom area in the southwest wing consists of 1x sheathing spanning to trussed wood roof and ceiling joists at about two foot spacing – these are support by the exterior URM walls interior concrete beams and columns. The floor is a raised one way reinforced concrete beam and slab system supported by concrete columns and concrete foundation walls.

The building's lateral system consists of straight 1x wood roof sheathing acting as the diaphragm spanning between the exterior unreinforced brick masonry shear walls that resist the lateral loads.

The foundation system consists of perimeter concrete strip footings supporting the perimeter bearing walls and interior isolated concrete spread footings supporting the concrete floor columns. The basement area has concrete retaining walls and the floor is a concrete slab on grade.

EXISTING CONDITIONS

The Chapel appears to be in poor to fair condition. The building appears to have been vacant for some time and generally deteriorated. Paint and finishes are cracking and peeling off the walls and the ceilings in the classroom areas are deteriorated and have fallen down or been removed in areas. The roof framing in the chapels appears to be in good condition. From the crawl space access, areas of damage (cracking and spalling) to the underside of the concrete floor slab can be observed. The exterior of the building is in good shape with minimal visible cracks and deterioration. There are also a large number of wasp nests around the building and dead bees on the interior, which could indicate a pest problem.

Existing Structural Deficiencies

A preliminary evaluation has identified the following deficiencies for the Chapel Building:

1. Load Path/Transfer to Shear Walls. For proper seismic performance, there must be present a complete lateral-force-resisting system that forms a continuous load path for the entire structure – from the roof/floor levels, all the way to the foundation. Diaphragms should be connected for transfer of loads to the shear walls. Examination of the existing building drawings did not show direct connections from the 1x roof sheathing to the existing URM walls.

2. Wall Anchorage. The masonry walls should be anchored to the roof for out-of-plane loads with proper hold downs and straps that transfer the forces into the diaphragm. No such hold downs or straps were observed during the site visit or upon review of the existing drawings. The walls are likely not adequately anchored to the roof diaphragm. During an earthquake, the heavy walls and roof may separate causing a loss of vertical support of the roof structure which may lead to a partial collapse.

3. Diaphragm Spans/Sheathing. At the roof level, straight 1x sheathing acts as a diaphragm to distribute seismic forces to the URM shear walls. The existing 1x sheathing is flexible and has limited capacity, especially at long spans between lateral-force resisting elements and in building diaphragms with large aspect ratio's (length-to-width).

4. Shear Stress Check. Using the "quick check" procedure of ASCE 31, the URM walls appear to be overstressed for seismic loads.

5. Existing Brick Chimney. Tall unreinforced brick chimneys have limited strength and ductility and usually perform poorly during seismic events. The anchorage of the existing brick chimney to the roof and floor framing is not known and likely inadequate. The chimneys can become damaged and pose a serious falling hazard during an earthquake.

6. Deterioration of Concrete. There are areas of spalling and cracking in the ground floor slab.

7. URM Wall Proportions. The height-to-thickness ratio of the masonry shear walls exceeds the height-to-thickness limitations set by the ASCE 31 Tier 1 check.

8. Stiffness of Wall Anchors. It could not be verified if the anchors were installed taut from the wood plate to the masonry wall.

9. Cross Ties. The building does not appear to have continuous cross ties. Cross ties are needed to develop the out-of-plane walls forces into the diaphragm. Mitigation of this deficiency is not needed provided that the out-of-plane wall forces are adequately developed into the diaphragm.

10. Beam Supports. The beams in the chapel area are supported on brick walls and corbels. No connection plates or anchors could be verified in field or on the existing drawings.

11. Potential Non-Structural Deficiencies. Clay tile roof. Where existing roof tiles are loose or are not properly secured they pose a falling hazard around the perimeter of the building.

Existing Conditions Photos

- Existing Exterior Photos
- Existing Interior Photos

VIEW OF MAIN ENTRY FROM SOUTHEAST

VIEW FROM SOUTHEAST

NORTHERN EXIT FROM PROTESTANT CHAPEL

PROTESTANT CHAPEL ENTRANCE

VIEW OF CATHOLIC CHAPEL FROM NORTH

NORTHEASTERN ENTRANCE

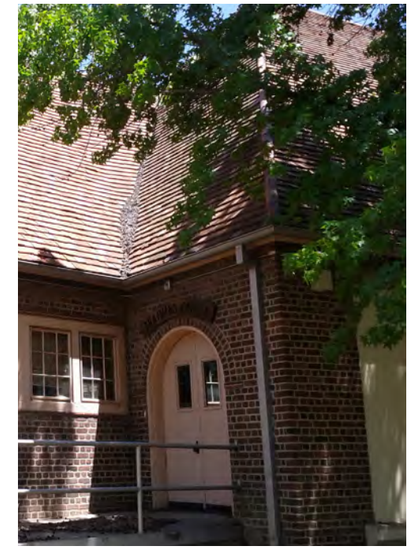
PROTESTANT CHAPEL ENTRANCE

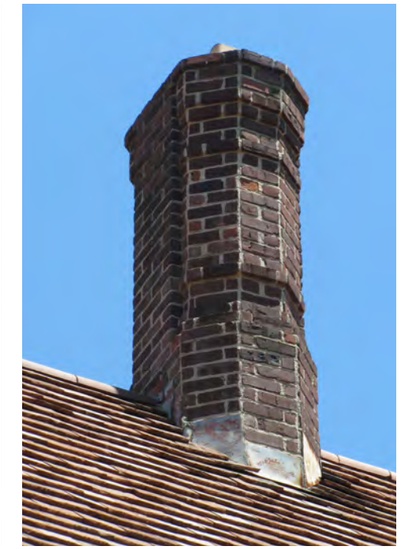
Building 26
Chapel - Main Wing

STAIRS TO BASEMENT

RAMP AT NORTHERN ENTRY TO CLASSROOM WING

NORTHERN ENTRY TO CLASSROOM WING


CLASSROOM ENTRY


BRICK CHIMNEY

VIEW OF CLASSROOM WING FROM WEST

SOUTHERN ENTRY TO CLASSROOM WING

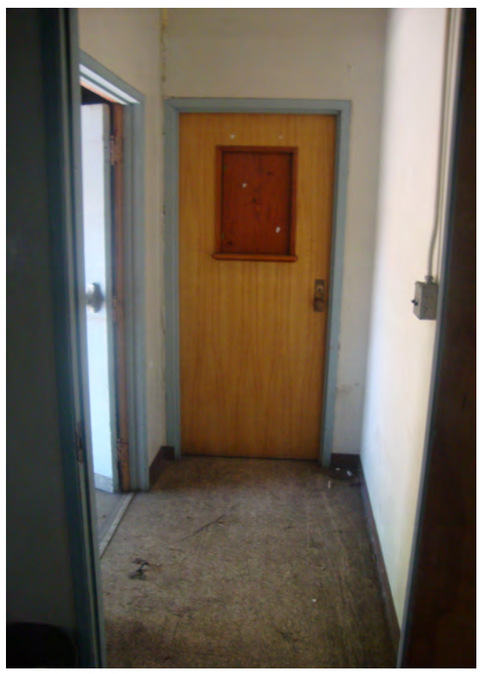
VIEW OF CLASSROOM WING FROM EAST

Building 26
Chapel - Classroom Wing

CLASSROOM

CATHOLIC CHAPEL

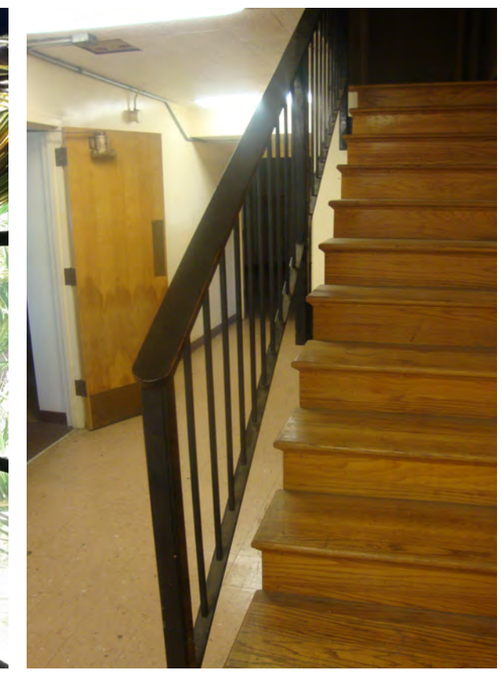
ENTRY & WAITING


INTERIOR DOOR

CHOIR LOFT IN CATHOLIC CHAPEL

PROTESTANT CHAPEL

WINDOW


STAIR TO CHOIR LOFT

Building 26
Chapel

V.7 BUILDING 14 - GARAGE (MAINTENANCE BUILDING)

Maintenance Building, looking south, photograph by Page & Turnbull, 2011.

In 1994, the Maintenance Building was evaluated for historic significance. It was determined to be eligible for listing on the National Register as a district contributor and an individual building. It was also listed individually on the California Register in 1997. Therefore, the Maintenance Building is a historical resource for the purposes of CEQA.

Architecture/Site

BUILDING DESCRIPTION/EXISTING CONDITIONS[40]

The Maintenance Building is located west of the facility's main entrance gate. This one-story, brick building was designed by Deputy Chief W.K. Daniels and was constructed in 1931. The building has been in continuous use since construction, utilized as an aero shop, an auto repair shop, a machine shop, an electric room and a battery room. In 1994, after the construction of the New Maintenance Building, the Maintenance Building became a storage facility and bicycle shop.

The Maintenance Building is rectangular in plan, three bays wide by eight bays deep with a modified saw tooth roof with red terra cotta barrel tiles. The center of the building has a flat roof clad in built-up roofing material, which allows for insertion of steel awning sash windows along the roof slope of the long sides. Window openings have concrete lintels and sills, and hold large steel sash windows with awning-type functions.

The east elevation has large window openings in each of the three bays filled with multi-light windows (many of which have been covered by plywood). The west elevation is also three bays, and has contemporary roll-down doors in the two end bays. The central bay features four small, four-light fixed wood sash windows.

The north and south elevations contain large window and garage door openings that are separated by brick piers. The north elevation garage opening is filled with a glass and wood panel folding door at the center of the elevation. The end bays contain arched doorways with tongue and groove arched-head wood doors (with some original hardware), emphasized with decorative arched brickwork. The north elevation end bays contain twelve-light windows. The garage opening is two bays wide and contains a double set of the original glass and wood panel folding doors.

The interior is divided into many spaces by various wood-framed and corrugated metal partitions. There is a concrete floor and an open ceiling throughout with exposed steel trusses, wood rafters and suspended fluorescent lights. Some original machinery including a drill press and a lathe remain in the space.[41]

Alterations and Additions

Changes to the exterior include the installation of new metal roll-down garage doors and the replacement of some exterior swing doors. The interior has been altered as the functions of the space have changed over time, mostly consisting of the construction of various wood and metal partitions. In 1953 and 1954, the building underwent minor renovations including electrical work and painting.

Character-Defining Features

Exterior
- Rectilinear plan
- One-story massing
- Gabled roof with terra cotta cladding
- Multi-light, steel-sash windows
- Sliding, multi-light garage door on steel tracks

Interior
- Large open plan with few divisions
- Exposed ceiling trusses

Site
- None

[40] HRI 1980, HRA P&T 2005, CHATTEL HRA 2005

[41] HRA EDAW 2005

Historic Images

Carpentry shop in Maintenance Building, 1935 (Source: Historic Resources Assessment, Chattel Architecture 2005)

Print shop in Maintenance Building, 1935 (Source: Historic Resources Assessment, Chattel Architecture 2005)

Maintenance Building (center) Aerial Photograph, 2010 (Source: Google Maps)

Structural (Structural Focus)

BUILDING DESCRIPTION

The existing Maintenance Garage is a one-story unreinforced brick-masonry (URM) building constructed in 1930. The building is rectangular in plan, approximately 136 feet long by 83 feet wide with a footprint area of approximately 11300 square feet. The roof is hipped along the perimeter and flat in the middle, with saw-tooth skylights along a portion of the north-west roof. There are some small offices and mezzanines in the center of the building along with some full height wood or corrugated sheet metal walls to partition the building. No major modifications or retrofits are appeared to have been made to the building.

The building's gravity system consists of wood roof framing over steel beams spanning to steel trusses supported on steel columns embedded in the URM walls and interior steel columns. At the east and west ends of the buildings, steel trusses and framing members bear directly on the URM walls.

The building's lateral force resisting system consists of straight 1x wood sheathing acting as the diaphragm spanning between exterior URM walls which resist the lateral shear loads.

The foundation system consists of perimeter reinforced concrete strip footings with reinforced concrete spread footings below the perimeter and interior steel columns. The building has a 4" concrete slab on grade with welded wire mesh reinforcing.

EXISTING CONDITIONS

The building appears to be in fair condition. The wood and steel roof framing members are generally in good condition, with little signs of damage and deterioration. There are areas of minor rusting and minor deterioration of wood likely due to leaks in the roof. However, there were several areas where damage and distress were observed, mainly in the brick walls. There are diagonal, horizontal and vertical cracks at locations along the exterior walls, and on the interior there is good amount of cracking and spalling of the first course of brick masonry along the lower portions of the south-east walls.

Existing Structural Deficiencies

A preliminary evaluation has identified the following deficiencies for the Old Maintenance Garage:

1. Load Path/Transfer to Shear Walls. For proper seismic performance, there must be present a complete lateral-force-resisting system that forms a continuous load path for the entire structure – from all roof/floor levels, all the way to the foundation. Diaphragms should be connected for transfer of loads to the shear walls. Examination of the existing building drawings did not show direct connections from the 1x roof sheathing to the existing walls.

2. Wall Anchorage. The masonry walls should be anchored to the roof for out-of-plane forces with proper hold downs and straps that transfer the loads into the diaphragm. No such hold downs or straps were observed during the site visit or upon review of the existing drawings. The walls are likely not adequately anchored to the roof diaphragm. During an earthquake, the heavy walls and roof may separate causing a loss of vertical support of the roof structure which may lead to a partial collapse.

3. Diaphragm Spans/Sheathing. At the roof level the straight 1x sheathing acts as a diaphragm to distribute seismic forces to the URM shear walls. The existing 1x sheathing is flexible and has limited capacity, especially at long spans between lateral-force resisting elements and in building diaphragms with large aspect ratio's (length-to-width).

4. Shear Stress Check. Using the "quick check" procedure of ASCE 31, the URM walls appear to be overstressed for seismic loads.

5. Existing Mezzanines. Interior mezzanine levels should be braced independently from the main structure, or should be anchored and connected directly to lateral-force resisting system of the main building. The existing interior mezzanines appear to be un-braced and do not appear to have a complete lateral force resisting system.

6. Masonry Units. There are signs of deterioration and distress in the brick units, especially along the interior of the south-east corner walls.

7. Unreinforced Masonry Wall Cracks. There are several large diagonal and horizontal cracks on the building exterior.

8. Diaphragm Reinforcement at Openings. The saw-tooth skylights create a large discontinuity in the roof diaphragm and adequate reinforcing should be provided around this opening.

9. URM Wall Proportions. The height-to-thickness ratio of the masonry shear walls exceeds the height-to-thickness limitations set by the ASCE 31 Tier 1 check.

10. Stiffness of Wall Anchors. It could not be verified if the anchors were installed taut from the wood plate to the masonry wall.

11. Beam, Girder and Truss Supports. Framing supporting large areas of roof should not bear on unreinforced masonry as the primary support for vertical loads. At the east and west ends of the buildings steel roof trusses are supported directly by the URM walls.

12. Potential Non-Structural Deficiencies.
    - Clay tile roof. Where existing roof tiles are loose or are not properly secured they pose a falling hazard around the perimeter of the building.
    - Glass skylight. During an earthquake the glass can break and fall.

Existing Conditions Photos

- Existing Exterior Photos
- Existing Interior Photos

VIEW FROM NORTHWEST

WINDOWS

VIEW FROM NORTH

PAINTED SIGNAGE ON NORTH FACADE

EXTERIOR DOOR

WINDOWS ON NORTHWEST FACADE

SLIDING DOOR ON NORTHERN FACADE

ROLL-UP DOOR ON SOUTHERN FACADE

VIEW FROM SOUTH

Building 14
Maintenance Building (Garage)

INTERIOR OF WINDOWS

CEILING MOUNTED EQUIPMENT

ROOF TRUSSES & SKYLIGHT

INTERIOR FLOOR/WALL CONDITION

WOOD PARTITION WITH EXPOSED ROOF

INTERIOR PARTITION

EXPOSED BRICK EXTERIOR WALL

RESTROOM

OFFICE MEZZANINE

Building 14
Maintenance Building (Garage)

V.8 BUILDING 5 - GYMNASIUM

Gymnasium, looking northwest, Photograph by Page & Turnbull, 2011.

In 1994, the Gymnasium was evaluated for historic significance. It was determined to be eligible for listing on the National Register as a district contributor and an individual building. It was also listed individually on the California Register in 1997. Therefore, the Gymnasium is a historical resource for the purposes of CEQA.

Architecture/Site

BUILDING DESCRIPTION/EXISTING CONDITIONS[42]

The Gymnasium is located west of the facility's main entrance, adjacent to the Athletic Field. The building was designed by Alfred Eichler, who worked as an architect for the Division of Architecture of the State of California Department of Public Works from 1925 to 1963. The building is divided into three sections: the oversized primary section and two rear buildings. The Gymnasium was constructed in 1934, though one of the rear buildings was added between 1958 and 1961. There is a plaque on the main building, commemorating the dedication of the Gymnasium by the governor.

The primary gymnasium building is constructed of poured-in-place concrete, and is rectangular in plan. The building is three bays wide by five bays long. The roof is clad flat tiles, with a front shed roof clad in asphalt shingles. At the front facing gable, the eaves flare up gently at the intersection of the roof with the wall. The north and south elevations have five window bays filled with wood framed windows with wire glazing. The three central bays project past the roof plan as dormers, with large multi-light, wood casement windows with 6-light transom windows above them.

The main entrance to the building is on the east façade, inside of a one-story projecting shed roof element. The entrance is symmetrically placed in the center of the façade with contemporary metal doors inset in an arch opening framed by engaged columns with decorative dentils and a chevron design in low relief. There is a six-light fixed wood sash window centered over the doorway. On the south elevation of this inset element, there is an eight-light wood casement sash window. On the east façade above the shed roof is a series of three recessed arched windows with engaged column window surrounds with foliate capitals and a decorative cornice. A similar group of windows is mirrored on the west (rear) elevation.

The entrance doors on the east façade lead to an enclosed entryway which once housed a ticket window. The entryway features plaster walls and a quarry tile floor. On either side of the entryway are wood doors leading to rooms which were likely once used as restrooms and/or visiting team locker rooms. There are two sets of double doors leading from the entryway into the main gymnasium space, and two doors from the small restroom/locker rooms leading into the gymnasium as well. The gymnasium has a high wood framed ceiling with exposed steel trusses and a wood floor.

The original rear building (constructed at the same time as the gymnasium) is a one-story masonry structure with a poured-in-place concrete foundation and a front-facing gable roof clad in asphalt shingles. The eaves flare up gently at this building, similar to the main gymnasium building. The building is six bays deep by three bays wide, with steel casement windows with wire glass and wood surrounds. The rear elevation features two pairs of windows and an attic vent in the gable end. The north elevation has windows arranged in a long row, though the bay closest to the primary gymnasium building contains a pair of contemporary metal doors with a small fixed window above. The interior of this building includes offices, a weight room and a locker room.

The newer rear building is a one-story masonry structure with a poured-in-place concrete foundation and a flat roof. There are no openings except the doorway on the south elevation with a set of contemporary metal doors. The entrance is raised above the ground level, accessed by concrete stairs. The interior of the building features large restrooms, showers, lockers and a changing room.

Alterations and Additions

Alterations to the exterior of the Gymnasium include the installation of contemporary metal doors, and obvious multiple repainting campaigns. The dressing rooms were expanded in 1962 by infilling the southwest corner of the building.

At the interior of the Gymnasium, the plan was altered slightly with the construction of the later rear building, which required reconfiguration of the interior and exterior entrances off of the back hall of the primary building.

[42] HRI 1980, HRA P&T 2005, CHATTEL HRA 2005

Character-Defining Features

Exterior

- Rectilinear plan
- Two-story massing
- Poured-in-place concrete
- Decorative, arched entry
- Recessed, arched, wood casement windows

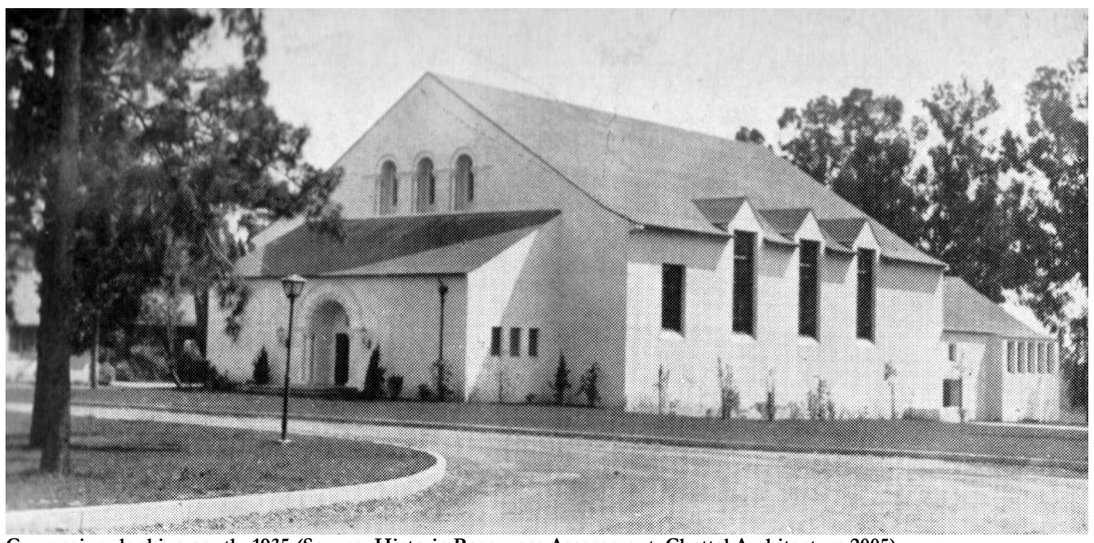
Interior

- Open plan (gymnasium)
- Exposed ceiling trusses

Site

- Viewing platform overlooking athletic field
- Athletic field and track are a historic open space feature

Historic Images



Gymnasium looking south, 1935 (Source: Historic Resources Assessment, Chattel Architecture 2005)

Gymnasium (center) Aerial Photograph, 2010 (Source: Google Maps)

Structural (Structural Focus)

BUILDING DESCRIPTION

The existing Gymnasium is a one-story reinforced concrete building with a full basement constructed in 1934. The building is rectangular in plan, approximately 156 feet long by 72 feet wide with a footprint area of approximately 11,000 square feet. The Gymnasium building is broken up into 4 areas, the largest of which is the main gym portion. This area has a high gabled roof with dormers at the windows on the north and south walls. At the east end of the building is the main entrance/lobby area which has a low mono-slope roof. At the northwest corner is the original locker room and shower area, similar to the main gym area but smaller and with a much lower gable roof. And at the southwest corner is a newer addition to the building (circa 1962). This area is 1 story tall and of light framed wood construction. The new addition is attached structurally to the original concrete building. Aside from this addition, no major modifications or retrofits are appeared to have been made to the building.

For the main portion of the Gym, the building's gravity system consists of straight wood sheathing at the roof level spanning between wood roof joists supported by steel beams and long span steel roof trusses. The roof trusses are supported on steel columns embedded in the concrete walls. The wooden gym floor is supported by wood joists spanning to built-up wood beams, supported on 8" x 8" wood posted laid out in typical 10 foot by 10 foot grids. At the main entry area, the roof is supported by trussed wood rafters bearing on the existing concrete wall and the floor is a one-way reinforced concrete beam and slab system supported by the concrete walls. At the northwest corner of the building the gabled roof is supported by trussed wood rafters supported on concrete bearing walls and interior concrete beams and columns. The floor here is a one-way reinforced concrete beam and slab system supported by concrete walls and interior concrete columns. The southwest addition area is wood framing supported on wood bearing walls and some interior steel beams.

The building's lateral system consists of straight 1x wood roof sheathing acting as the diaphragm spanning between the reinforced concrete shear walls to resist lateral loads. The southwest addition area is also 1x wood roof sheathing acting as the diaphragm. Here the diaphragm is supported by the existing concrete shear walls and by wood sheathed shear walls on one side.

The foundation system consists of perimeter reinforced concrete strip footings and retaining walls with larger reinforced concrete spread footings below the perimeter steel columns. Interior columns and posts are supported by isolated concrete spread footings. The basement floor is a concrete slab on grade.

EXISTING CONDITIONS

The building appears to be in good condition. The wood floor is visibly sloping down towards the exterior walls on the north and south sides of the gym. Some of the finished floor surface has delaminated from the floor sheathing. The wood and steel roof framing members are in good condition, with no visible signs of damage or deterioration. There is one area with large cracks at the transition from the high roof to the low roof on the northwest wall, but aside from this the walls appear to be in good shape. In the basement the fireproofing material encasing the wood posts, beams and floor is damaged and falling off in some areas. And there are some minor signs of water intrusion along the perimeter basement walls.

Existing Structural Deficiencies

A preliminary evaluation has identified the following deficiencies for the Gymnasium:

1. Wall Reinforcing. Walls that do not have at least a minimum amount of reinforcing steel have limited capacity in resisting seismic forces. Based on the existing structural drawings the ratio of reinforcing steel to gross concrete area is not adequate.

2. Wall Anchorage. The walls should be anchored to the roof for out-of-plane forces with proper hold downs and straps that transfer the loads into the diaphragm. The walls are anchored to the diaphragm by the steel roof framing member, but these connections do not have adequate capacity to develop the forces from the walls into the roof diaphragm.

3. Diaphragm Spans/Sheathing. At the roof level the straight 1x sheathing acts as a diaphragm to distribute seismic forces to the shear walls. The existing 1x sheathing is flexible and has limited capacity, especially at long spans between lateral-force resisting elements and in building diaphragms with large aspect ratio's (length-to-width).

4. Deterioration of Concrete. There are several large cracks at the exterior wall and header beam on the northwest side of the building and the concrete appears to be sagging here.

5. Stiffness of Wall Anchors. It could not be verified if the anchors were installed taut from the wood plate to the walls.

6. Potential Geometric Irregularities. Due to the some vertical and horizontal setbacks and re-entrant corners of the building, it will be subject to potential damage at those interfaces.

Existing Conditions Photos

- Existing Exterior Photos
- Existing Interior Photos

VIEW FROM NORTHEAST

VIEW FROM NORTHWEST

VIEW FROM SOUTHWEST

TRACK

ENTRY DETAIL

UPPER WINDOW

SIDE ENTRY

SIDE ENTRY

GYMNASIUM WINDOWS

RAMP TO BASEMENT

Building 5
Gymnasium

GYMNASIUM LOOKING TOWARDS ENTRY

SHOWER ROOM

BASEMENT CEILING

SHOWER ROOM

SHOWER ROOM

GYMNASIUM FLOOR

BASEMENT WALL

GYMNASIUM FLOOR

Building 5
Gymnasium

VI. REUSE STUDIES

VI.0 SITE AND SETTING

Reuse Description

ARCHITECTURE/SITE

The proposed site design includes the retention of the eight historic buildings along with the immediate landscaping and open space. It is recommended that mature trees be kept in place near the historic buildings and in the historic landscape and open space areas.

Two options are included for the road system and infrastructure for the site.

Option 1

- Existing road system is retained along with the historic buildings (see civil analysis)
- Infrastructure improvements are made to service only the historic buildings (see civil)
- Landscape and parking improvements are not detailed in this option
- Cost estimate provided by Fuscoe Engineers

Option 2:

- The historic streetscape between the Grocery Store (former Maintenance Building) and Community Center (former Chapel) is slightly modified, but generally retained.
- The historic open space north of the Church (former Gymnasium) is retained as an open parking lot
- Historic landscape at the former Superintendent's Residence and Administration building is retained
- Historic landscape at the former Assistant Superintendent's Residence is retained
- Historic open space between the Community Center (former Chapel) and Office (Former Infirmary) is retained
- Retail space is provided in the northeast corner of the site at the intersection of Whittier Boulevard and Sorensen Avenue
- Retail space is provided near the property entrance on Sorensen Avenue
- Mixed density residential provided throughout the site
- New roadway and parking areas provided for development
- No cost estimate provided

CIVIL (FUSCOE)

Site Overview

Per topographic information provided by the client and on-site assessment, the site has an average slope form the northeast to the southwest of approximately 2 to 3 percent with drainage away from Whittier Boulevard to the southwest. Entry to the site is via a single entrance at Wittier Boulevard adjacent to the northeast property line. Trees and shrubs are sparsely planted throughout the site, consistent with the former use as a correctional facility. Forty-six existing buildings are distributed throughout the site, eight of which are planned for restoration and re-use.

Demolition

Thirty-eight of the existing buildings will be demolished. Existing sewer, water and dry utility facilities formerly serving the demolished buildings will need to be capped and abandoned in place or removed. The former buildings sites will need to be graded for proper drainage and planted to prevent erosion. Grading should conform and blend to the local topography as much as practical.

Sitework

Throughout the site there are facilities and remnants of the former correctional facility. Facilities and appurtenances not to be used with the eight remaining buildings will need to be cleared, the adjacent ground grubbed, planted and returned to a state consistent with the proposed re-use of the facility.

Roadways

Most of the roadways on site have had the surface penetrated for utility repair and capped or have other surface irregularities. Superficial observation indicates that the existing roadways are serviceable and slurry coating and restriping will be sufficient to make the road fully serviceable. Broken and or severely cracked curb and gutter should be replaced/reconstructed where needed. It should be anticipated that the heavy construction equipment, used for demolition, debris removal and grading, may damage the existing road surface to the point of requiring replacement. Consultation with a qualified geotechnical engineer, should be sought before demolition and site remediation takes place.

Sanitary Sewer

It is anticipated that the exiting sewer facilities can continue to be used for the proposed re-use. Sewer system capacity should not be an issue for this use since there is a sharp reduction in the demand on the system from the removal of the majority of buildings from the site. The balance of the sewers that served the buildings being demolished should be properly abandoned in place or removed. The remaining sewers serving the eight re-use buildings should be videoed (CCTV) and any deficiencies noted. Depending on the deficiencies found, various repair and/or rehabilitation methods can be used. These may include replacement for severely damaged portions or trenchless/semi-trenchless rehabilitation using slip-lining, pipe bursting, cured-in-place or internal point repair methods. Sewer integrity should be checked to the connection point in Townley Drive, located on the western edge of the site.

Water

Water is supplied from the 14-inch city main in Whittier Boulevard. Currently the entire water system has been shut down due to numerous leaks and failures. Due to the poor state of the current water facilities, the water system should be replaced with a new system to serve the remaining eight buildings. A looped system through the site with a connection at the current location in Whittier Boulevard and a new connection at the city 12-inch line located in the Presbyterian Hospital parking lot, located on the southeast edge of the project would provide a robust and adequate water supply for the project.. Unless high fire demands are anticipated, an 8-inch pipe size should be adequate for the entire project. Detector checks will be needed for fire services 2-inches and larger. The existing system may be properly abandoned in place or removed.

The site has a water well on site-that should be properly abandoned. Unless the property has existing water rights to underground aquifers it is not proper to use the on-site well.

Storm Drain & Stormwater Quality
The site is currently served by existing 18-inch through 36-inch storm drain pipes. Discharge from the site is to a city 36" RCP pipe crossing Lot 1 or Tract 31110, approximately 500-feet north of the sites southerly property corner. It is unknown at this time if the existing storm drain system is deficient per current design standards. A formal hydrology study is required to determine if the storm drain system meets the current County of Los Angeles and/or City standards. However, no evidence was found during site inspection or interviews to indicate that the exiting main storm drain system is inadequate. Installation of area drains should be anticipated around the remaining eight buildings as part of the precise grading operation. These will need to be tied to the nearest main line of the existing storm drain system.

The project will not generate or cause a hydrologic condition of concern since the project would be increasing the pervious area of the site, decreasing the potential runoff. A water quality natural treatment system or an acceptable alternative, meeting the requirements of the current clean water act permit, is required. This facility could be constructed on the west edge of the site.

Dry Utilities
The site is currently serviced by overhead utilities (electrical and telecommunications), hung from utility poles throughout the site. Ground observations and field discussions with the site superintendent "Walt" indicate that electrical service is currently originated through a Southern California Edison (SCE) service panel at the northwest edge of the site adjoining the church parking lot. SCE supplies four (4), 4160 volt service lines to transformers on the site which step the voltage down to 208/110 service voltage. An emergency generator is located on site. The dispensation of this generator is not known at this time. It is anticipated that new services, including telephone/cable will be bought to the remaining building via underground conduits, eliminating the need for the poles on site. Additional small conduits will be required to service site lighting. Alternative sources for power include an existing overhead 12-kilovolt circuit on the west side of Sorenson Avenue.

Natural gas is currently provided to the site via service originating in Whittier Boulevard. It appears that many of the services are 2-inch in size. Gas service pipe not used should be properly severed from the main network and abandoned in place or removed.

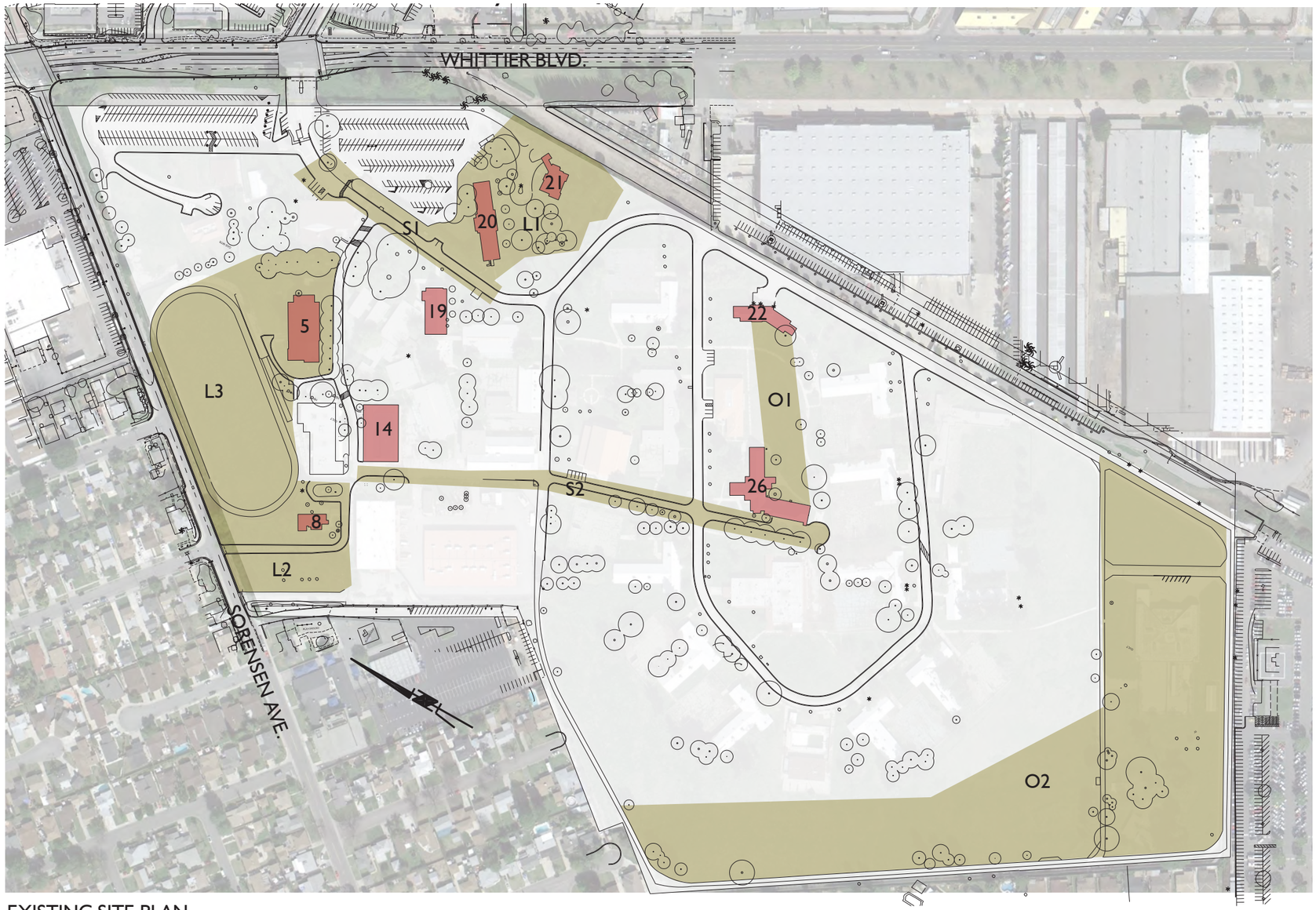
Due to the age of the site, it is unlikely that the existing telephone/communication system is high-speed broadband capable. Evaluation of the requirements of the remaining buildings should be performed by a qualified telecommunications professional.

Conceptual Site Drawings

- Option 1: Proposed Site Plan
- Option 2: Proposed Site Plan

Conceptual Utility Drawings (Fuscoe)

- Option 1: Sewer and Water Facilities to Serve Remaining Buildings
- Option 1: Sewer and Water Facilities to be Abandoned or Removed
- Option 1: Existing Storm Drain Facilities
- Option 1: Existing and Proposed Dry Utilities
- Option 1: Vehicular Circulation



EXISTING SITE PLAN
Scale: NTS

PROJECT NORTH

PROPOSED INTERMEDIATE SITE PLAN

NOTES

- Demolition of non-significant buildings
- Retention of existing road system

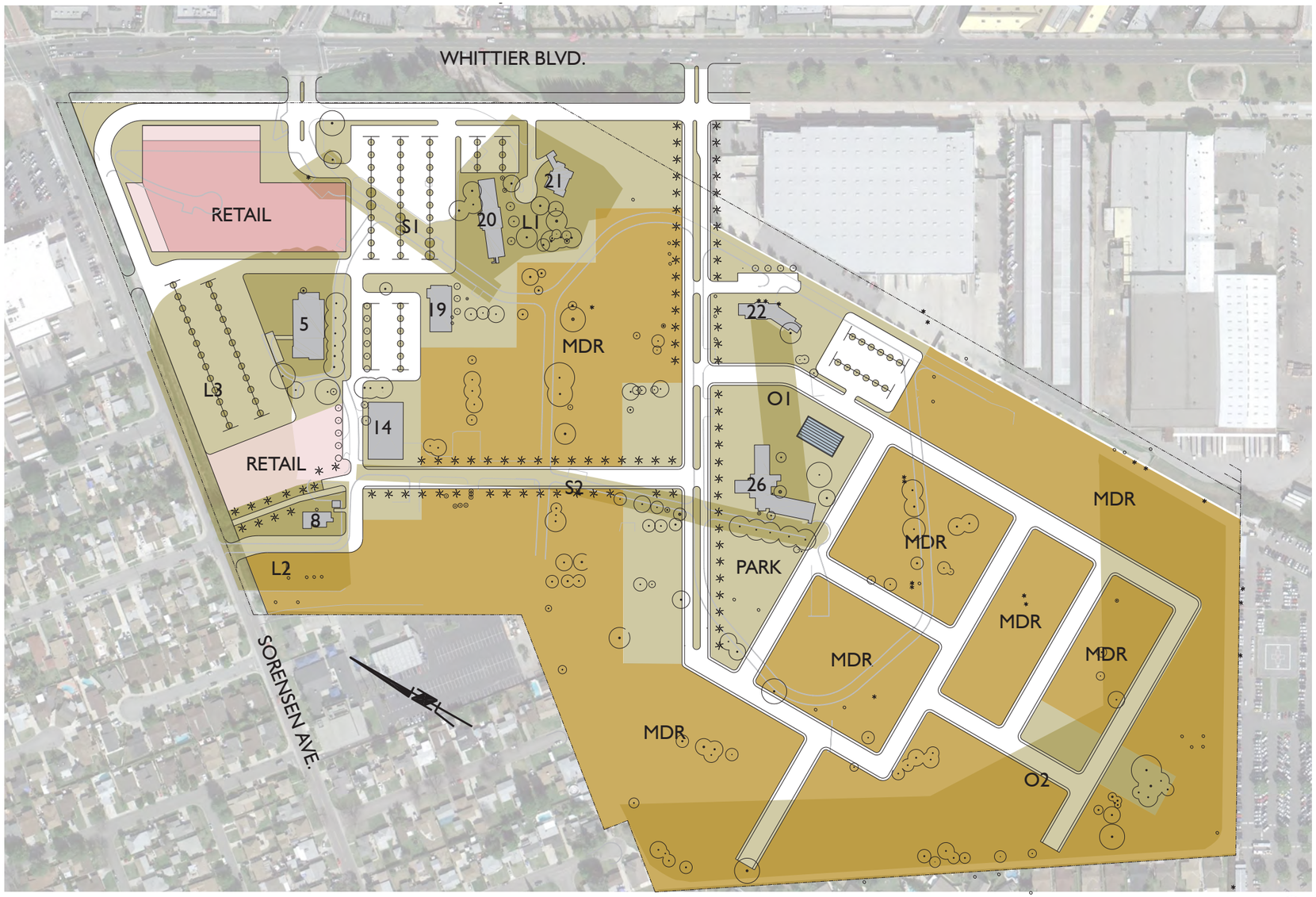
LEGEND

5- GYMNASIUM
8 - ASSIST. SUPPER. RESIDENCE
14 - MAINTENANCE GARAGE
19 - AUDITORIUM
20 - ADMINISTRATION BUILDING
21 - SUPERINTENDENT'S RESIDENCE
22 - INFIRMARY
26 - CHAPEL (FORMER DINING HALL)
**Building numbers used here are the same numbers used in previous historic studies*

L1 - Landscaping surrounding Superintendent's Residence & Administration Building
L2 - Landscapeing around Assistant Superintendent's Residence
L3 - Landscaping around Gymnasium including Athletic Field
S1 - Streetscape 1
S2 - Streetscape 2
O1 - Openspace between Chapel & Infirmary
O2 - Openspace at southern & western boundaries

SIGNIFICANT
NOT SIGNIFICANT
CONTRIBUTING LANDSCAPE

Existing Site



PROPOSED REUSE SITE PLAN
Scale: NTS

PROJECT NORTH

PROPOSED SITE PLAN

NOTES

- Plan based on client provided documents (see Brookfield Homes conceptual land use plan)
- Historic structures indicated and recommendations for site plan adjustments noted
- Existing landscape elements shown

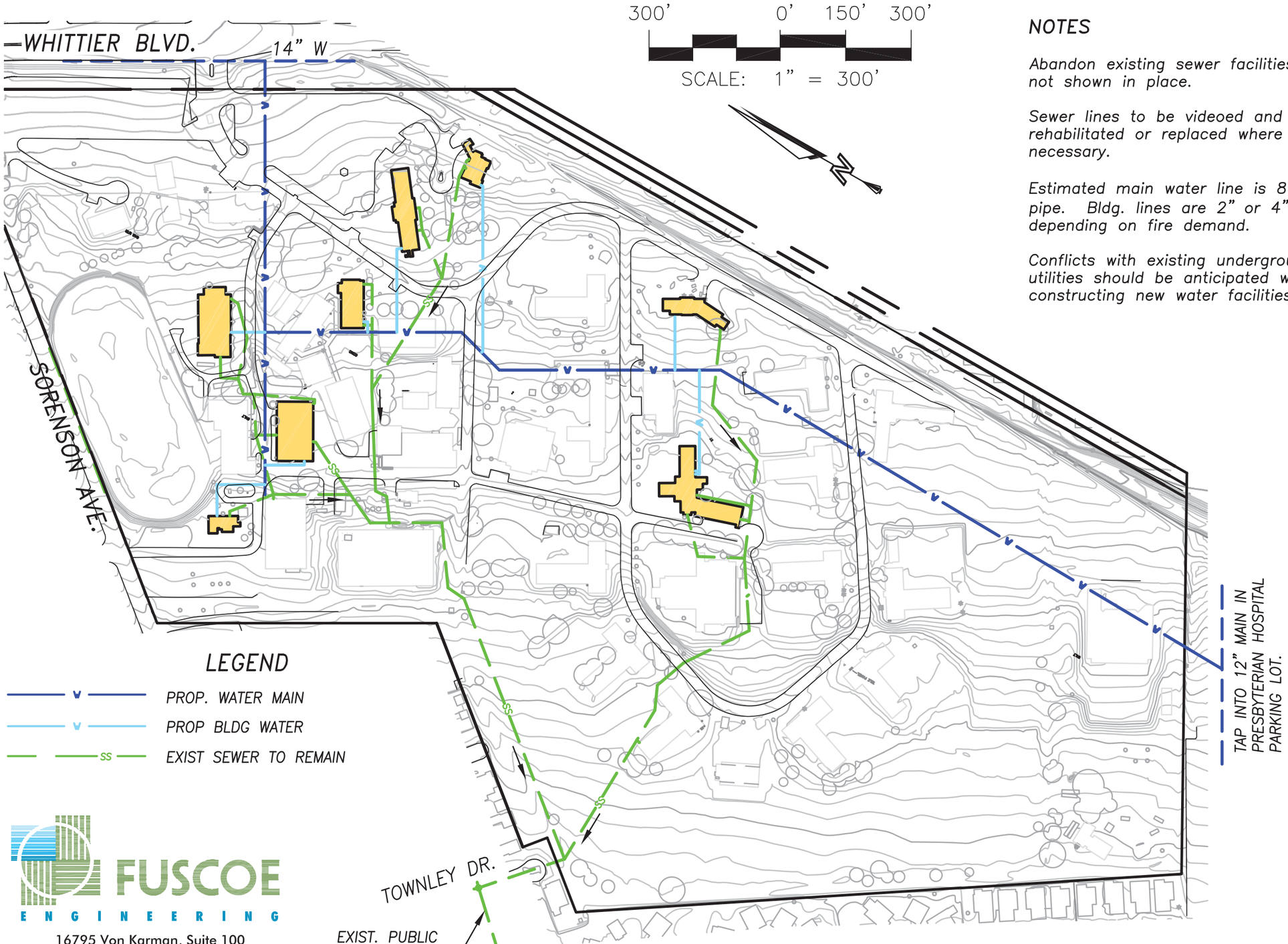
LEGEND

5- CHURCH (FORMER GYMNASIUM)
8 - RESIDENCE (FORMER ASSIST. SUP. RESIDENCE)
14 - GROCERY STORE (FORMER MAINTENANCE GARAGE)
19 - COMMUNITY THEATER (FORMER AUDITORIUM)
20 - OFFICE (FORMER ADMINISTRATION BUILDING)
21 - RESIDENCE (FORMER SUPERINTENDENT'S RESIDENCE)
22 - OFFICE (FORMER INFIRMARY)
26 - COMMUNITY CENTER (FORMER CHAPEL)
**Building numbers used here are the same numbers that are used in previous historic studies*

L1 - Landscaping surrounding Superintendent's Residence & Administration Building
L2 - Landscapeing around Assistant Superintendent's Residence
L3 - Landscaping around Gymnasium including Athletic Field
S1 - Streetscape 1
S2 - Streetscape 2
O1 - Openspace between Chapel & Infirmary
O2 - Openspace at southern & western boundaries

BIG BOX RETAIL
STORE FRONT RETAIL
PARK / PUBLIC OPEN SPACE
POOL
MIXED DENSITY RESIDENTIAL

PROPOSED
Site Plan



NOTES

Abandon existing sewer facilities not shown in place.

Sewer lines to be videoed and rehabilitated or replaced where necessary.

Estimated main water line is 8" pipe. Bldg. lines are 2" or 4" depending on fire demand.

Conflicts with existing underground utilities should be anticipated when constructing new water facilities.

FUSCOE ENGINEERING
16795 Von Karman, Suite 100
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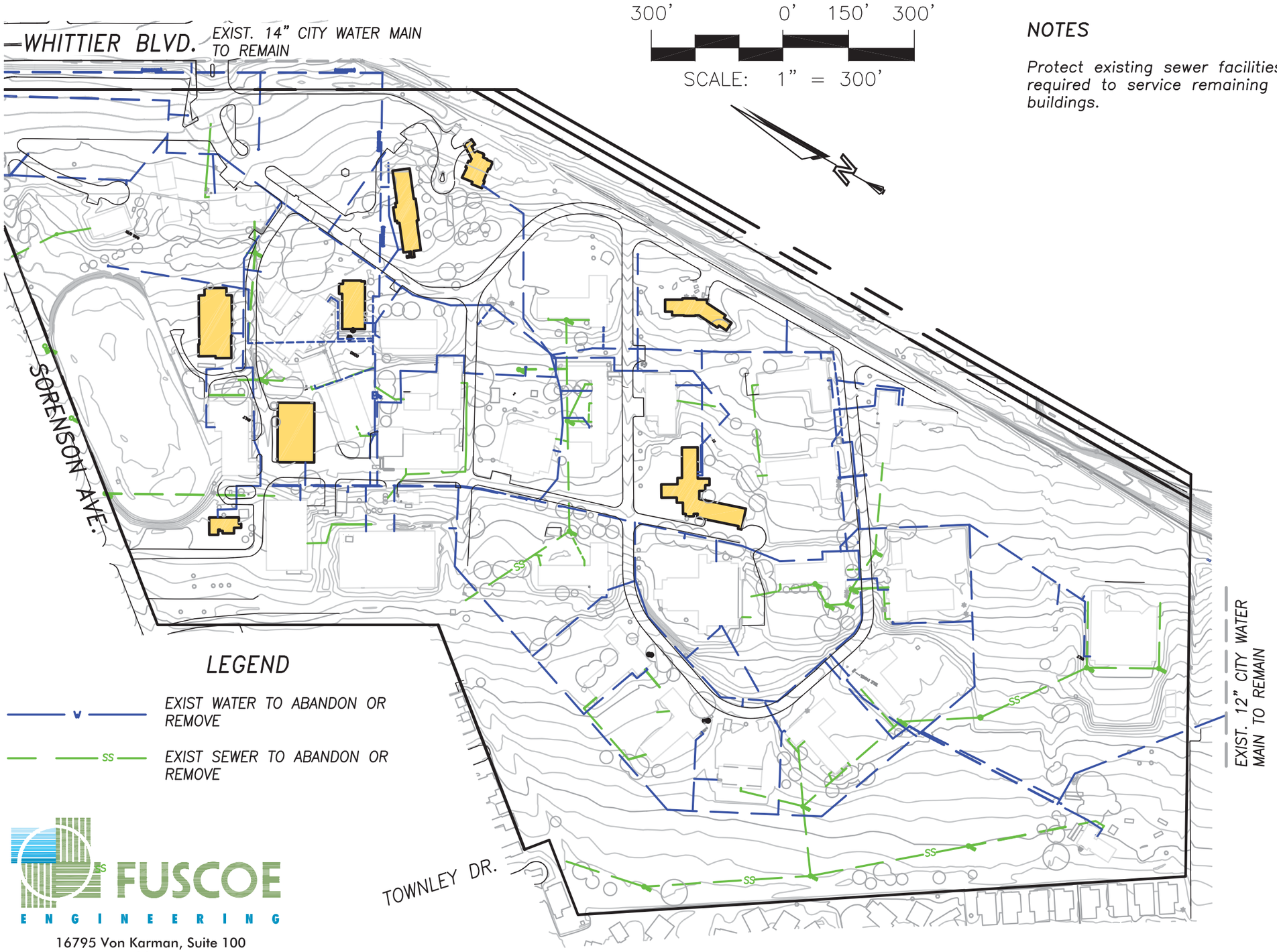
SEWER AND WATER FACILITIES TO SERVE REMAINING BUILDINGS

Plotted by: :\PROGRAM FILES (X86)\AUTOCAD CIVIL 3D LAND DESKTOP COMPANION 2009\AUTOSAVE\ACPUBLISH_3508\30706-1175-01-XH-X-UTIL.DWG (09-22-11



NOTES

Protect existing sewer facilities required to service remaining buildings.

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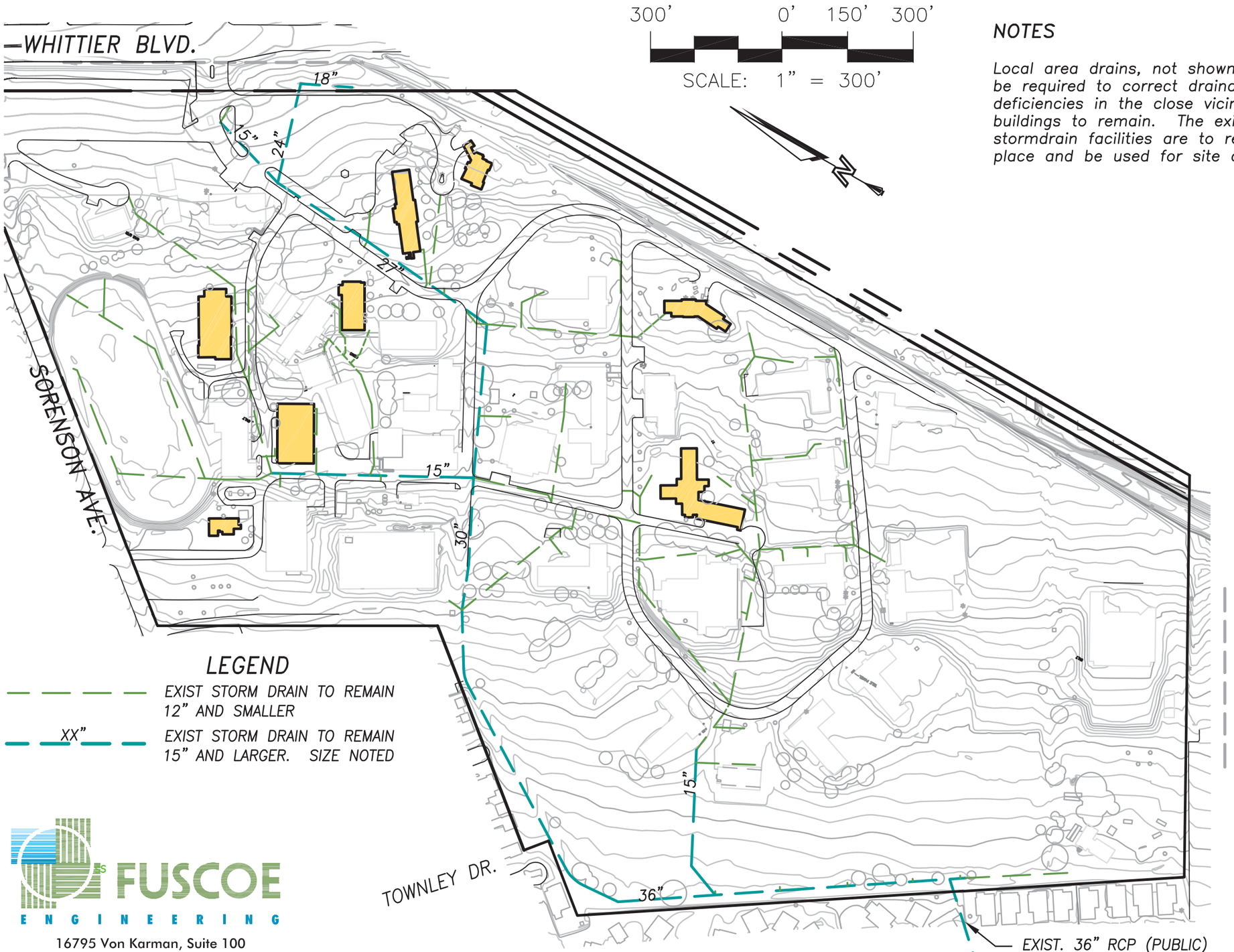
SEWER AND WATER FACILITIES TO BE ABANDONED OR REMOVED

Plotted by: :\PROGRAM FILES (X86)\AUTOCAD CIVIL 3D LAND DESKTOP COMPANION 2009\AUTOSAVE\ACPUBLISH_3508\30706-1175-01-XH-X-UTIL.DWG (09-22-11



NOTES

Local area drains, not shown hereon will be required to correct drainage deficiencies in the close vicinity of the buildings to remain. The existing site stormdrain facilities are to remain in place and be used for site drainage.

LEGEND

- EXIST STORM DRAIN TO REMAIN 12" AND SMALLER
- XX" EXIST STORM DRAIN TO REMAIN 15" AND LARGER. SIZE NOTED

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EXISTING STORM DRAIN FACILITIES

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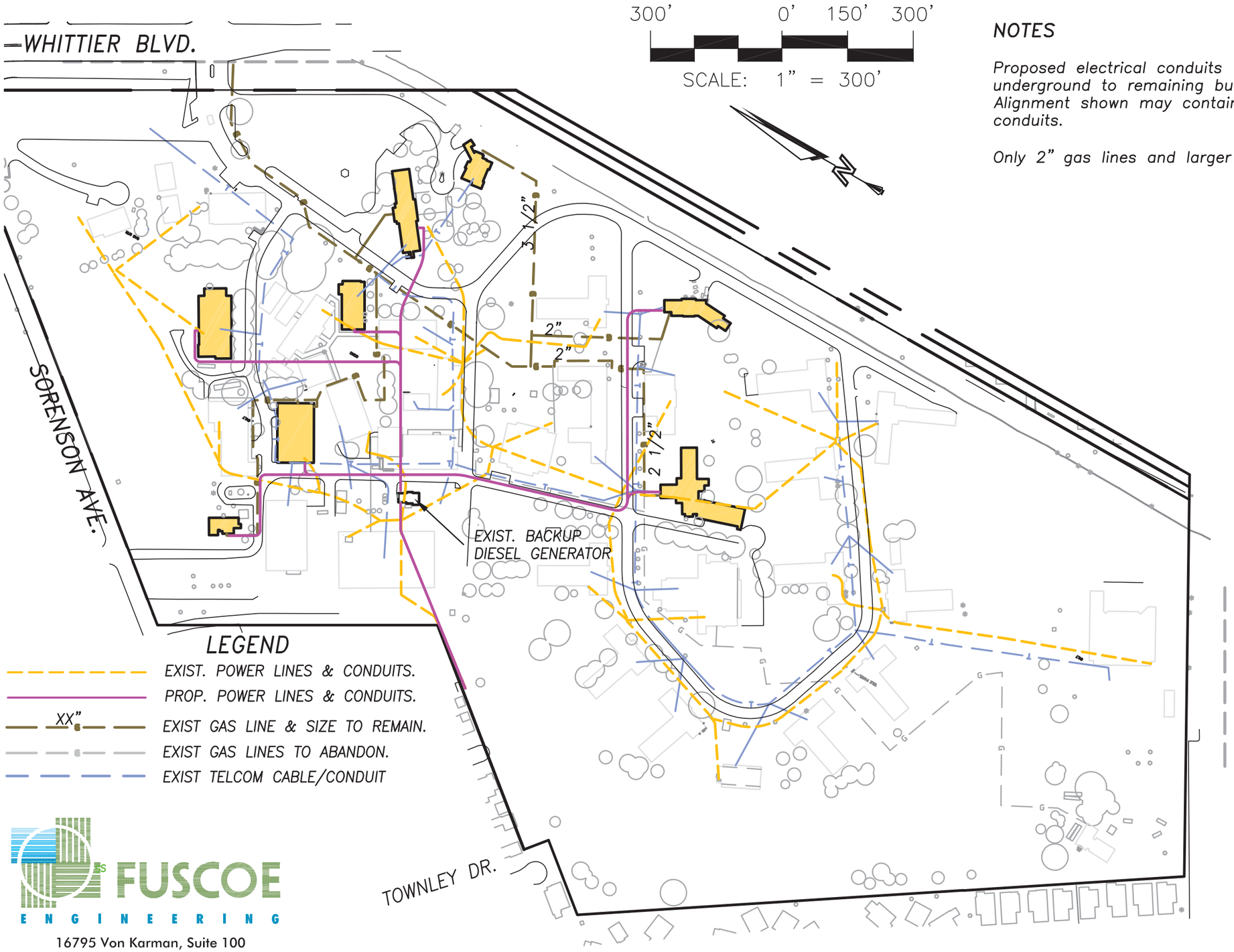

NOTES

Proposed electrical conduits will be underground to remaining buildings. Alignment shown may contain multiple conduits.

Only 2" gas lines and larger are labeled.

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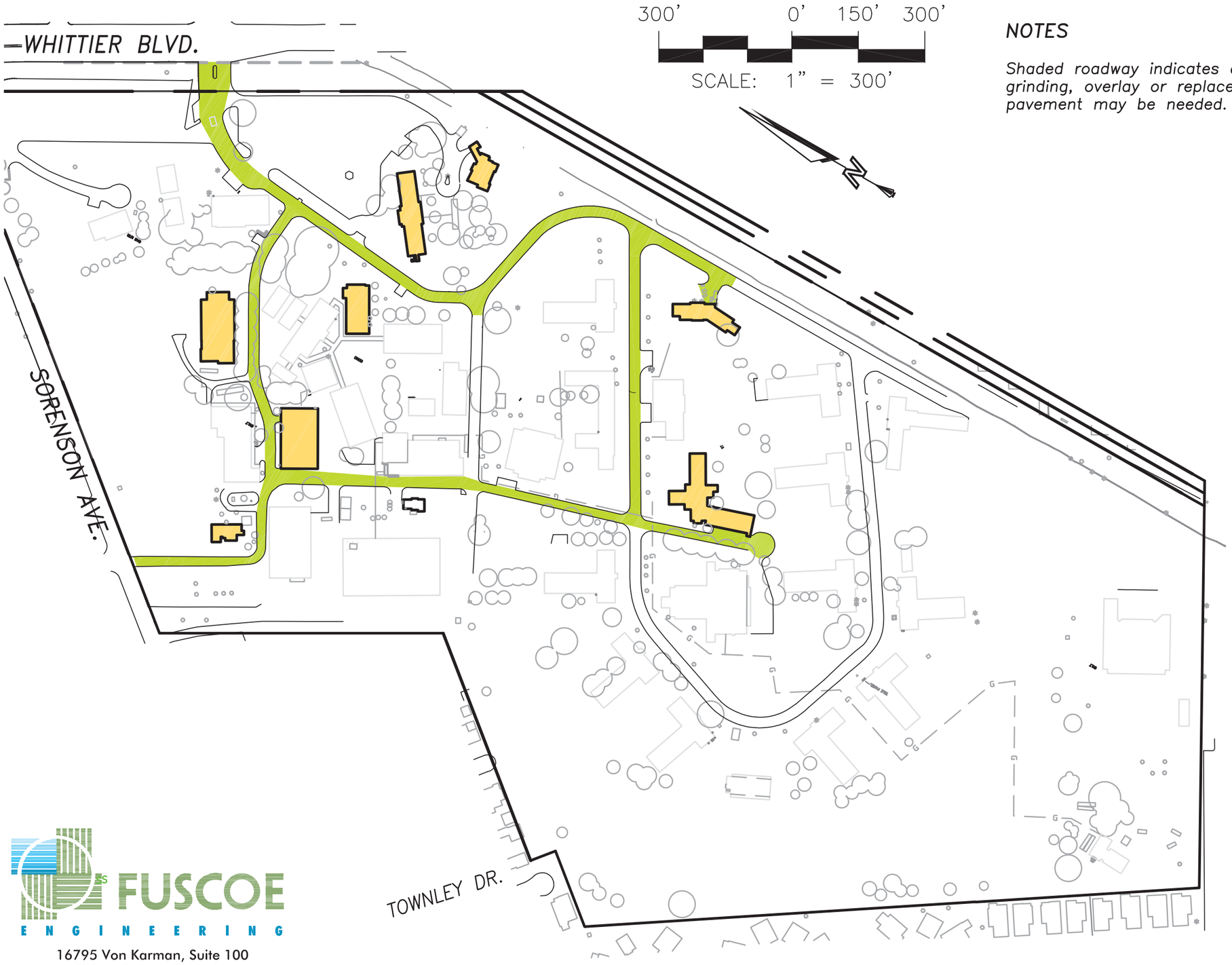
EXISTING AND PROPOSED DRY UTILITIES

Plotted by: :\PROGRAM FILES (X86)\AUTOCAD CIVIL 3D LAND DESKTOP COMPANION 2009\AUTOSAVE\ACPUBLISH_3508\30706-1175-01-XH-X-UTIL.DWG (09-22-11



NOTES

Shaded roadway indicates areas where grinding, overlay or replacement of pavement may be needed.

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VEHICULAR CIRCULATION

Plotted by: C:\PROGRAM FILES (X86)\AUTOCAD CIVIL 3D LAND DESKTOP COMPANION 2009\AUTOSAVE\ACPUBLISH_3508\30706-1175-01-XH-X-UTIL.DWG (09-22-11

Conceptual Level Site Infrastructure Cost Estimate (Fuscoe)

FUSCOE ENGINEERING, INC.

PROJECT: NELLES CORRECTIONAL FACILITY
LOCATION: WHITTIER, CA
CLIENT: PAGE & TURNBULL
DESCRIPTION: SITEWORK FOR 8 BUILDNIGS TO REMAIN

JOB NO. 1175.01.01
PREPARED BY: TSD/MN/KR
DATE: 9/22/2011

CONCEPTUAL LEVEL ESTIMATE

ITEM #	DESCRIPTION	QUANTITY	UNIT	COST	TOTAL
1.1	**DEMOLITION**				
	BUILDINGS				
	DEMO 38 BUILDINGS OF VARIOUS SIZES	330,000	SF	$4.00	$1,320,000
	SUBTOTAL 1.1				**$1,320,000**
1.2	**SITEWORK**				
	SERVICE SITE				
	CLEARING & GRUBBING (25% OF SITE)	18.5	AC	$2,500.00	$46,250
	GENERAL SITE				
	SLURRY COAT EXISTING DRIVE ISLES	122,300	SF	$0.40	$48,920
	MISC RECONSTRUCTION OF CURBS, GUTTERS	2,000	LF	$25.00	$50,000
	RE STRIP ROADS, ALLOWANCE	1	LS	$7,500.00	$7,500
	MISC WAYFINDING SIGNAGE	1	LS	$5,000.00	$5,000
	SITE UTILITIES				
	SEWER				
	VIDEO EXISTING SEWER LINES & ANALYZE	1	LS	$20,000.00	$20,000
	REHABILITATE EXISTING SEWER LINES	3,000	LF	$25.00	$75,000
	ABANDON/REMOVE SEWER LINE AS NECESSARY	8,500	LF	$5.00	$42,500
	GRADING AND DRAINAGE				
	RE-HABILITATE GRADING & DRAINAGE FOR EACH BUILDING SITE	8	EA	$9,500.00	$76,000
	WATER QUALITY NATURAL TREATMENT SYSTEM BASIN	1	LS	$250,000.00	$250,000

9/22/2011 1 of 3

FUSCOE ENGINEERING, INC.

PROJECT: NELLES CORRECTIONAL FACILITY
LOCATION: WHITTIER, CA
CLIENT: PAGE & TURNBULL
DESCRIPTION: SITEWORK FOR 8 BUILDNIGS TO REMAIN

JOB NO. 1175.01.01
PREPARED BY: TSD/MN/KR
DATE: 9/22/2011

CONCEPTUAL LEVEL ESTIMATE

ITEM #	DESCRIPTION	QUANTITY	UNIT	COST	TOTAL
	GRADE 38 FORMER BUILDING SITES TO CONFORM TO TERRAIN	38	EA	$3,000.00	$114,000
	WATER				
	CONNECT TO (E)	2	EA	$25,000.00	$50,000
	METER SERVICE	8	EA	$7,000.00	$56,000
	8" MAIN	3,500	LS	$75.00	$262,500
	ABANDON/REMOVE WATER LINE	23,800	LF	$5.00	$119,000
	ACCESS ENCROACHMENT AT HOSPITAL	1	EA	$15,000.00	$15,000
	ABANDON EXISTING WELL	1	EA	$20,000.00	$20,000
	FIRE WATER				
	DETECTOR CHECKS	3	EA	$8,000.00	$24,000
	HYDRANTS	10	EA	$2,750.00	$27,500
	DRY UTILITIES				
	CONNECT TO (E)	8	EA	$10,000.00	$80,000
	UNDERGROUND EXTENSIONS	1	EA	$167,393.00	$167,393
	ELECTRICAL				
	SITE LIGHTING	1	LS	$50,000.00	$50,000
	METERS	8	EA	$5,000.00	$40,000
	MISCELLANEOUS SITE IMPROVEMENTS				
	LANDSCAPE & IRRIGATION				
	UPGRADE (E) DETERIORATED GRASS AND PLANTING NEAR BUILDINGS	8	EA	$20,000.00	$160,000
	ENTRY LANDSCAPE REHABILITATION	1	LS	$15,000.00	$15,000
	IRRIGATION				
	IRRIGATION SYSTEM @ EACH BLDG TO REMAIN	8	EA	$5,000.00	$40,000
	IRRIGATION SYSTEM @ ENTRY	1	LS	$5,000.00	$5,000

9/22/2011 2 of 3

FUSCOE ENGINEERING, INC.

PROJECT: NELLES CORRECTIONAL FACILITY — JOB NO. 1175.01.01
LOCATION: WHITTIER, CA — PREPARED BY: TSD/MN/KR
CLIENT: PAGE & TURNBULL — DATE: 9/22/2011
DESCRIPTION: SITEWORK FOR 8 BUILDNIGS TO REMAIN

CONCEPTUAL LEVEL ESTIMATE

ITEM #	DESCRIPTION	QUANTITY	UNIT	COST	TOTAL
	FENCING				
	PERIMETER FENCING	1	LS	$100,000.00	$100,000
	BUILDING FENCING	8	EA	$8,500.00	$68,000
	HARDSCAPE				
	MISC FLATWORK FOR ADA COMPLIANCE PER BLDG	8	EA	$10,000.00	$80,000
	ENTRY RE-WORK	1	EA	$20,000.00	$20,000
	EXTERIOR FURNISHINGS				
	ALLOWANCE PER BUILDING	8	EA	$5,000.00	$40,000
	ALLOWANCE @ ENTRY	1	LS	$10,000.00	$10,000
	SUBTOTAL 1.2				**$2,184,563**
	SUBTOTAL NET COST				**$3,504,563**
	PRORATES				
	GENERAL CONDITIONS	10.00%			$350,456
	DESIGN CONTINGENCY	10.00%			$350,456
	ESCALATION	5.00%			$175,228
	PHASING ALLOWANCE	10.00%			$350,456
	SUBTOTAL				**$1,226,597**
	BONDS AND INSURANCE	5.00%			$175,228
	OVERHEAD AND PROFIT	5.00%			$175,228
	TOTAL SITEWORK COST FOR 8 BLDGS TO REMAIN				**$5,081,616**

9/22/2011 — 3 of 3

VI.1 BUIDING 21 – RESIDENCE (FORMER SUPERINTENDENT'S RESIDENCE)

Reuse Description

The Superintendent's Residence will remain a single family home. The proposed work at this time consists of remodeling of the existing kitchen and pantry area, laundry room, and upstairs and downstairs bathrooms. Also, the rest of the homes interiors and exteriors will be generally refinished/refurbished. It is assumed that this work will have no structural implications.

STRUCTURAL RECOMMENDATIONS (STRUCTURAL FOCUS)

Based on the building evaluation, there are several potential and actual deficiencies in the building that require further investigation and/or mitigation. The recommended mitigation measures for the building deficiencies are described below:

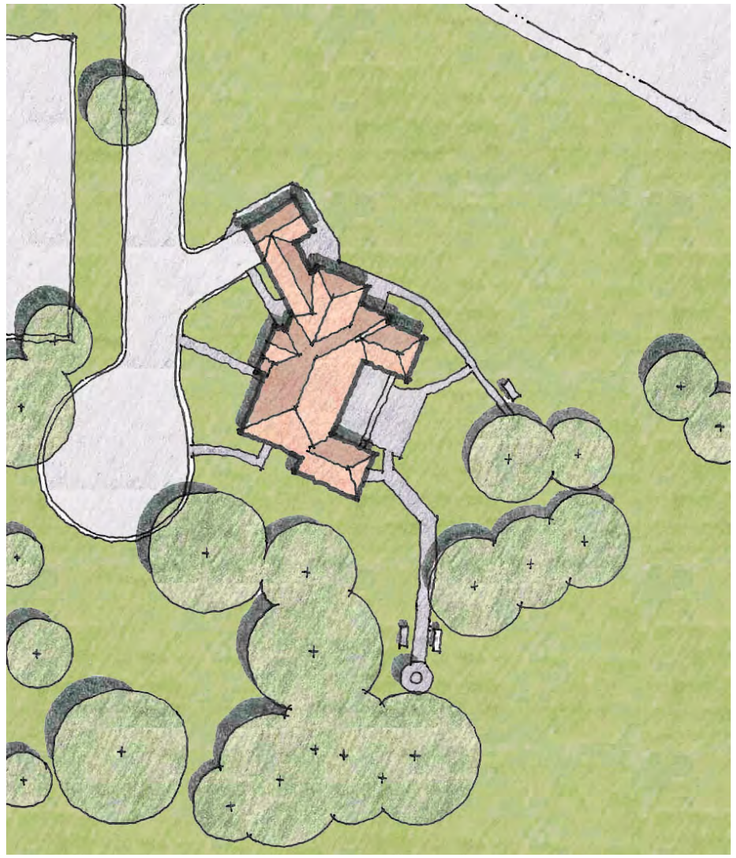
1. Provide shear transfer between the roof and existing walls by adding new wood ledgers and blocking members to connect the existing roof diaphragm to the existing shear walls.
2. Strengthen existing diaphragms with new plywood sheathing added above existing 1x sheathing or attached to the underside of the existing roof framing. Provide additional framing clips/straps for collector elements and at diaphragm openings as necessary.
3. Strengthen the existing brick URM walls with new shotcrete or composite fiber-reinforcing (FRP) or provide new lateral load resisting elements in the building interior. New lateral elements will require connection to the existing diaphragm and likely new foundations.
4. Provide new out-of-plane anchors/hold-downs along the building perimeter for anchorage of the existing walls to the roof diaphragm. Additional wood blocking, straps and framing clips would also be required.
5. Strengthen the existing chimneys. Some additional evaluation and possible exploratory demolition will likely be required to determine if there is any existing chimney anchorage and if that anchorage is adequate. Assuming the chimneys are not adequately attached and cannot resist the seismic demands, provide strengthening and/or bracing. Alternatively, deconstruct and rebuild the chimneys with adequate framing and reinforcing and to resist the seismic loads - reattach the original brick as a veneer to maintain the historical character of the chimneys.
6. Repair/replace damaged masonry units, and patch and fill existing cracks with epoxy injection.
7. Provide connection hardware and blocking at framing in basement.
8. Conduct an ASCE 31-03 Tier 2 investigation to confirm Tier 1 deficiencies where applicable.

STRUCTURAL CONCLUSION (STRUCTURAL FOCUS)

Based on available information gathered at the time of this report, a visual observation of the building and some rough calculations, the preliminary evaluation of the Superintendent's Residence, in accordance with the CHBC and a Tier 1 check per the ASCE standard 31-03, has identified potential structural deficiencies in the building. To meet the California Historic Building Code requirements, it is recommended that the identified structural deficiencies be addressed. This would include, but is not limited to, further field investigation, and a more detailed structural evaluation following the CHBC and ASCE 31-03, and potentially structural strengthening as described. Further investigation/evaluation may eliminate some of the listed potential deficiencies and required strengthening.

Conceptual Drawings & Program

- Proposed Site Plan
- Proposed Ground Floor Plan w/ Demo
- Proposed Upper Floor Plan w/ Demo
- Proposed Exterior Elevations



SITE PLAN
Scale: 1" = 50'-0"

PROPOSED USE: SINGLE FAMILY RESIDENCE

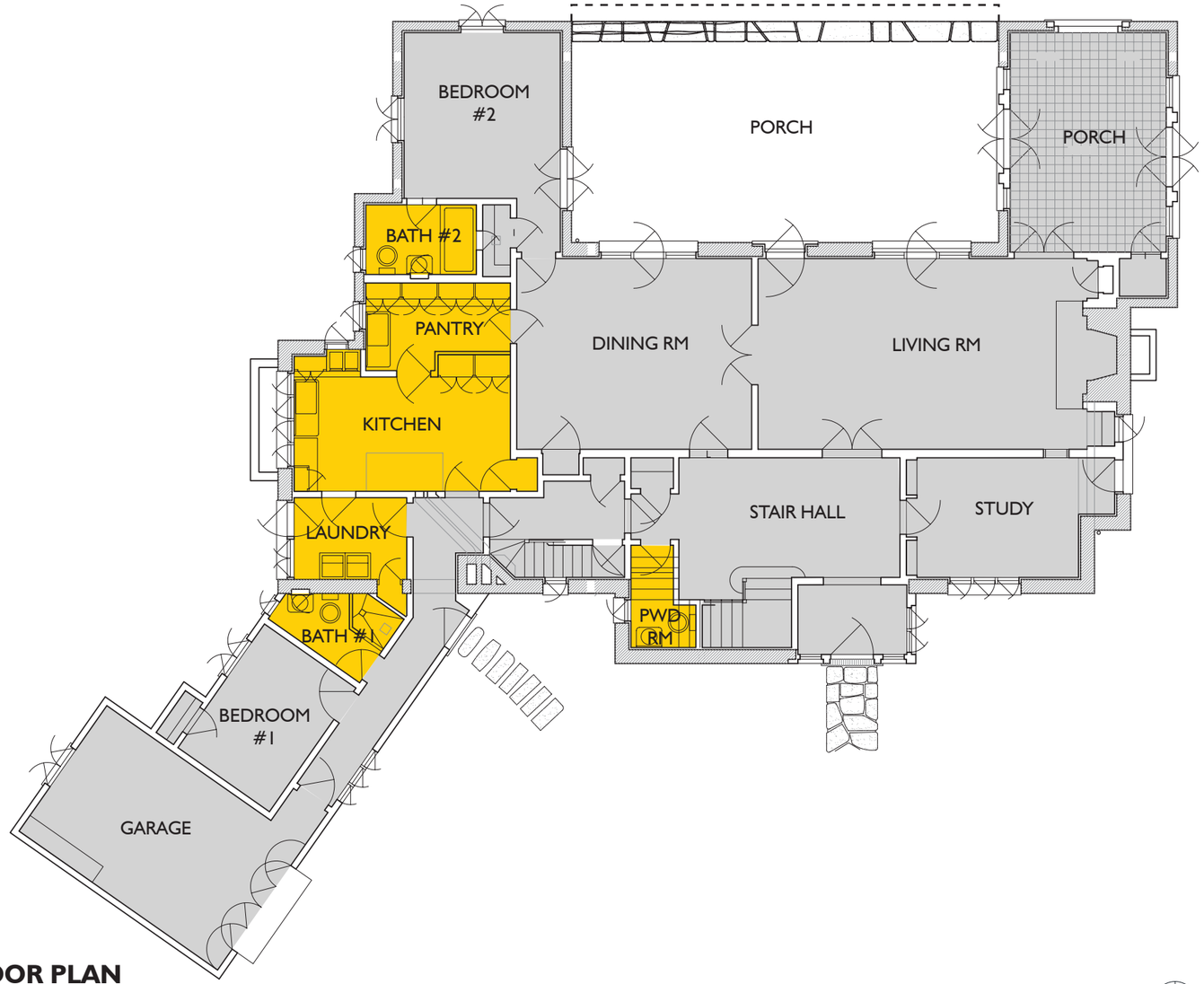
SITE SCOPE OF WORK

- Protect existing gardens and trees
- Demolish existing second garage
- Reconfigure driveway per plan
- Repair/restore water feature and other historic landscape elements
- Repair/restore landscaping

HISTORIC SITE ELEMENTS

- Entire site is part of historic landscape
- Water feature
- Sandstone benches
- Garden

Building 21
Superintendent's Residence



GROUND FLOOR PLAN
Scale: 3/32" = 1'-0"

PROPOSED USE: RESIDENCE

SCOPE OF WORK

- Full renovation of kitchen
- Full renovation of baths
- Refinish throughout
- Demo roof above porch
- Remove (e) carpet and refinish wood floors (assume wood floors exist throughout)

EXTERIOR FEATURES

- Rectilinear plan with attached garage
- One-and-one-half story massing
- Hipped roof with dormers
- Masonry construction with half-timbered wings
- Wood casement, multi-light windows
- Wood entry door

INTERIOR FEATURES

- Wood floors
- Wood trim, moldings, and doors
- Fireplaces

CODE REQUIRED SCOPE OF WORK

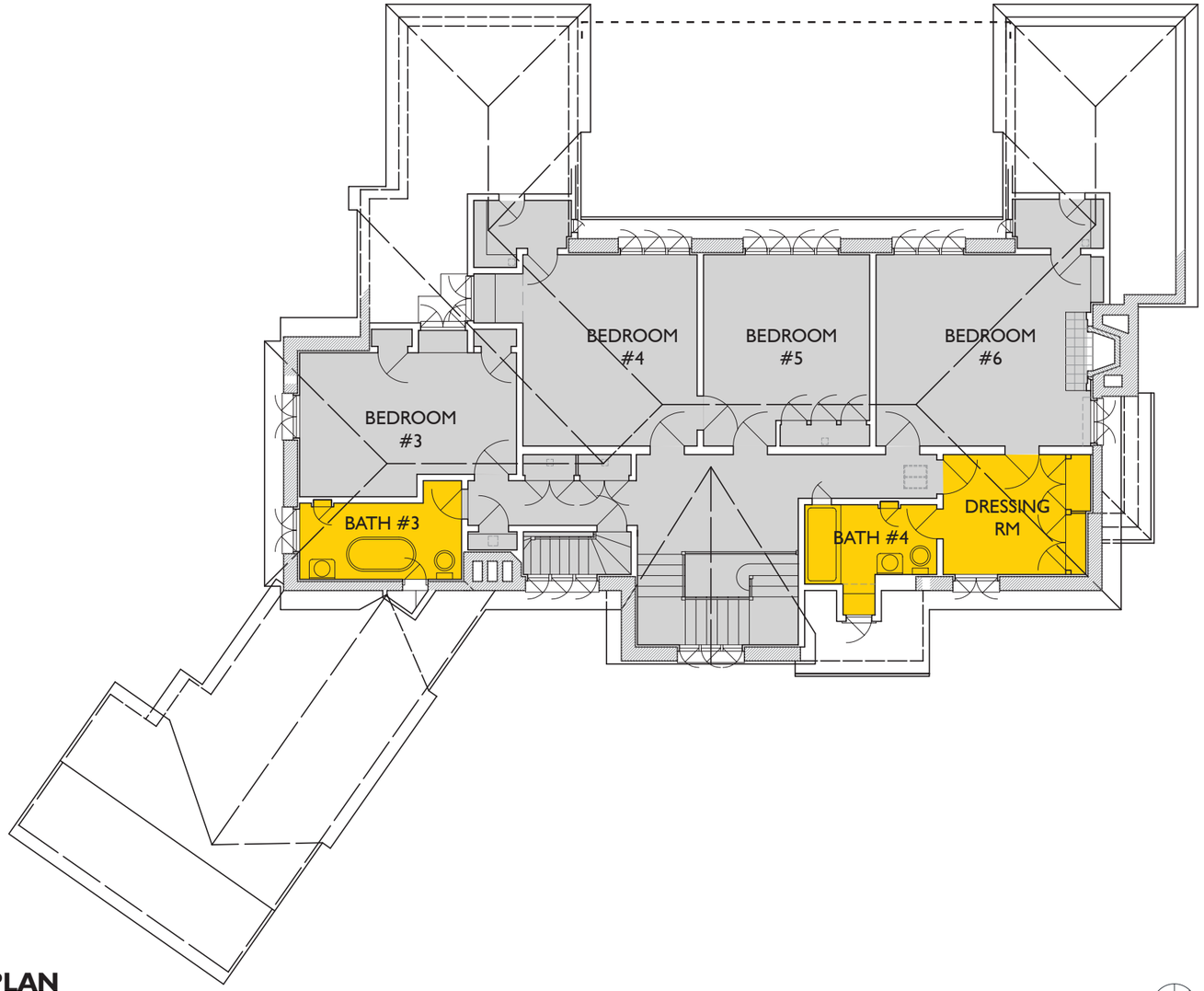
- None

BUILDING GROSS SF: 4,710 SF
GROUND FLOOR NET SF: 2,439 SF

LEGEND

FULL RENOVATION
REFINISH EXISTING

Building 21
Superintendent's Residence



UPPER FLOOR PLAN
Scale: 3/32" = 1'-0"

PROPOSED USE: SINGLE FAMILY RESIDENCE

SCOPE OF WORK

- Full renovation of kitchen
- Full renovation of baths
- Refinish throughout
- Demo roof above porch

INTERIOR FEATURES

- Wood floors
- Wood trim, moldings, and doors
- Fireplaces

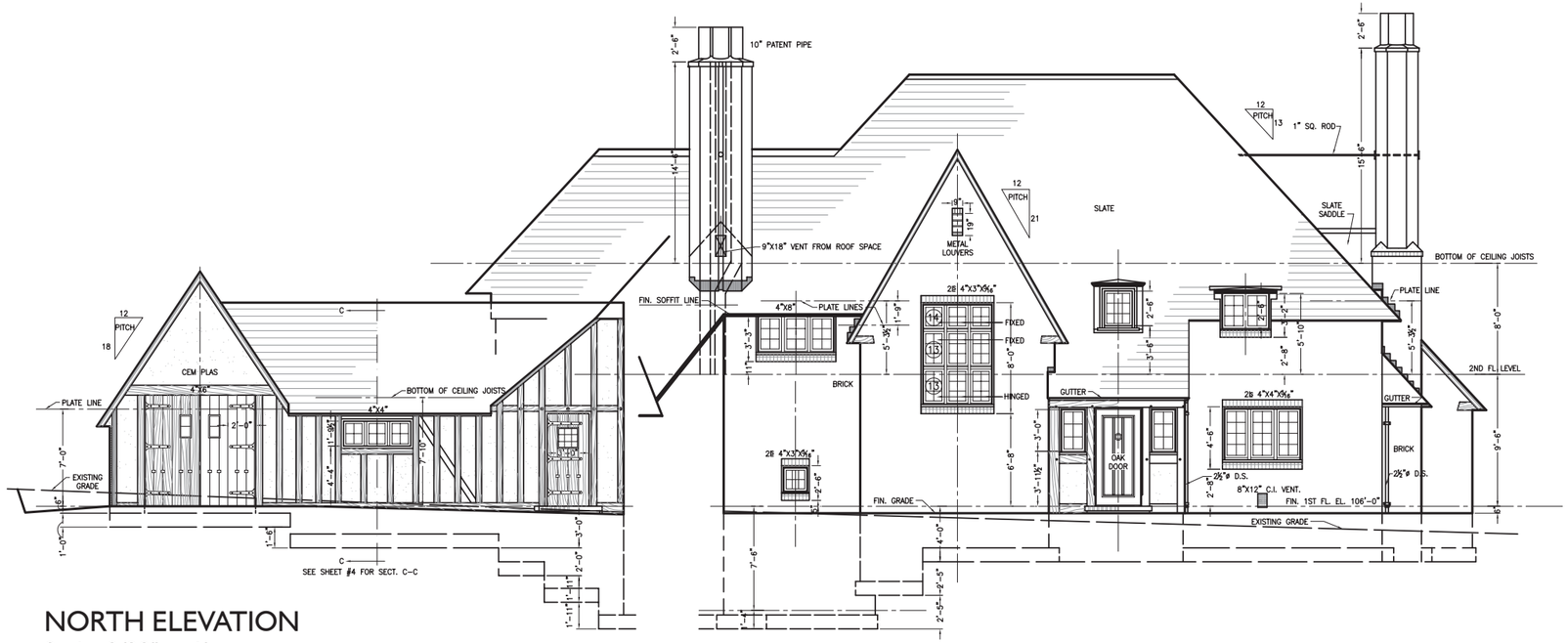
CODE REQUIRED SCOPE OF WORK

- None

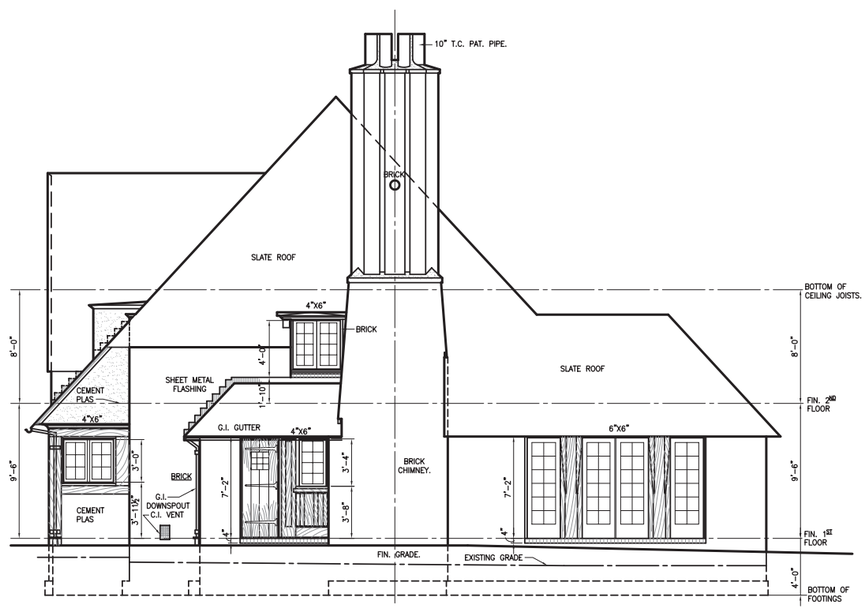
BUILDING GROSS SF: 4,540 SF
UPPER FLOOR NET SF: 1,501 SF

LEGEND
FULL RENOVATION
REFINISH EXISTING

Building 21
Superintendent's Residence



NORTH ELEVATION
Scale: 3/32" = 1'



WEST ELEVATION
Scale: 3/32" = 1'

Building 21
Superintendent's Residence

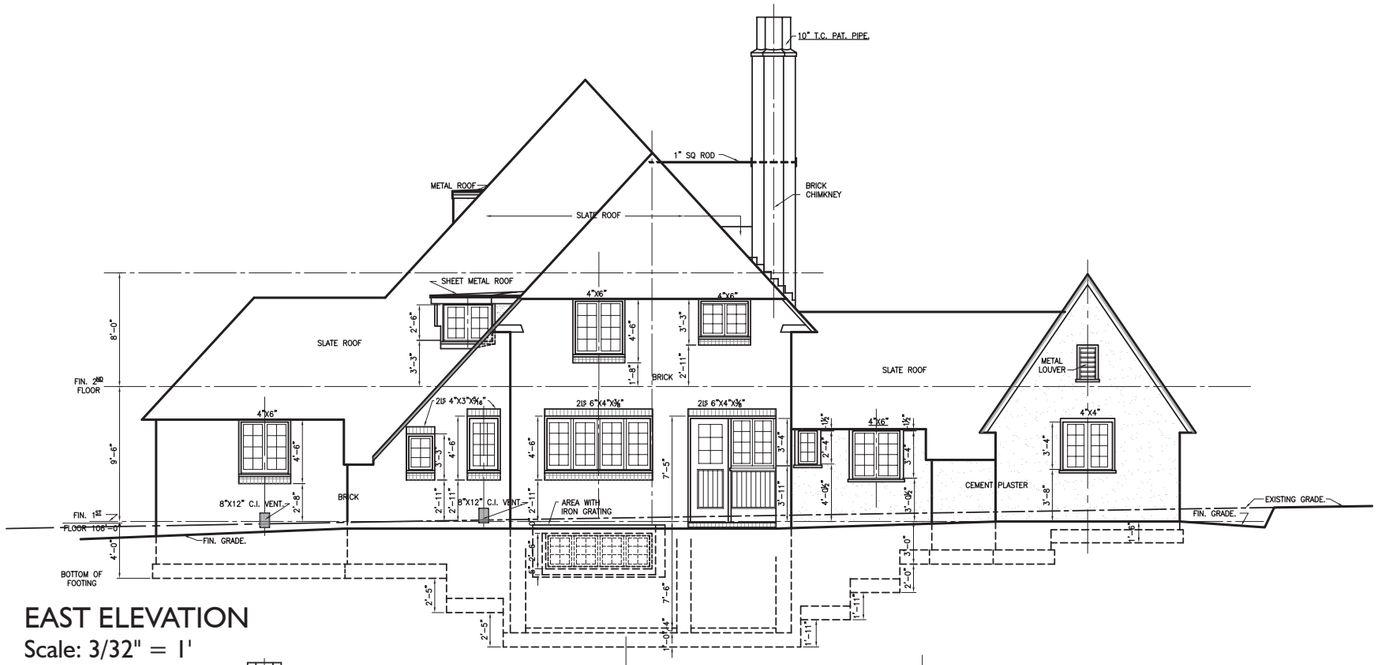
PROPOSED USE: SINGLE FAMILY RESIDENCE

EXTERIOR SCOPE OF WORK

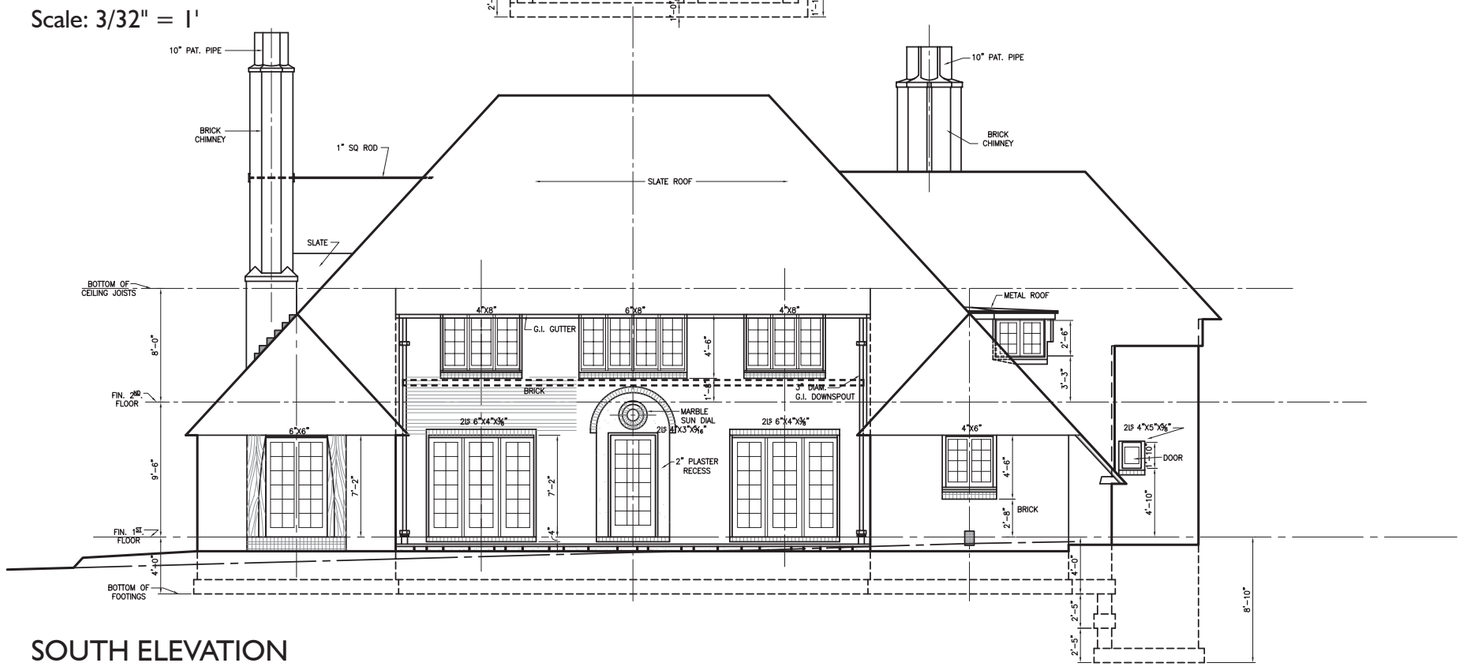
- Repaint wood trim where necessary
- Repair roof where necessary
- General repair of existing as necessary

EXTERIOR FEATURES

- Rectilinear plan with attached garage
- One-and-one-half story massing
- Hipped roof with dormers
- Masonry construction with half-timbered wings
- Wood casement, multi-light windows
- Wood entry door



EAST ELEVATION
Scale: 3/32" = 1'



SOUTH ELEVATION
Scale: 3/32" = 1'

PROPOSED USE: SINGLE FAMILY RESIDENCE

EXTERIOR SCOPE OF WORK

- Repaint wood trim where necessary
- Repair roof where necessary
- General repair of existing as necessary
- Demo existing roof over porch

EXTERIOR FEATURES

- Rectilinear plan with attached garage
- One-and-one-half story massing
- Hipped roof with dormers
- Masonry construction with half-timbered wings
- Wood casement, multi-light windows
- Wood entry door

Building 21
Superintendent's Residence

Zoning Summary

SECTION	ITEM	SUMMARY
	APN	8170-013-904
	Proposed Zoning	Workplace District
	Status	Historically Significant
	Proposed Use	Single-Family Residential
	Area	4,540 s.f. (plus 228 garage)
	Date of Construction	1919-20
	Type of Construction	Brick masonry with wood roof

Required Parking: Four parking spaces for each unit. Off-street parking facilities shall provide a minimum of two non-tandem parking spaces within an enclosed garage. Additional on-site parking spaces may be developed in tandem on the property.

RELEVANT SECTIONS FROM CITY OF WHITTIER – (WBSP)

SECTION	ITEM	SUMMARY
WBSP Sect. 4.2.1	Land Use	Residential developments within the Workplace District zone are limited to multi-family units, with a minimum density of sixteen (16) unites per acres and maximum density of thirty (30) units per acres. The development of single-family residences is not permitted in the Workplace District zone. The proposed use of the structure may be allowed under Section 1.10 (j) of the WBSP.
WBSP 1.10 (j.)	Historic Resources	Any building or structure within the Whittier Boulevard Specific Plan that has been deemed eligible for landmark designation, is listed as an historic landmark or is a contributing resource within a designated historic district on any Local, State or National Register of Historic Places may, for historic preservation and adaptive re-use purposes only, be permitted any land use to be contained within the historic building or structure, subject to the prior review and approval of a Conditional Use Permit.

Summary of Building Code Review

Proposed use: Single-family residence

Existing Areas
- First floor: 2,439 sq. ft.
- Second floor: 1,501 sq. ft.
- Garage (not included in total s.f.) 228 sq. ft.
- Total: 4,540 sq. ft.

Building height
- Height at front: 32'
- Height at back: 32'

Occupancy type: Residential, Group R-3
Construction type: Brick masonry with wood roof; Type IIB
Occupant load: 23 persons

See Appendix for full code analysis.

Height and Floor Area Limitations: The Nelles School Superintendent's Residence is two stories in height. The building is 32' high at the front, 32' high at the rear, and the average height is 32.0". The total square footage of the building (4,540 sq. ft.) is less than the "unlimited" allowable square feet for Type IIB.

Fire Sprinklers and Rating Requirements: In an exception to code requirements, fire-resistive rating is not required for corridors contained within a dwelling or sleeping unit in an occupancy in Group R. This applies to the Nelles School Superintendent's Residence.

Egress and Exit Requirements: All egress and exit requirements for the Nelles School Superintendant's Residence are met.

Stairs: The treads and risers of the existing exterior steps and the treads, risers, and handrails of the interior stairways and of the Nelles School Superintendent's Residence do not meet code requirements. However, no change in use is proposed and it is reasonable to assume the existing stairs would remain in use. As an existing structure, those conditions may be allowed to remain at the discretion of the governing building official.

Accessibility: Existing single-family residential units are not required to meet the accessibility requirements of CBC Chapter 11. Additionally, alterations to existing buildings such as the Nelles School Superintendent's Residence do not require an accessible means of egress. As an existing structure, those conditions may be allowed to remain at the discretion of the governing building official.

Building Construction: The Nelles School Superintendent's Residence is classified as Type IIB.

Structural Requirements: See Structural Analysis.

Cost Estimate Summary (Mack5)

B1 Superintendent's Residence Detail | Job #11357 | October 19, 2011

mack5

Proposed Use: Single Family Residence	Quantity	Unit	Rate	Total ($)

Scope:

The Superintendent's Residence will remain a single family home. The proposed work at this time consists of remodeling of the existing kitchen and pantry area, laundry room, and upstairs and downstairs bathrooms. Also, the rest of the homes interiors exteriors will be generally refinished / refurbished. It is assumed that this work will have no structural implications. Per Re-Use Feasibility Study, Reuse Description on page 46

Control Quantities (per digital take-off):

Stories	2	EA
Enclosed area	4,710	SF
Roof area (includes slope factor)	4,640	SF
Interior partitions	500	LF
Plumbing fixtures - allow	12	FX
Subtotal: Gross floor area	4,710	SF

Construction Costs (see below):

Structural Improvements			$72.92	$343,456
Code Improvements*			$22.67	$106,791
Architectural Improvements			$80.77	$380,443
Site Improvements			$27.52	$129,610
Total: Construction	4,710	SF	$203.89	$960,301

*Please note, there is potential that Building Official can excuse Code Requirement

Page 7

VI.2 BUIDING 19 – COMMUNITY THEATER (FORMER AUDITORIUM)

Reuse Description

The use of the Auditorium will essentially remain the same - its proposed re-use is that it becomes a "community theater." The scope of work includes the following: demolition of the northeast stairs, demolition of one set of stage stairs to allow installation of a new accessible stage lift, demolition and replacement of plumbing and bathroom fixtures, demolition of partition walls near entry, relocation of the mechanical/fan room, new access to the balcony/storage area, new ticket window at entry, provide accessible access, and refinish/renovate interior and exterior finishes and walls. No other major modifications or features are proposed at this time for the re-use of this building as a community theater.

STRUCTURAL DESCRIPTION (STRUCTURAL FOCUS)

The modifications and their corresponding structural implications are summarized as follows:

1. Demolition of northeast stairway. No structural implications.
2. Demolition of stage stairs for new lift. No major structural implications. Depending on the weight of the new lift, some strengthening of the existing concrete slab on grade or new foundations may be required.
3. Demolition of interior partitions. No structural implications. The walls being removed are assumed to be non-load bearing partitions and thus have no effect on the building structure.
4. Relocation of Mechanical/Fan Room. No structural implications. It is assumed that the equipment will be located on the ground floor and will likely require new reinforced concrete house-keeping pads supported on grade.
5. New ticket window. It is assumed the new ticket window will require an opening in an existing concrete wall. It is assumed that the opening will be small and will not require any structural work.
6. New accessible access. No structural implications. The new ramp will likely be reinforced concrete supported on grade.
7. New access to balcony storage. Assume access will be provided by new stairway or ladder. No major structural implications. Minor strengthening of the balcony floor would likely be required for the stair support or an opening in the balcony floor.

STRUCTURAL RECOMMENDATIONS (STRUCTURAL FOCUS)

Based on the building evaluation, there are several potential and actual deficiencies in the building that require further investigation and/or mitigation. The recommended mitigation measures for the building deficiencies are described below:

1. Verify the connection of the roof diaphragm to the shear walls. If the connection is deficient, strengthen or provide new wood ledgers and blocking members to connect the existing roof diaphragm to the existing shear walls for proper shear transfer.
2. Strengthen the existing roof diaphragm with new plywood sheathing added above existing 1x sheathing or attached to the underside of the existing roof framing. Provide additional framing clips/straps for collector elements and at diaphragm openings.
3. Verify the reinforcing of existing concrete elements, including walls and pilasters/buttresses. Provide new composite fiber-reinforcing (FRP) strengthening if the concrete has very little or no steel reinforcing.
4. Verify that there are dowels from the concrete walls to the foundation. Strengthen or provide connection with new steel tie plates and anchors.
5. Provide new out-of-plane anchors/hold-downs along the building perimeter for anchorage of the existing walls to the roof diaphragm. Additional wood blocking, straps and framing clips would also be required.
6. Repair/replace damaged masonry units, and patch and fill existing cracks with epoxy injection.
7. Conduct an ASCE 31-03 Tier 2 investigation to confirm Tier 1 deficiencies where applicable.

STRUCTURAL CONCLUSIONS (STRUCTURAL FOCUS)

Based on available information gathered at the time of this report, a visual observation of the building and some rough calculations, the preliminary evaluation of the Auditorium building, in accordance with the CHBC and a Tier 1 check per the ASCE standard 31-03, has identified some potential structural deficiencies in the building. To meet the California Historic Building Code requirements, it is recommended that the identified structural deficiencies be addressed. This would include, but is not limited to, further field investigation, and a more detailed structural evaluation following the CHBC and ASCE 31-03, and potentially structural strengthening as described. Further investigation/evaluation may eliminate some of the listed potential deficiencies and required strengthening.

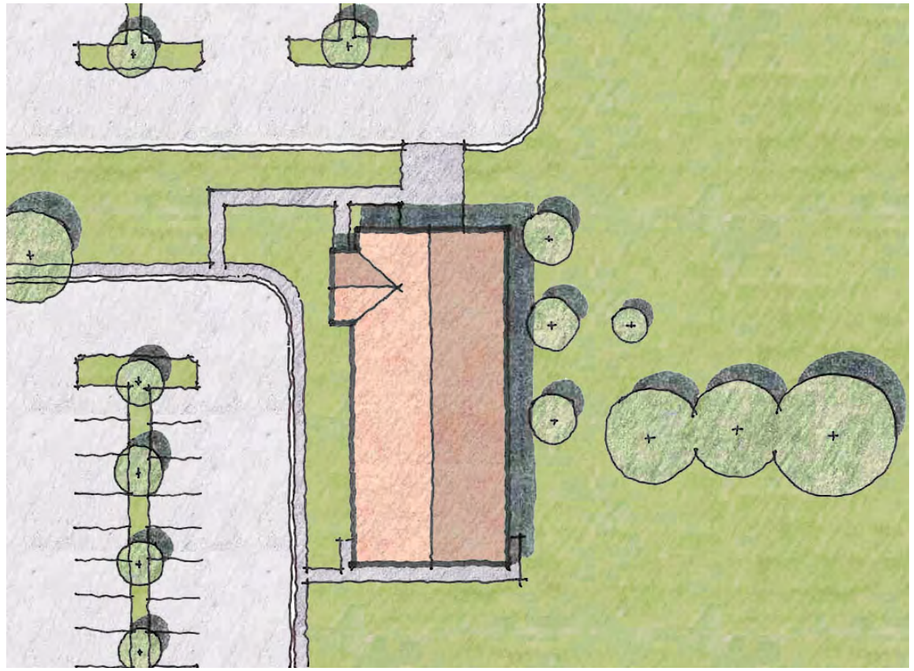
Conceptual Drawings & Program

- Proposed Site Plan
- Existing Floor Plan w/ Demo
- Proposed Floor Plan
- Proposed Exterior Elevations

PROPOSED USE: COMMUNITY THEATER

SITE SCOPE OF WORK

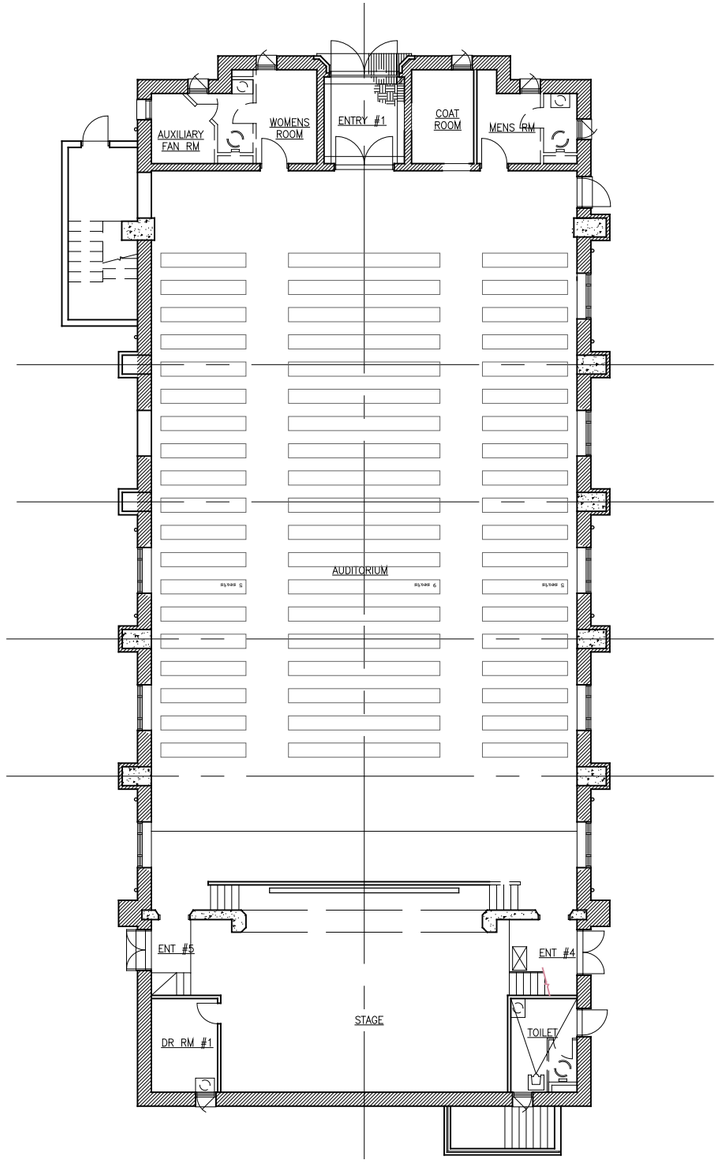
- Protect existing gardens and trees
- Reconfigure side walks to align with new parking per plan
- Repair/restore landscaping
- New parking per plan



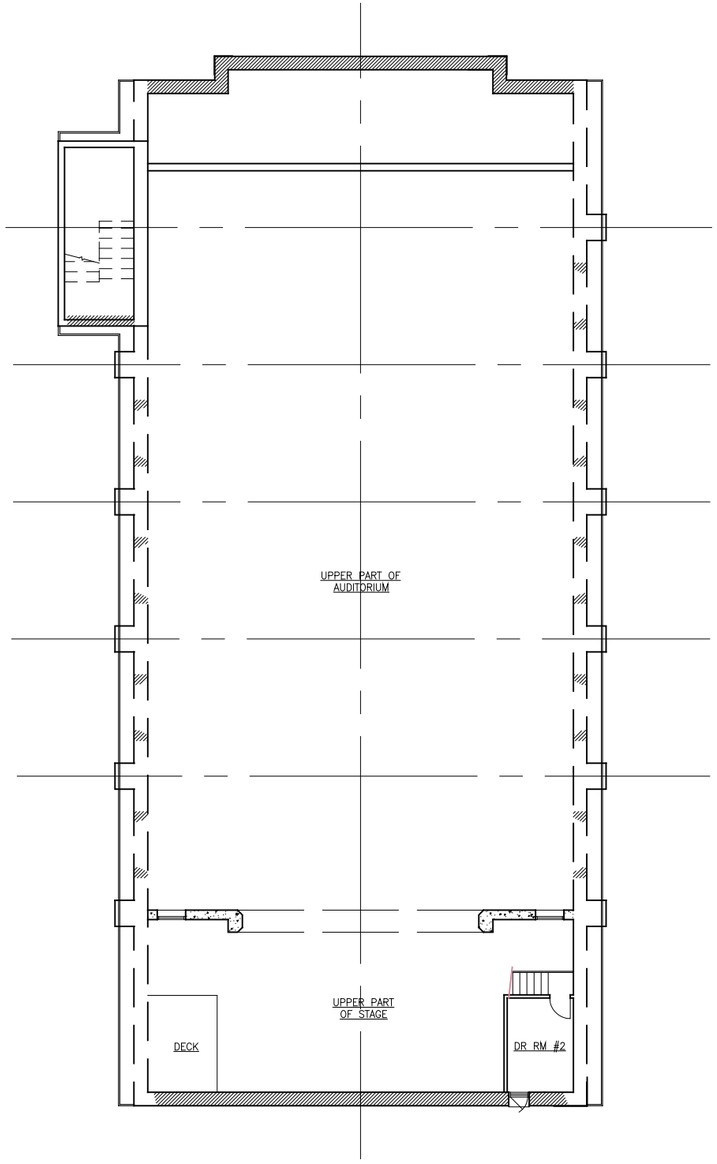
SITE PLAN
Scale: 1" = 50'-0"

PROJECT NORTH

Building 19
Auditorium



EXISTING FIRST FLOOR PLAN W/ DEMO
Scale: 1/16" = 1'-0"



EXISTING UPPER FLOOR PLAN W/ DEMO
Scale: 1/16" = 1'-0"

PROPOSED USE: COMMUNITY THEATER

DEMO SCOPE OF WORK

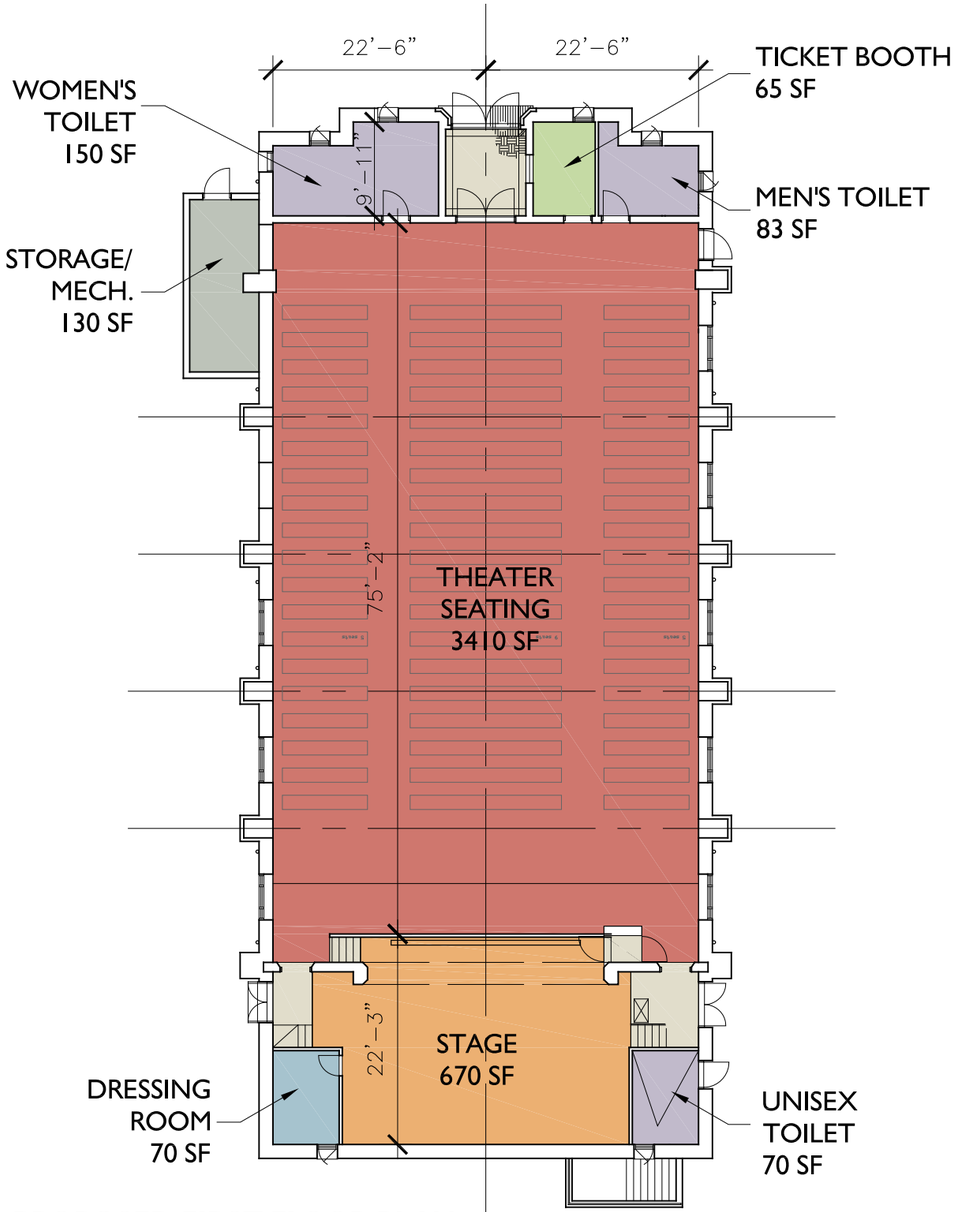
- Remove all plumbing fixtures
- Remove one set of stage stairs
- Remove partition walls near entry
- Remove stair at addition
- Remove tile floor in toilet rooms

LEGEND

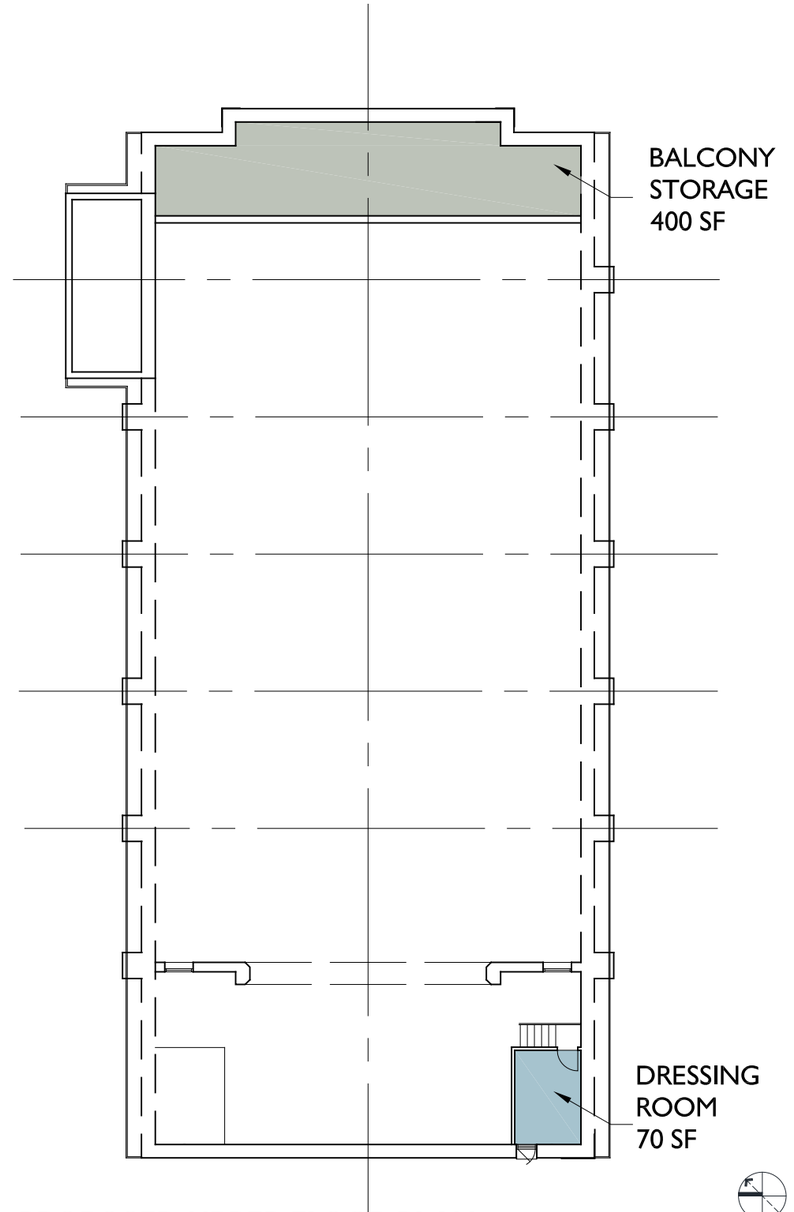
(E) TO BE DEMOLISHED

(E) TO REMAIN

Building 19
Auditorium



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



PROPOSED UPPER FLOOR PLAN
Scale: 1/16" = 1'-0"

PROPOSED USE: COMMUNITY THEATER

INTERIOR SCOPE OF WORK

- Replace all bathroom fixtures & finishes
- Relocate fan room
- Install ticket window at entry
- Update interior finishes
- Refinish proscenium wall above stage opening
- Preserve open plan

CODE SCOPE OF WORK

- Enlarge toilets to meet code requirements
- Provide accessible access
- Install automatic fire sprinkler system throughout
- Provide rated exit doors
- Provide rated exit passageways

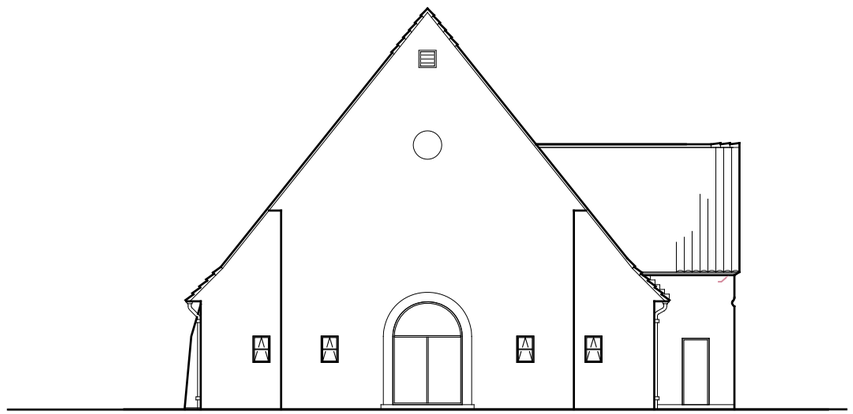
BUILDING GROSS SF: 5,965 SF

PROPOSED PROGRAM NET SF: 5,115 SF

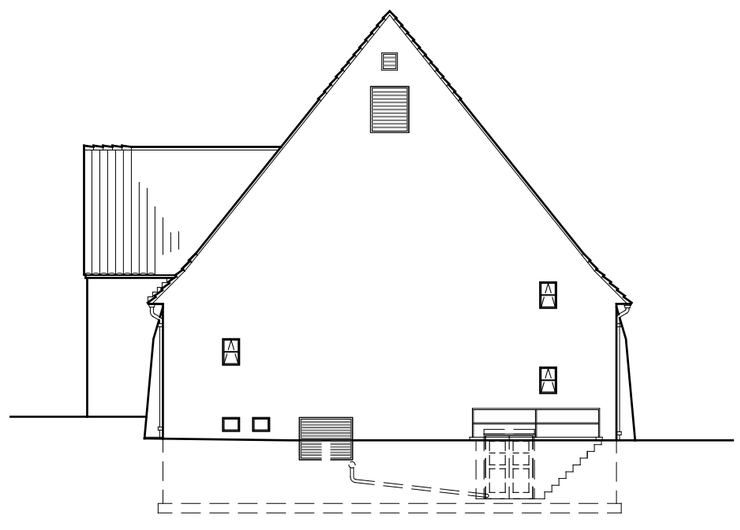
LEGEND

- THEATER SEATING - 3410 SF
- STAGE - 670 SF
- TICKETBOOTH - 65 SF
- DRESSING ROOM - 140 SF (2)
- TOILET - 300 SF (3)
- STORAGE/MECHANICAL - 530 SF (2)
- CIRCULATION

Building 19
Auditorium



EAST ELEVATION | SCALE: 1/16"=1'-0"



WEST ELEVATION | SCALE: 1/16"=1'-0"

PROPOSED USE: COMMUNITY THEATER

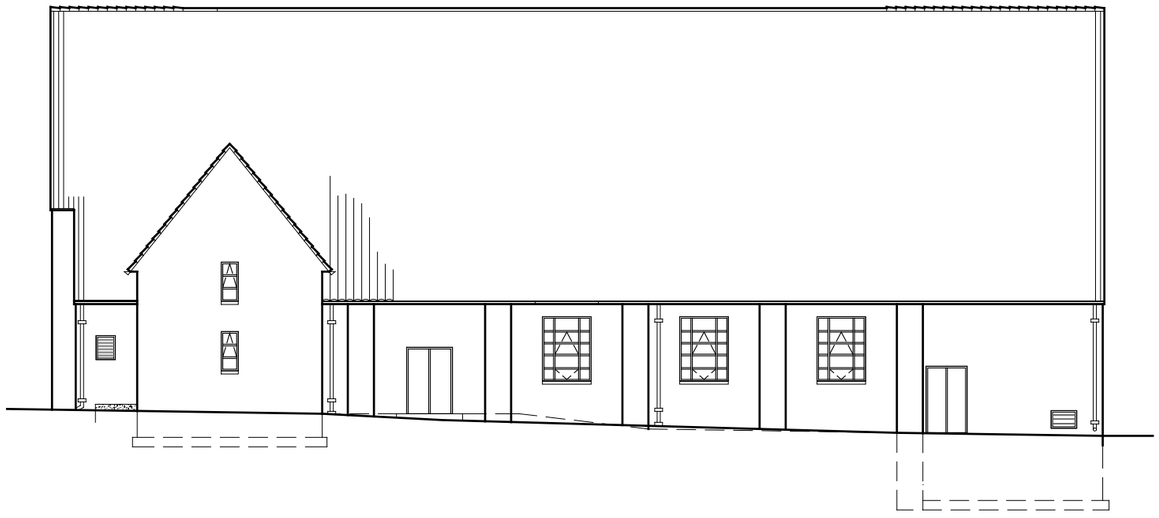
EXTERIOR SCOPE OF WORK

- Repair exterior walls where necessary
- Repaint doors and windows

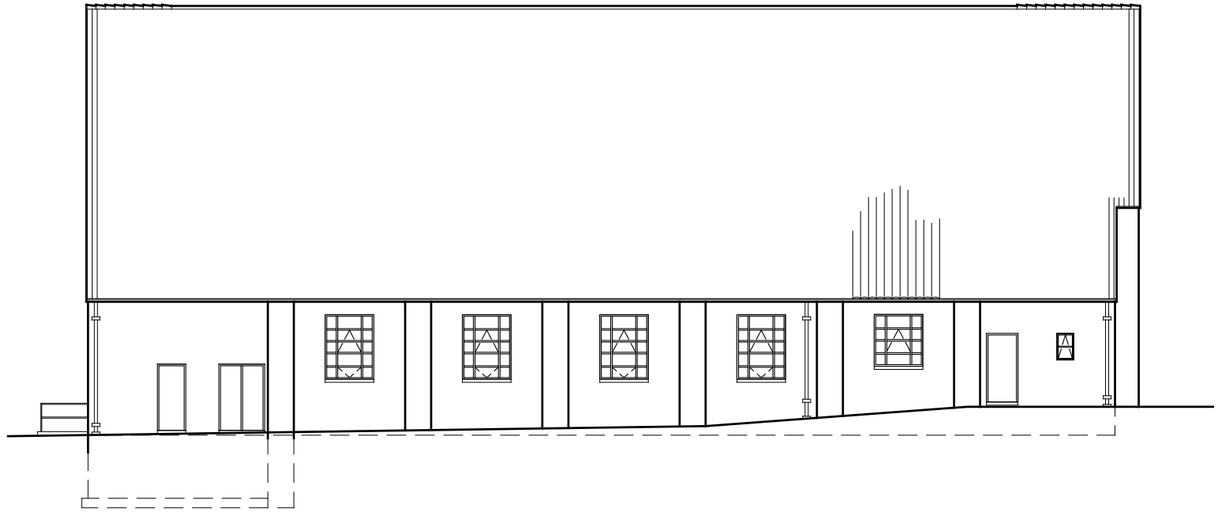
EXTERIOR FEATURES

- Rectilinear plan
- One-and-one-half story massing
- Front gable roof with terra cotta cladding
- Simple, recessed, arched entry

Building 19
Auditorium



NORTH ELEVATION | SCALE: 1/16"=1'-0"



SOUTH ELEVATION | SCALE: 1/16"=1'-0"

PROPOSED USE: COMMUNITY THEATER

EXTERIOR SCOPE OF WORK

- Repair exterior walls where necessary
- Repaint doors and windows

EXTERIOR FEATURES

- Rectilinear plan
- One-and-one-half story massing
- Front gable roof with terra cotta cladding
- Simple, recessed, arched entry

Building 19
Auditorium

Zoning Summary

SECTION	ITEM	SUMMARY
	APN	8170-013-904
	Proposed Zoning	Workplace District
	Status	Historically Significant
	Proposed Use	Auditorium
	Area	6,393 s.f. (plus 1,135 s.f. mechanical basement)
	Date of Construction	1923
	Type of Construction	Brick masonry and concrete with wood over steel roof trusses

Required Parking:1/3 seats and 1/100 s.f. of area devoted to assembly purposes without fixed seats such as banquet, waiting, and reception rooms.

56 Stalls Required, assuming non fixed seating.

RELEVANT SECTIONS FROM CITY OF WHITTIER – (WBSP)

SECTION	ITEM	SUMMARY
WBSP Sect. 4.2.1	Land Use	Theaters (Movies/ Performing Arts) are not permitted in the Workplace District zone. The proposed use of the structure may be allowed under Section 1.10 (j) of the WBSP.
WBSP 1.10 (j.)	Historic Resources	Any building or structure within the Whittier Boulevard Specific Plan that has been deemed eligible for landmark designation, is listed as an historic landmark or is a contributing resource within a designated historic district on any Local, State or National Register of Historic Places may, for historic preservation and adaptive re-use purposes only, be permitted any land use to be contained within the historic building or structure, subject to the prior review and approval of a Conditional Use Permit.

Summary of Building Code Review

Proposed use: Theater

Existing areas
- Building Gross S.F.: 6,393 sq. ft.
- Total N.S.F.: 5,686 sq. ft.

Building height
- Height at front: 43'
- Height at back: 46'

Occupancy type: Assembly; Group A-1
Construction type: Type IIIB; Brick masonry and concrete with wood over steel truss roof
Occupant load: 410 persons; the Auditorium Building will require posting of occupancy load

Fixture count
- Men's lavatories: 2
- Men's urinals: See code
- Men's W/C: 3
- Women's lavatories: 2
- Women's W/C: 11
- Drinking fountains: 2

See Appendix for full code analysis.

Height and Floor Area Limitations: The Nelles School Auditorium Building is one story in height. The front of the building is 43' high, the rear is 46' high, and the average height is 44.5'. The total square footage of the building (5,686 sq. ft.) is less than the maximum allowable 8,500 sq. ft. for Classification A-1/Type IIIB.

Fire Sprinklers and Rating Requirements: For Group A occupancies which exceed 300 persons, assembly space and the exit discharge are required to have an automatic fire sprinkler system, and it is assumed that an automatic sprinkler system would be installed in the Nelles School Auditorium Building. As an existing building, code compliance would be at the discretion of the governing building official.

- No rating of the corridors is required in A occupancies with sprinkled corridors for occupant loads greater than 30 persons. The 2010 CBC does recognize some plaster, lath, and wood framed walls and ceilings as being 1-hour compliant. Further evaluation would need to be performed in order to determine that the existing walls and ceilings meet those requirements. This requirement can be met with the installation of an approved fire-sprinkler system.
- The existing discharge doors and corridor are not fire-rated. This requirement can be met with the installation of fire-rated doors or with the installation of an approved fire-sprinkler system or modifications to the openings and penetrations.

Egress and Exit Requirements: The existing exit doors, door thresholds, door arrangement, locking devices, and much of the existing hardware do not currently meet code requirements. As an existing building, compliance with various sections of the code would be at the discretion of the governing building official.

- The existing pair of main exit doors (outer) from the Auditorium meets the minimum width requirement, but the direction of door swing would have to be reversed.
- The existing pairs of exit doors located at the north and south sides of the stage need to be modified so that one leaf in each door provides a clear opening width of 32".
- The interior doors located in the proscenium wall flanking the stage that leads to the accessways need to be increased to a minimum width of 44" to comply with code requirements.
- A series of existing doors located in the women's restroom does not meet code requirements. It is presumed that the restrooms would be reconfigured as part of the project.
- An egress lighting system and an emergency lighting system would need to be installed in order to comply with the code.
- Accessible means of egress are not required in alterations to existing buildings such as the Nelles School Auditorium Building. Existing thresholds would need to be modified or replaced in order to comply with code requirements.
- New locking devices and door hardware would need to be installed in order to comply with the code.
- The Nelles School Auditorium Building currently does not have illuminated exit signs and will require those so as to comply with these requirements. Tactile exit signs are not currently present and would also need to be installed.

- If equipped with an automatic sprinkler system, the interior doors which provide access to the egress passageways would need to be widened to comply with code requirements.

Stairs: The existing stairs, stairway handrails, and guards do not currently meet code requirements. As an existing building, compliance with various sections of the code would be at the discretion of the governing building official.

- The existing stairway handrails and basement stairway guards would need to be modified or replaced, and handrail extensions would need to be provided in order to meet code requirements.
- The stairs which access the dressing room area behind the stage, the steps that provide egress from the south side of the stage, and the two sets of steps that provide egress from the north side of the stage would have to be modified to comply with code requirements.
- The treads of the existing interior stairways of the Auditorium Building do not meet the minimum length required by code.

Accessibility: In its current state, the Nelles School Auditorium Building is not fully accessible throughout. However, as an existing building, accessibility may not be required upon discretion of the governing building official. Any future renovations shall comply with code requirements for accessibility.

- The required number of assistive listening systems is not currently met, however as an existing building, this may not be required. Future renovations shall provide accommodation per this section of the code.
- The existing restroom facilities possess many deficiencies in regard to accessibility, however code compliance would be at the discretion of the governing building official. If existing restrooms were to be renovated, they would be required to meet accessibility requirements for wheelchair clearance, clear floor space at fixtures, water closets, water closet compartments, urinals, lavatories, passageways, symbols, grab bars, and accessories. The existing space allocated to toilet facilities most like would not accommodate the accessibility clearances or the number of fixtures required by the CPC.
- Currently, drinking fountains are not provided. As an existing building, this and other building components (such as telephones, signs and identification, symbols of accessibility) may not be required. Any future modifications, however, shall be in compliance with the code.
- Currently, no accessible means of egress are provided to the stage and backstage areas, but as an existing building, this may not be required. By code, alterations to existing buildings such as the Nelles School Auditorium Building do not require an accessible means of egress. As an existing structure, those conditions may be allowed to remain at the discretion of the governing building official.

Building Construction: The Nelles School Auditorium Building is classified as Type IIIB. All structural elements and bearing walls are made of non-combustible materials. The roof of the Auditorium is made of wood over steel. Type IIIB does not require that any element except the exterior bearing walls have any rating (2 hours in this case)..

Structural Requirements: See Structural Analysis.

Cost Estimate Summary (Mack5)

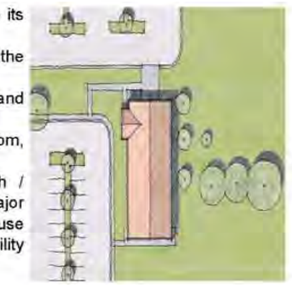
B2 Auditorium Detail | Job #11317 | October 18, 2011

mack5

Proposed Use: Community Theater	Quantity	Unit	Rate	Total ($)

Scope:

The use of the Auditorium will essentially remain the same - its proposed re-use is that it becomes a "community theater."
The scope of work includes the following: demolition of the northeast stairs, demolition of one set of stage stairs to allow installation of a new accessible stage lift, demolition and replacement of plumbing and bathroom fixtures, demolition of partition walls near entry, relocation of the mechanical/fan room, new access to the balcony/storage area, new ticket window at entry, provide accessible access, and refinish / renovate interior and exterior finishes and walls. No other major modifications or features are proposed at this time for the re-use of this building as a community theater. Per Re-Use Feasibility Study, Reuse Description on page 57



Control Quantities (per digital take-off):

Stories	1	EA		
Enclosed area	5,965	SF		
Roof area (includes slope factor)	9,040	SF		
Interior partitions	245	LF		
Plumbing fixtures - allow	6	FX		
Subtotal: Gross floor area	5,965	SF		

Construction Costs (see below):

Structural Improvements			$74.11	$442,043
Code Improvements*			$68.89	$410,932
Architectural Improvements			$42.06	$250,897
Site Improvements			$7.85	$46,841
Total: Construction	5,965	SF	$192.91	$1,150,714

*Please note, there is potential that Building Official can excuse Code Requirement

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VI.3 BUIDING 22 – OFFICE (FORMER INFIRMARY)

Reuse Description

The proposed re-use for the Old Infirmary building is a new office space. The scope of work appears to be a basic tenant improvement which will essentially include the demolition of the majority of existing partition walls, fixtures and furnishings to allow for the build out of new offices and rooms. Also, a new exit door is to be installed and the existing sunroom is to be demolished. No other major modifications or features are proposed at this time for the re-use of this building as a community theater.

STRUCTURAL DESCRIPTION (STRUCTURAL FOCUS)

The modifications and their corresponding structural implications are summarized as follows:

1. Change of use. No structural implications for the change in use from a former hospital/infirmary to an office building.
2. Demolition of existing sun room area. It is our understanding that the partially collapsed existing sun room is a non-historical addition which will be demolished. No structural implications.
3. Demolition of interior partitions. No structural implications. The walls being removed are assumed to all be non-load bearing partitions and thus have no effect on the building structure.
4. New exit/door. The new door opening is located at existing window opening. This will require saw cutting the wall/sill below the window to allow for a new door. No major structural implications.
5. Build out for new rooms, restrooms, offices. Assuming the construction for these rooms is light framing and does not impose large forces on the building elements, there are no structural implications. Some minor work may be required for floor or wall penetrations for MEP, and typical details will likely apply.

STRUCTURAL RECOMMENDATIONS (STRUCTURAL FOCUS)

Based on the building evaluation, there are some potential deficiencies in the building that require further investigation and/or mitigation. The recommended mitigation measures for the building deficiencies are described below:

1. Strengthen the existing roof diaphragm with new plywood sheathing added above existing 1x sheathing or attached to the underside of the existing roof framing. Provide additional framing clips/straps for collector elements and cross ties. Alternatively, provide new lateral load resisting elements (shear walls) in the building interior to reduce the overall span and aspect ratio of the existing diaphragm - some foundation work may also be required.
2. Provide new out-of-plane anchors/hold-downs along the building perimeter for anchorage of the existing walls to the roof diaphragm. Additional wood blocking, straps and framing clips would likely also be required.
3. The sunroom area of the building should be closed off. A contractor should be contacted to stabilize the damaged sun room structure until such time as it is decided what to do with the sun room area (i.e., demolishing, repairing, etc.)
4. Further investigation is required to determine if the existing chimney is a potential falling hazard.
5. Conduct an ASCE 31-03 Tier 2 investigation to confirm Tier 1 deficiencies where applicable.

STRUCTURAL CONCLUSIONS (STRUCTURAL FOCUS)

Based on available information gathered at the time of this report, a visual observation of the building and some rough calculations, the preliminary evaluation of the Auditorium building, in accordance with the CHBC and a Tier 1 check per the ASCE standard 31-03, has identified some potential structural deficiencies in the building. To meet the California Historic Building Code requirements, it is recommended that the identified structural deficiencies be addressed. This would include, but is not limited to, further field investigation, and a more detailed structural evaluation following the CHBC and ASCE 31-03, and potentially structural strengthening as described. Further investigation/evaluation may eliminate some of the listed potential deficiencies and required strengthening.

Conceptual Drawings & Program

- Proposed Site Plan
- Existing Floor Plan w/ Demo
- Proposed Floor Plan
- Proposed Exterior Elevations

SITE PLAN
Scale: 1" = 50'-0"

PROJECT NORTH

PROPOSED USE: OFFICE

SITE SCOPE OF WORK

- Protect existing gardens and trees
- Reconfigure side walks to align with new parking per plan
- Repair/restore landscaping
- Provide new parking per plan
- Preserve/restore contributing Open Space per plan

Building 22
Infirmary

PROPOSED USE: OFFICE

DEMOLITION SCOPE OF WORK

- Demo existing interior partitions as shown. Retain partitions when space planning allows.
- Demo sinks and toilets in rooms
- Demo existing casework
- Demo sun porch
- Remove floor surface
- Remove dropped ceiling

EXISTING FLOOR PLAN W/ DEMO
Scale: 1/16" = 1'-0"

Building 22
Infirmary

PROPOSED FLOOR PLAN
Scale: 1/16" = 1'-0"

PROPOSED USE: OFFICE

INTERIOR FEATURES

- Double-loaded corridor

INTERIOR SCOPE OF WORK

- Full interior fit out
- Rehab (e) finishes as needed
- Rehab (e) windows & doors. Fix some doors in place
- Patch & repair ceiling
- Install (n) carpet throughout

CODE SCOPE OF WORK

- Install code compliant exit doors and modify thresholds
- Install exit door at northwestern corner of open office suite
- Provide enlarged toilet facilities

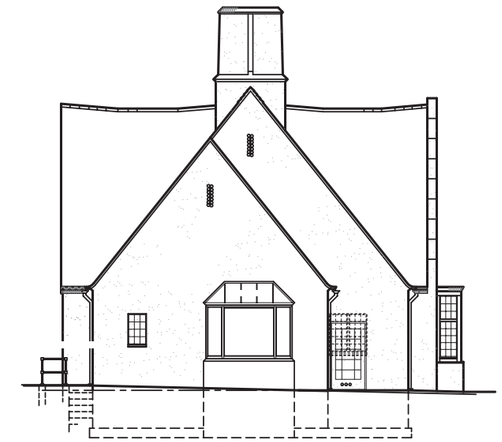
BUILDING GROSS SF: 4,615 SF
BUILDING NET SF: 4,555 SF

LEGEND

- KITCHEN/BREAK RM 215 SF
- LOBBY/RECEPTION 260 SF
- OPEN OFFICE 590 SF
- OFFICE SUITES 1340 SF (7)
- CONFERENCE ROOM 835 SF (2)
- SERVICE SPACE 525 SF
- CIRCULATION 790 SF

Building 22
Infirmary

EAST ELEVATION
Scale: 1/16” = 1“-0”



NORTH ELEVATION
Scale: 1/16” = 1’-0”

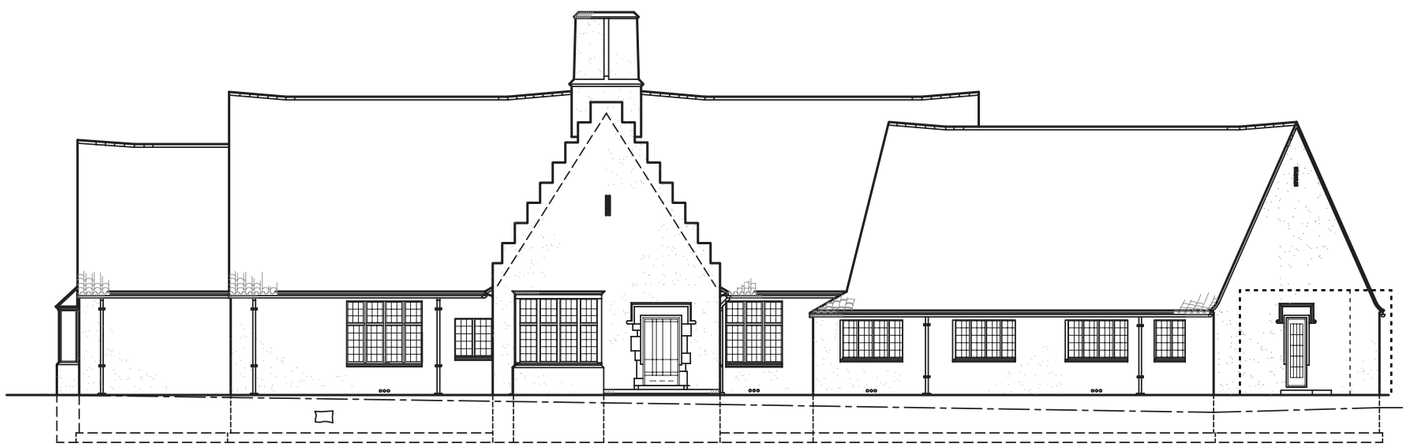
PROPOSED USE: OFFICE

EXTERIOR SCOPE OF WORK

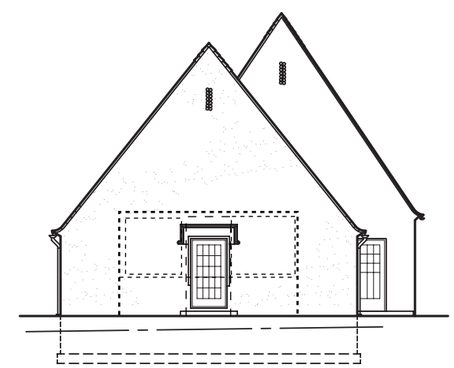
- Restore exterior finishes as needed
- Repair existing windows where necessary
- Replace exit doors with code compliant fire doors
- New exit door in northern wing
- Repair area of demolished sun porch

EXTERIOR FEATURES

- “V” floor plan
- One-story massing
- Simple cement walls
- Gabled roof with terra cotta tile
- Wood, multi-light door with quoining surround



WEST ELEVATION
Scale: 1/16” = 1’-0”



SOUTH ELEVATION
Scale: 1/16” = 1’-0”

Building 22
Infirmary

Zoning Summary

SECTION	ITEM	SUMMARY
	APN	8170-013-904
	Proposed Zoning	Workplace District
	Status	Historically Significant
	Proposed Use	Office
	Area	4,612 s.f. (not including 1936 addition)
	Date of Construction	1923-28 and 1936 (sun porch)
	Type of Construction	Reinforced concrete with wood roof

Required Parking General Office: 1/300 s.f.
15.4 stalls required

RELEVANT SECTIONS FROM CITY OF WHITTIER – (WBSP)

SECTION	ITEM	SUMMARY
WBSP Sect. 4.2.1	Land Use	Limited office uses which are compatible with residential uses are permitted in the Workplace District Zone. The proposed use of the structure may also be allowed under Section 1.10 (j) of the WBSP. (See *"Service Uses,"* Table 4-1)
WBSP 1.10 (j.)	Historic Resources	Any building or structure within the Whittier Boulevard Specific Plan that has been deemed eligible for landmark designation, is listed as an historic landmark or is a contributing resource within a designated historic district on any Local, State or National Register of Historic Places may, for historic preservation and adaptive re-use purposes only, be permitted any land use to be contained within the historic building or structure, subject to the prior review and approval of a Conditional Use Permit.

Summary of Building Code Review

Proposed use: Office

Existing areas
- Building Gross S.F.: 4,612 sq. ft.
- Total N.S.F.: 4,077 sq. ft.

Building height
- Height at front: 32'
- Height at back: 32'

Occupancy type: Business; Group B
Construction type: Type IIIB; Reinforced concrete with wood roof
Occupant load: 41 persons

Fixture count
- Men's lavatories: 1
- Men's urinals: See code
- Men's W/C: 1
- Women's lavatories: 1
- Women's W/C: 8
- Drinking fountains: 0

See Appendix for full code analysis.

Height and Floor Area Limitations: The Nelles School Old Infirmary is one story in height. The front of the building is 32' high, the rear is 32' high, and the average height is 32'. The total square footage of the building (4,077 sq. ft.) is less than the maximum allowable 9,500 sq. ft. for Classification B/Type IIIB.

Fire Sprinklers and Rating Requirements: Group B occupancies in structures over 6,000 s.f. and over 40 feet in height are required to have an automatic sprinkler system. It is assumed that the Nelles School Old Infirmary will be non-sprinklered. As an existing building, code compliance would be at the discretion of the governing building official.

- Non-sprinklered corridors serving more than 30 occupants in Group B occupancy are required to be 1-hour rated, and the CBC does recognize some plaster, lath, and wood framed walls and ceilings as being 1-hour compliant. Further evaluation would need to be performed in order to determine that the existing walls and ceilings meet those requirements. This requirement can also be met with the installation of an approved fire-sprinkler system.
- The existing corridor and discharge doors are not fire-rated. This requirement can be met through the installation of fire-rated doors or with the installation of an approved fire sprinkler system or modifications to the openings and penetrations.

Egress and Exit Requirements: The existing landings at the exit doors, exit doors, door thresholds, locking devices, and much of the existing hardware do not currently meet code requirements. As an existing building, compliance with various sections of the code would be at the discretion of the governing building official.

- Currently 3 exits are provided from the interior of the Old Infirmary building and these exits meet or exceed the minimum required net clear opening of 36.6". An additional exterior door with a net clear opening of 32" is present in the kitchen area. This door cannot currently be considered an exit door as it would require occupants to exit through an intervening space. Although that door can remain in place, it does not currently meet the requirements to be considered an exit door. Currently no exit exists at the north end of the corridor. As the corridor is more than 20 feet in length, the result is a dead-end corridor. The 2010 CBC would require installation of exit discharge at that location with a net clear opening of no less than 32".
- Existing landings at the exit doors would need to be modified or replaced in order to comply with code requirements.
- An emergency lighting system would need to be installed in order to comply with the code.
- Accessible means of egress are not required in alterations to existing buildings such as the Nelles School Old Infirmary. Existing thresholds would need to be modified or replaced in order to comply with code requirements.
- New locking devices and door hardware would need to be installed in order to comply with the code.
- The Nelles School Old Infirmary currently does not have illuminated exit signs and will require those so as to comply with these requirements. Tactile exit signs are not currently present and would also need to be installed.

- The majority of exiting doors within the Old Infirmary building do not provide the required 18" of clear floor space on the strike side of the door. Those doors and/or the obstructions would need to be removed or modified in order to comply with code requirements.

Stairs: The existing stairway handrails and guards do not currently meet code requirements. As an existing building, compliance with various sections of the code would be at the discretion of the governing building official.

- Existing basement stairway handrail heights and guard heights do not meet the code requirements and no handrail extensions are currently present. The handrails and guard would need to be modified or replaced at all stairs and extensions added in order to comply with code requirements. As an existing structure, and because the stairs serve a non-public service area, the basement stairs, if left unaltered, may not require modification.

Accessibility: In its current state, the Nelles School Old Infirmary is not fully accessible throughout. However, as an existing building, accessibility may not be required upon discretion of the governing building official. Any future renovations shall comply with code requirements for accessibility.

- The existing restroom facilities possess many deficiencies in regard to accessibility, however code compliance would be at the discretion of the governing building official. If existing restrooms were to be renovated, they would be required to meet accessibility requirements for wheelchair clearance, clear floor space at fixtures, water closets, water closet compartments, urinals, lavatories, passageways, symbols, grab bars, and accessories. The existing space allocated to toilet facilities most likely would not accommodate the accessibility clearances or the number of fixtures required by the CPC.
- Currently, drinking fountains are not provided. As an existing building, this and other building components (such as telephones, signs and identification, symbols of accessibility) may not be required. Any future modifications however, shall be in compliance with this section of the code.
- Currently ground and floor surfaces along accessible routes and in accessible rooms and spaces do not comply with code requirements.
- By code, alterations to existing buildings such as the Nelles School Old Infirmary do not require an accessible means of egress. As an existing structure, those conditions may be allowed to remain at the discretion of the governing building official.

Building Construction: The Nelles School Old Infirmary is classified as Type IIIB. Exterior structural elements are made of non-combustible materials. The roof of the Old Infirmary is made of wood. Type IIIB does not require that any element except the exterior bearing walls have any rating (2 hours in this case).

Structural Requirements: See Structural Analysis.

Cost Estimate Summary (Mack5)

B3 Infirmary Detail | Job #11357 | October 19, 2011

mack5

Proposed Use: Office	Quantity	Unit	Rate	Total ($)

Scope:

The proposed re-use for the Old Infirmary building is a new office space. The scope of work appears to be a basic tenant improvement which will essentially include the demolition of the majority of existing partition walls, fixtures and furnishings to allow for the build out of new offices and rooms. Also, a new exit door is to be installed and the existing sunroom is to be demolished. No other major modifications or features are proposed at this time for the re-use of this building as an office. Per Re-Use Feasibility Study, Reuse Description on page 68

Control Quantities (per digital take-off):

Stories	1	EA		
Enclosed area (existing inc. basement)	4,615	SF		
Roof area (includes slope factor)	7,360	SF		
Interior partitions	360	LF		
Plumbing fixtures - allow	12	FX		
Subtotal: Gross floor area	4,615	SF		
Construction Costs (see below):				
Structural Improvements			$39.24	$181,071
Code Improvements*			$100.96	$465,940
Architectural Improvements			$82.32	$379,903
Site Improvements			$63.83	$294,564
Total: Construction	4,615	SF	$286.34	$1,321,478

*Please note, there is potential that Building Official can excuse Code Requirement

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VI.4 BUIDING 8 – RESIDENCE (FORMER ASSISTANT SUPERINTENDENT'S RESIDENCE)

Reuse Description

The Assistant Superintendent's Residence will remain a single family home. The only proposed work at this time is the remodeling of the existing bathrooms and kitchen, as well as refinishing/renovating the building interior/exterior finishes. This work has no structural implications.

STRUCTURAL RECOMMENDATIONS (STRUCTURAL FOCUS)

Based on the building evaluation, there are several potential and actual deficiencies in the building that require further investigation and/or mitigation. The recommended mitigation measures for the building deficiencies are described below:

1. A contractor should be contacted to stabilize the tree and damaged structure as well as provide necessary measures to protect the house. Once a safe working environment has been established, remove the tree and all damaged portions of the existing trellis.
2. Provide shear transfer between the roof and existing walls by adding new wood ledgers and blocking members to connect the existing roof diaphragm to the existing shear walls.
3. Strengthen the existing roof diaphragm with new plywood sheathing added above existing 1x sheathing, attached to the underside of the existing roof framing, or attached above the existing ceiling framing.
4. Strengthen the existing shear walls with new plywood sheathing and framing clips. Alternately, provide new lateral load resisting elements in the building interior by adding plywood sheathing to interior stud walls and connecting the walls to the roof diaphragm to create new shear walls. Some foundation work may also be required.
5. Strengthen the existing chimney. Some additional evaluation and possible exploratory demolition will likely be required to determine if there is any existing chimney anchorage and if that anchorage is adequate. Assuming the chimney is not adequately attached, provide strengthening or demolish and rebuild chimney to resist seismic loads.
6. Conduct an ASCE 31-03 Tier 2 investigation to confirm Tier 1 deficiencies where applicable.

STRUCTURAL CONCLUSIONS (STRUCTURAL FOCUS)

Based on available information, the preliminary evaluation of the Assistant Superintendent's Residence, in accordance with the CHBC and a Tier 1 check per the ASCE-31-03 standard, has identified several potential structural deficiencies in the building. Based on visual observation, available documents and some rough calculations, preliminary evaluation has determined that the existing masonry shear walls and roof diaphragm may become overstressed during a seismic event. It is recommended that a detailed structural evaluation be performed during upcoming renovation projects to determine what level of strengthening is required. Further investigation may likely eliminate some of the listed potential deficiencies.

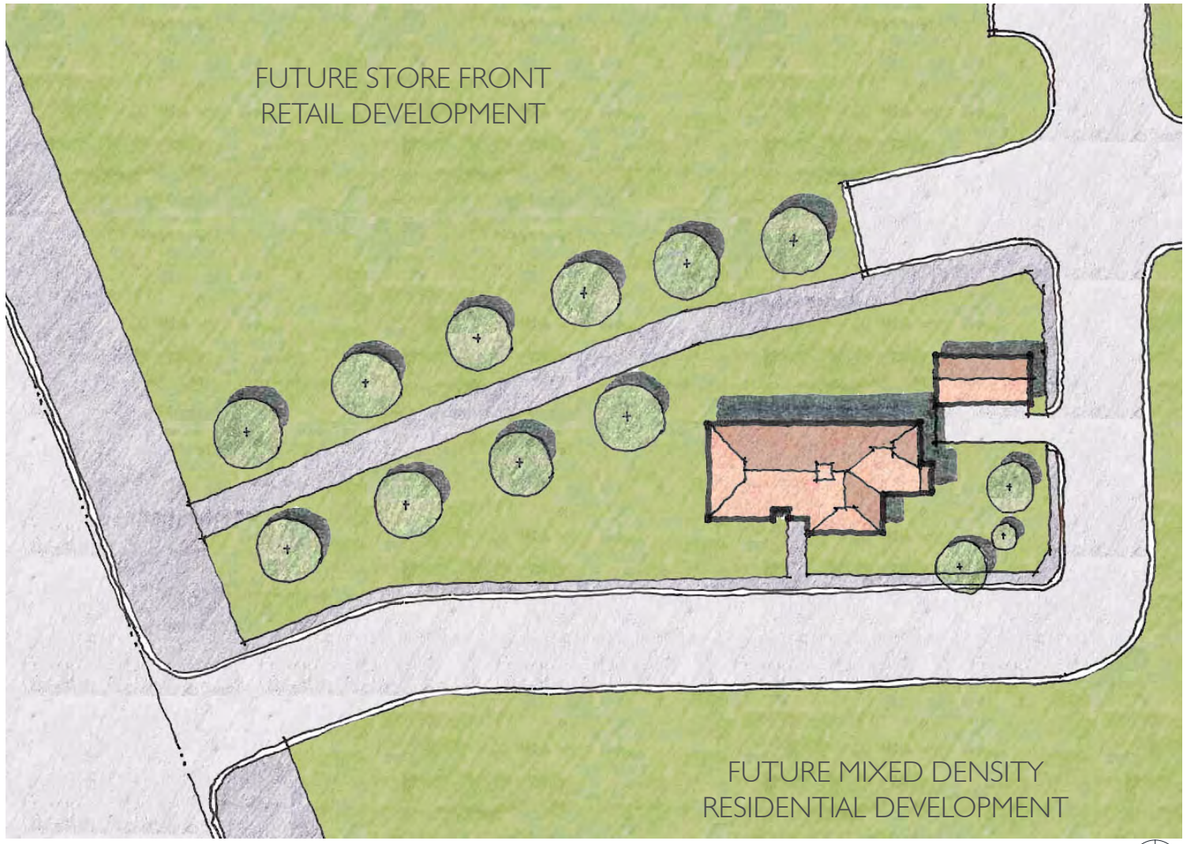
Conceptual Drawings & Program

- Proposed Site Plan
- Proposed Floor Plan w/ Demo
- Proposed Exterior Elevations

PROPOSED USE: SINGLE FAMILY RESIDENCE

SITE SCOPE OF WORK

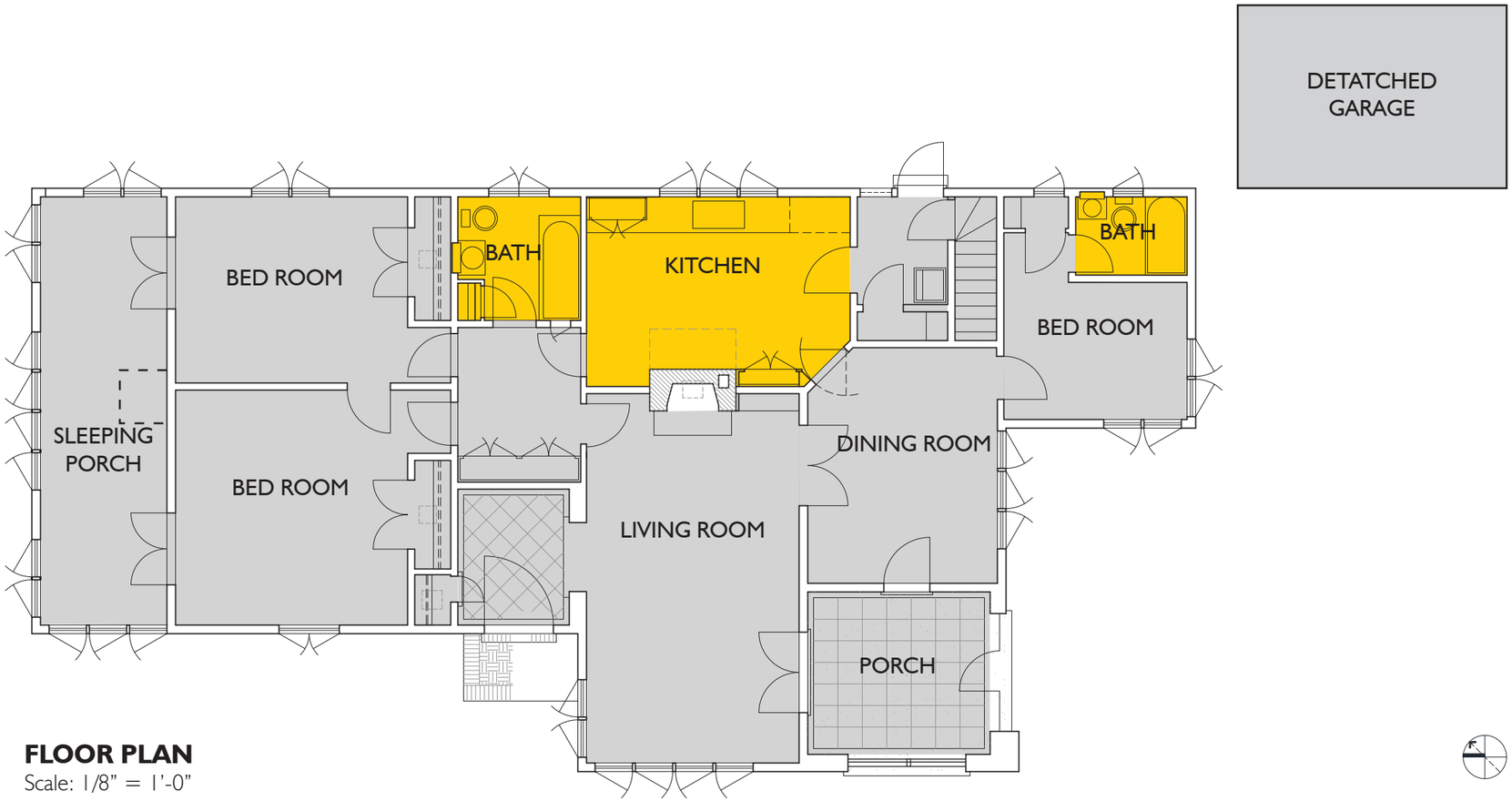
- Protect existing gardens and trees
- Reconfigure driveway per plan
- Retain detatched garage
- Retain mature trees
- Install new residential landscape
- Demo (e) mechanical equipment on site & building



SITE PLAN
Scale: 1" = 50'-0"

PROJECT NORTH

Building 8
Assistant Superintendent's Residence



FLOOR PLAN
Scale: 1/8" = 1'-0"

PROPOSED USE: SINGLE FAMILY RESIDENCE

INTERIOR SCOPE OF WORK

- Full renovation of kitchen
- Full renovation of baths
- Replace carpet throughout
- Refinish throughout
- Demo sleeping porch closet

INTERIOR FEATURES

- Wood floors
- Wood trim, moldings, and doors

CODE REQUIRED SCOPE OF WORK

- None

BUILDING GROSS SF: 1,700

BUILDING NET SF: 1,575 SF

LEGEND

FULL RENOVATION

REFINISH EXISTING

Building 8
Assistant Superintendent's Residence

PROPOSED USE: SINGLE FAMILY RESIDENCE

EXTERIOR SCOPE OF WORK

- Repaint all stucco
- Repaint windows and doors
- General repair of existing as necessary

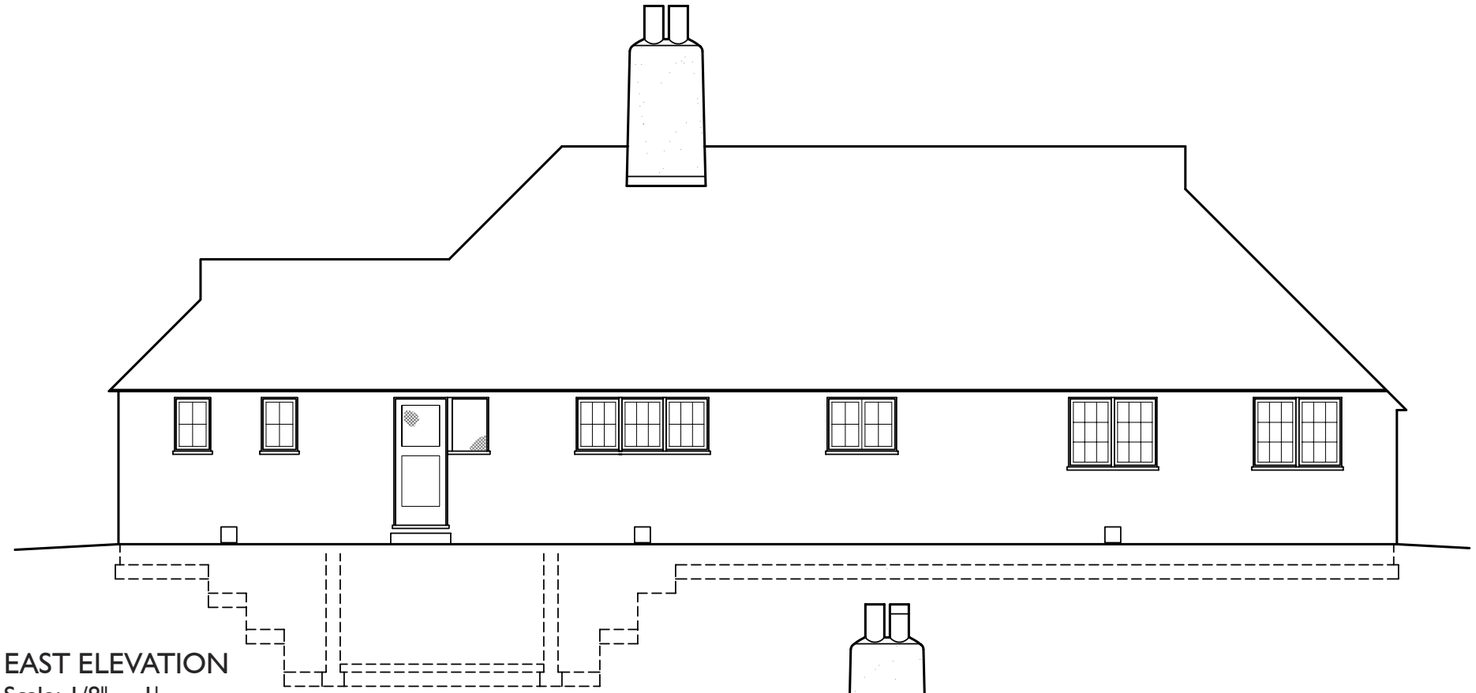
EXTERIOR FEATURES

- "L" shaped plan
- One-story massing
- Hipped gable roof and central chimney
- Grouped, wood, multi-light windows
- Arched entry with wood door

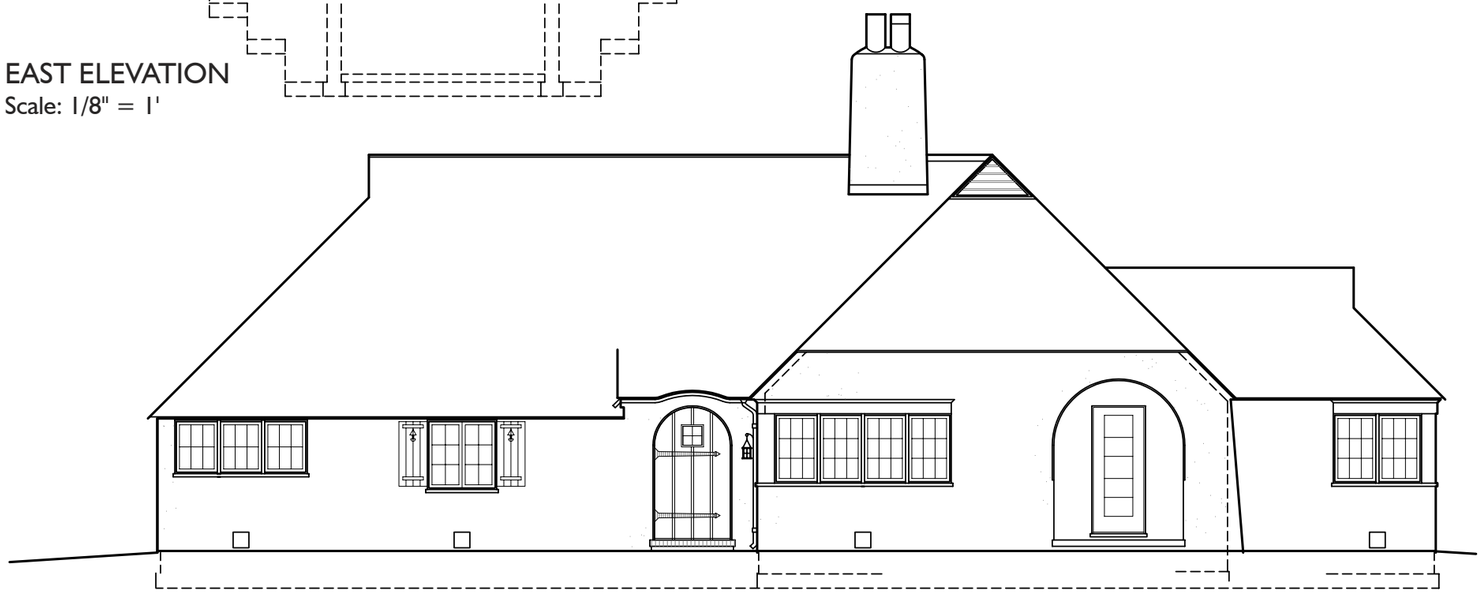
NORTH ELEVATION
Scale: 1/8" = 1'

SOUTH ELEVATION
Scale: 1/8" = 1'

Building 8
Assistant Superintendent's Residence



EAST ELEVATION
Scale: 1/8" = 1'



WEST ELEVATION
Scale: 1/8" = 1'

PROPOSED USE: SINGLE FAMILY RESIDENCE

EXTERIOR SCOPE OF WORK

- Repaint all stucco
- Repaint windows and doors
- General repair of existing as necessary

EXTERIOR FEATURES

- "L" shaped plan
- One-story massing
- Hipped gable roof and central chimney
- Grouped, wood, multi-light windows
- Arched entry with wood door

Building 8
Assistant Superintendent's Residence

Zoning Summary

SECTION	ITEM	SUMMARY
	APN	8170-013-904
	Proposed Zoning	Workplace District
	Status	Contributor
	Proposed Use	Single-Family Residential
	Area	4,540 s.f. (plus 228 garage)
	Date of Construction	1926
	Type of Construction	Wood frame with plaster and wood roof

Required Parking: Four parking spaces for each unit. Off-street parking facilities shall provide a minimum of two non-tandem parking spaces within an enclosed garage. Additional on-site parking spaces may be developed in tandem on the property.

RELEVANT SECTIONS FROM CITY OF WHITTIER – (WBSP)

SECTION	ITEM	SUMMARY
WBSP Sect. 4.2.1	Land Use	Residential developments within the Workplace District zone are limited to multi-family units, with a minimum density of sixteen (16) units per acres and maximum density of thirty (30) units per acres. The development of single-family residences is not permitted in the Workplace District zone. The proposed use of the structure may be allowed under Section 1.10 (j) of the WBSP.
WBSP 1.10 (j.)	Historic Resources	Any building or structure within the Whittier Boulevard Specific Plan that has been deemed eligible for landmark designation, is listed as an historic landmark or is a contributing resource within a designated historic district on any Local, State or National Register of Historic Places may, for historic preservation and adaptive re-use purposes only, be permitted any land use to be contained within the historic building or structure, subject to the prior review and approval of a Conditional Use Permit.

Summary of Building Code Review

Proposed use: Residence

Existing Building
- Building Gross S.F.: 1,812 sq. ft.
- Total N.S.F.: 1,812 sq. ft.

Building height
- Height at front: 21'
- Height at back: 21'

Occupancy type: Residential, Group R-3
Construction type: Wood frame with plaster and wood roof; Type II
Occupant load: 4 persons

See Appendix for full code analysis.

Height and Floor Area Limitations: The Nelles School Assistant Superintendent's Residence is one story in height. The building is 21' high at both the front and back. The total square footage of the building (1,812 sq. ft.) is less than the "unlimited" allowable square feet for Type II.

Fire Sprinklers and Rating Requirements: In an exception to code requirements, fire-resistive rating is not required for corridors contained within a dwelling or sleeping unit in an occupancy in Group R. This applies to the Nelles School Assistant Superintendent's Residence.

Egress and Exit Requirements: All egress and exit requirements for the Nelles School Assistant Superintendent's Residence are met.

Stairs: The treads and risers of the existing exterior steps of the Nelles School Assistant Superintendent's Residence do not meet code requirements. However, no change in use is proposed and it is reasonable to assume the existing steps would remain in use.

Accessibility: Existing single-family residential units are not required to meet the accessibility requirements of CBC Chapter 11. Additionally, alterations to existing buildings such as the Nelles School Assistant Superintendent's Residence do not require an accessible means of egress.

Building Construction: The Nelles School Assistant Superintendent's Residence is classified as Type II.

Structural Requirements: See Structural Analysis.

Cost Estimate Summary (Mack5)

B4 Asst Superintendent's Residence Detail | Job #11317 | October 19, 2011

mack5

Proposed Use: Single Family Residence	Quantity	Unit	Rate	Total ($)

Scope:

The Assistant Superintendent's Residence will remain a single family home. The only proposed work at this time is the remodeling of the existing bathrooms and kitchen, as well as refinishing/renovating the building interior/exterior finishes. This work has no structural implications. Per Re-Use Feasibility Study, Reuse Description on page 77

Control Quantities (per digital take-off):

Stories	1	EA
Enclosed area	1,700	SF
Roof area (includes slope factor)	2,505	SF
Interior partitions	215	LF
Plumbing fixtures - allow	6	FX
Subtotal: Gross floor area	1,700	SF

Construction Costs (see below):

Structural Improvements			$58.06	$98,703
Code Improvements*			$24.37	$41,425
Architectural Improvements			$71.40	$121,374
Site Improvements			$28.35	$48,200
Total: Construction	1,700	SF	$182.18	$309,702

*Please note, there is potential that Building Official can excuse Code Requirement

Page 31

VI.5 BUIDING 20 – OFFICE (FORMER ADMINISTRATION BUILDING)

Reuse Description

The Administration building will continue to be used as an office building. The proposed scope of work appears to be a basic tenant improvement which will essentially result in the demolition of a the majority of existing corridor and partition walls, as well as other basic fixtures and furnishings to allow for the build out of new offices and rooms. No other major modifications or features are proposed at this time for the Administration building.

STRUCTURAL DESCRIPTION (STRUCTURAL FOCUS)

The modifications and their corresponding structural implications are summarized as follows:

1. Demolition of interior partitions and corridor walls. The main corridor walls appear to be wood stud bearing walls which support the roof and ceiling framing. Removal of these walls will require new wood and/or steel framing members for the support of the roof structure above, as well as some potential new foundations. The non-corridor walls are assumed to be non-load bearing partitions, and the removal of these walls has no structural implications.

STRUCTURAL RECOMMENDATIONS (STRUCTURAL FOCUS)

Based on the building evaluation, there are potential and actual deficiencies in the building that require further investigation and/or mitigation. The recommended mitigation measures for the building deficiencies are described below:

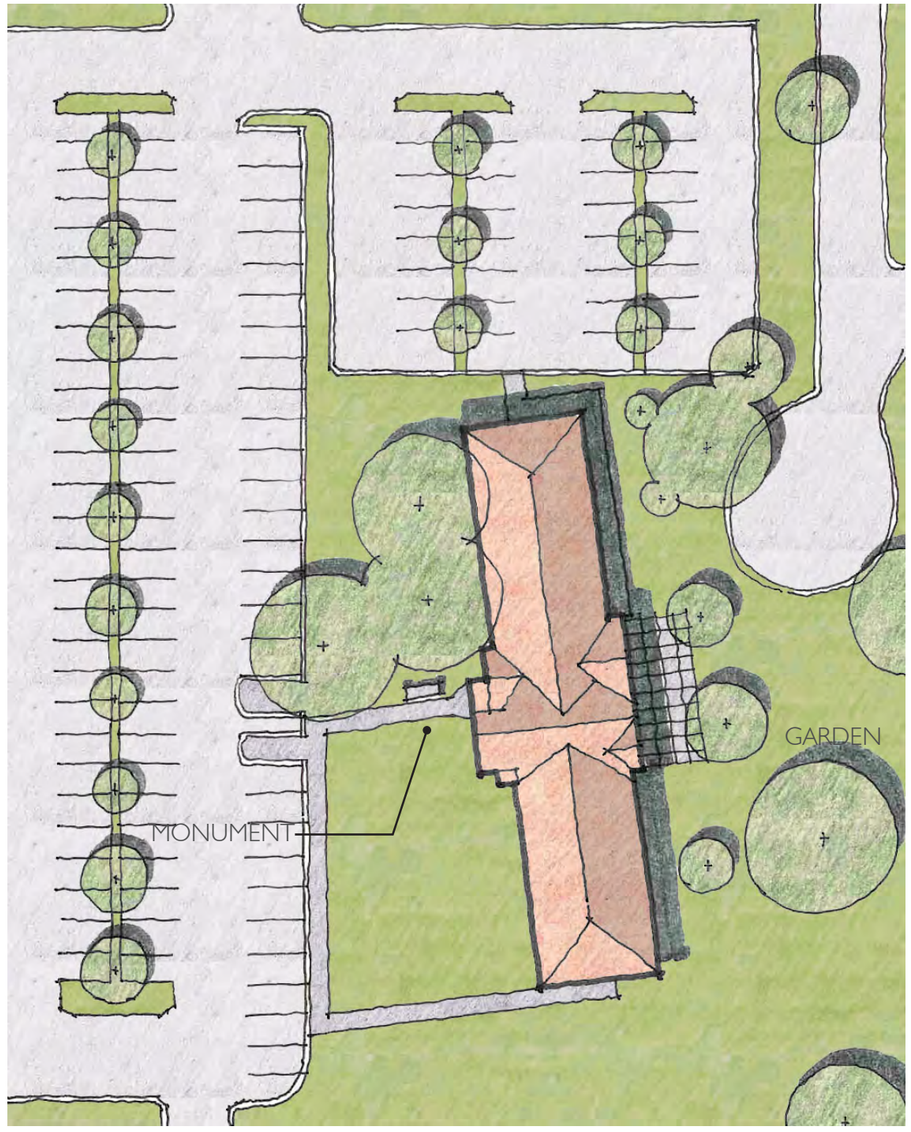
1. Provide shear transfer between the roof and existing walls by adding new wood ledgers and blocking members to connect the existing roof diaphragm to the existing shear walls.
2. Strengthen the existing roof diaphragm with new plywood sheathing added above the existing 1x sheathing or attached to the underside of the existing roof framing. Provide additional framing clips/straps for collector elements and crossties as necessary. Also, provide new lateral load resisting elements (shear walls) in the building interior to reduce the overall span and aspect ratio of the diaphragm - some foundation work may also be required.
3. Strengthen the existing brick URM walls with new shotcrete or composite fiber-reinforcing (FRP) or provide new lateral load resisting elements in the building interior. New lateral elements will require connection to the existing diaphragm and likely new foundations.
4. Provide new out-of-plane anchors/hold-downs along the building perimeter for anchorage of the existing walls to the roof diaphragm. Additional wood blocking, straps and framing clips would also be required.
5. Strengthen the existing chimney. Some additional evaluation and possible exploratory demolition will likely be required to determine if there is any existing chimney anchorage and if that anchorage is adequate. Assuming the chimney is not adequately attached and cannot resist the seismic demands, provide strengthening and/or bracing. Alternatively, deconstruct and rebuild the chimney with adequate framing and reinforcing and to resist the seismic loads - reattach the original brick as a veneer to maintain the historical character of the chimney.
6. Repair/replace damaged masonry units, and patch and fill existing cracks with epoxy injection.
7. Provide additional connection hardware at the beam to concrete pier support in the basement.
8. Conduct an ASCE 31-03 Tier 2 investigation to confirm Tier 1 deficiencies where applicable.

STRUCTURAL CONCLUSIONS (STRUCTURAL FOCUS)

Based on available information gathered at the time of this report, a visual observation of the building and some rough calculations, the preliminary evaluation of the Administration building, in accordance with the CHBC and a Tier 1 check per the ASCE standard 31-03, has identified potential structural deficiencies in the building. To meet the California Historic Building Code requirements, it is recommended that the identified structural deficiencies be addressed. This would include, but is not limited to, further field investigation, and a more detailed structural evaluation following the CHBC and ASCE 31-03, and potentially structural strengthening as described. Further investigation/evaluation may eliminate some of the listed potential deficiencies and required strengthening.

Conceptual Drawings & Program

- Proposed Site Plan
- Existing Floor Plan w/ Demo
- Proposed Floor Plan
- Proposed Exterior Elevations



SITE PLAN
Scale: 1" = 50'-0"

PROJECT NORTH

PROPOSED USE: OFFICE

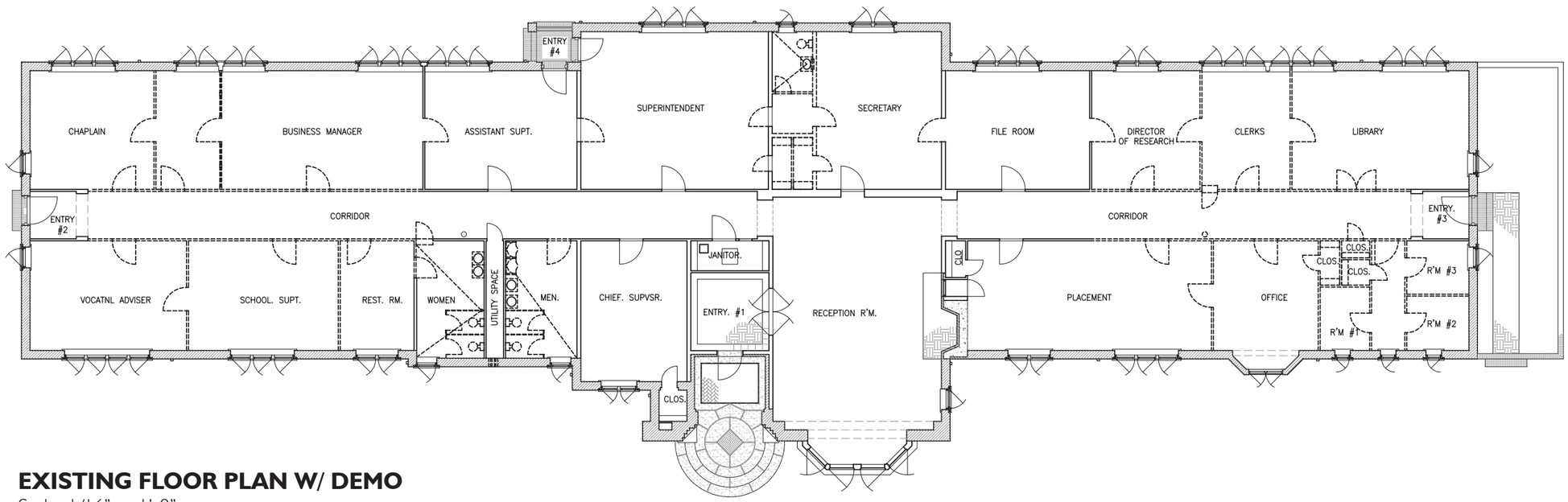
SITE SCOPE OF WORK

- Protect existing gardens and trees
- Demolish "Sally Port" at SW of building
- Reconfigure side walks to align with new parking per plan
- Repair/restore historic landscape elements
- Repair/restore landscaping
- New parking per plan

HISTORIC SITE ELEMENTS

- Monument constructed of salvaged stone from the previous administration building
- Garden

Building 20
Admin Building



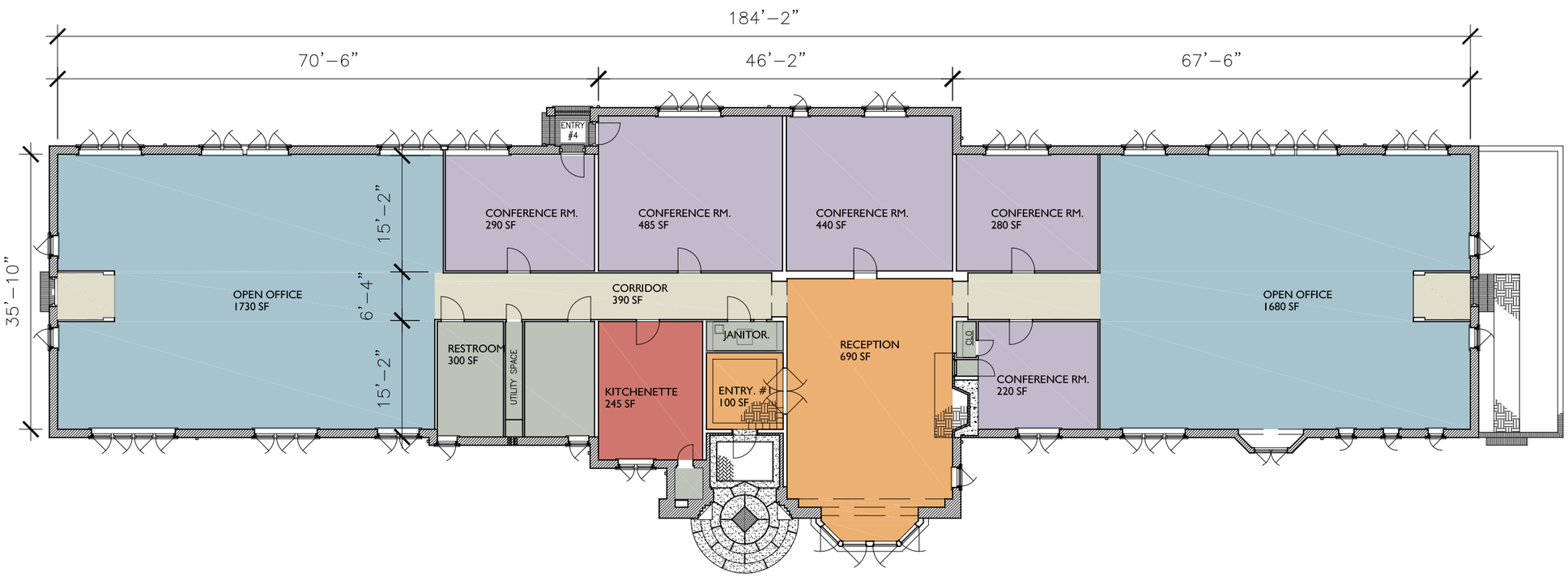
EXISTING FLOOR PLAN W/ DEMO
Scale: 1/16" = 1'-0"

PROPOSED USE: OFFICE

DEMOLITION SCOPE OF WORK

- Demo existing interior partitions as shown
- Remove, repair and reinstall existing doors to remain
- Remove and store existing doors to be demolished
- Repair damaged interior plaster
- Remove floor surface
- Remove dropped ceiling

Building 20
Admin Building



PROPOSED FLOOR PLAN
Scale: 1/16" = 1'-0"

PROPOSED USE: OFFICE

INTERIOR SCOPE OF WORK

- Preserve historic reception
- Refinish floors throughout
- Remove and replace acoustic ceiling tiles
- Refinish walls throughout
- Remove, repair and re-hang historic doors

CODE SCOPE OF WORK

- Install automatic sprinkler system throughout
- Install code compliant exit doors and modify thresholds
- Provide enlarged toilet facilities

INTERIOR FEATURES

- Double-height reception hall with wood timbered ceiling
- Arts and Crafts brick fireplace
- Double-loaded corridor

BUILDING GROSS SF: 7,755 SF
BUILDING NET SF: 7,020 SF

LEGEND

- KITCHENETTE 245 SF
- RECEPTION 790 SF
- OFFICE 3410 SF (2)
- CONFERENCE 1715 SF (5)
- SERVICE SPACE 380 SF
- CIRCULATION 480 SF

Building 20
Admin Building

WEST ELEVATION
Scale: 1/16" = 1'

EAST ELEVATION
Scale: 1/16" = 1'

PROPOSED USE: OFFICE

EXTERIOR SCOPE OF WORK

- Demo existing interior partitions as shown
- Remove, repair and reinstall existing doors to remain
- Remove and store existing doors to be demolished
- Repair damaged interior plaster
- Remove floor surface
- Remove dropped ceiling

EXTERIOR FEATURES

- Rectilinear plan
- One-and-one-half story massing
- Steeply hipped roof with cross gable
- Recessed, pointed arch entry with wood door
- Projecting bay window
- Wood casement, multi-light windows

Building 20
Admin Building

SOUTH ELEVATION
Scale: 1/16" = 1'

NORTH ELEVATION
Scale: 1/16" = 1'

Building 20
Admin Building

Zoning Summary

SECTION	ITEM	SUMMARY
	APN	8170-013-904
	Proposed Zoning	Workplace District
	Status	Historically Significant
	Proposed Use	Office
	Area	7,750 s.f. (not including 1936 addition)
	Date of Construction	1928-29
	Type of Construction	Brick masonry with wood roof

Required Parking General Office: 1/300 s.f.
26 stalls required

RELEVANT SECTIONS FROM CITY OF WHITTIER – (WBSP)

SECTION	ITEM	SUMMARY
WBSP Sect. 4.2.1	Land Use	Limited office uses which are compatible with residential uses are permitted in the Workplace District Zone. The proposed use of the structure may also be allowed under Section 1.10 (j) of the WBSP. (See *"Service Uses;"* Table 4-1)
WBSP 1.10 (j.)	Historic Resources	Any building or structure within the Whittier Boulevard Specific Plan that has been deemed eligible for landmark designation, is listed as an historic landmark or is a contributing resource within a designated historic district on any Local, State or National Register of Historic Places may, for historic preservation and adaptive re-use purposes only, be permitted any land use to be contained within the historic building or structure, subject to the prior review and approval of a Conditional Use Permit.

Summary of Building Code Review

Proposed use: Office

Existing areas
- Building Gross S.F.: 7,750 sq. ft.
- Total N.S.F.: 6,859 sq. ft.

Building height
- Height at front: 40'
- Height at back: 42'

Occupancy type: Business; Group B
Construction type: Type IIIB; Brick masonry with wood roof
Occupant load: 74 persons

Fixture count
- Men's lavatories: 3
- Men's urinals: See code
- Men's W/C: 3
- Women's lavatories: 3
- Women's W/C: 3
- Drinking fountains: 0

See Appendix for full code analysis.

Height and Floor Area Limitations: The Nelles School Administration Building is one story in height. The front of the building is 40' high, the rear is 42' high, and the average height is 41.0'. The total square footage of the building (6,859 sq. ft.) is less than the maximum allowable 9,500 sq. ft. for Classification B/Type IIIB.

Fire Sprinklers and Rating Requirements: It is assumed that an automatic sprinkler system would be installed in the Nelles School Administration Building.

- Non-sprinklered corridors serving more than 30 occupants in Group B occupancy are required to be 1-hour fire rated. The CBC does recognize some plaster, lath, and wood framed walls and ceilings as being 1-hour compliant. Further evaluation would need to be performed in order to determine that the existing walls and ceilings meet those requirements. This requirement can also be met with the installation of an approved fire-sprinkler system.
- The existing corridor and discharge doors are not fire-rated. This requirement can be met through the installation of fire-rated doors or with the installation of an approved fire-sprinkler system or modifications to the openings and penetrations.

Egress and Exit Requirements: The existing exit doors, door thresholds, locking devices, and much of the existing hardware do not currently meet code requirements. <u>As an existing building, compliance with various sections of the code would be at the discretion of the governing building official.</u>

- Currently, three exits are provided from the interior of Nelles School Administration Building. The primary entrance/exit is located in the reception room and two additional exits are located at either end of the central corridor. Each exit provides a net clear opening of 3'-2" and meets or exceeds the minimum required net clear opening of 32".
- Currently, the egress doors do not swing in the direction of travel. The swing directions of those doors would need to be reversed in order to comply with the code.
- The existing passageway and door between the Superintendent's Office and the Secretary's Office do not provide the necessary clearance. This passageway could easily be converted into two closets, and could then meet the code requirements.
- The maximum load for a single exit in a B occupancy is 200, and the anticipated occupant load for the Nelles School Administration Building is 74 persons. Two exits are required.
- An egress lighting system and an emergency lighting system would need to be installed in order to comply with the code.
- Accessible means of egress are not required in alterations to existing buildings such as the Nelles School Administration Building. Existing thresholds would need to be modified or replaced in order to comply with code requirements.
- New locking devices and door hardware would need to be installed in order to comply with the code.

- The Nelles School Administration Building currently does not have illuminated exit signs and will require those so as to comply with these requirements. Tactile exit signs are not currently present and would also need to be installed.
- The existing doorway between the central corridor and clinic corridor does not provide the required 18" of clear floor space on the strike side of the door. This door could be removed in order to comply with the requirements of this section.

Stairs: The existing stairway handrails and guards do not currently meet code requirements. As an existing building, compliance with various sections of the code would be at the discretion of the governing building official.

- Existing basement stairway handrail heights and guard heights do not meet the code requirements and no handrail extensions are currently present. The handrails and guard would need to be modified or replaced at all stairs and extensions added in order to comply with code requirements. As an existing structure, and because the stairs serve a non-public service area, the basement stairs, if left unaltered, may not require modification.

Accessibility: In its current state, the Nelles School Administration Building is not fully accessible throughout. However, as an existing building, accessibility may not be required upon discretion of the governing building official. Any future renovations shall comply with code requirements for accessibility.

- The existing restroom facilities possess many deficiencies in regard to accessibility, however code compliance would be at the discretion of the governing building official. If existing restrooms were to be renovated, they would be required to meet accessibility requirements for wheelchair clearance, clear floor space at fixtures, water closets, water closet compartments, urinals, lavatories, passageways, symbols, grab bars, and accessories. The existing space allocated to toilet facilities most like would not accommodate the accessibility clearances or the number of fixtures required by the CPC.
- Currently, drinking fountains are not provided. As an existing building, this and other building components (such as telephones, signs and identification, symbols of accessibility) may not be required. Any future modifications however, shall be in compliance with this section of the code.
- Accessible means of egress are not required in alterations to existing buildings such as the Nelles School Administration Building.

Building Construction: The Nelles School Administration Building is classified as Type IIIB. Exterior structural elements are made of non-combustible materials. The roof of the Administration Building is made of wood. Type IIIB does not require that any element except the exterior bearing walls have any rating (2 hours in this case).

Structural Requirements: See Structural Analysis.

Cost Estimate Summary (Mack5)

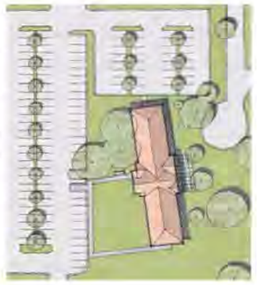
B5 Administration Building Detail | Job #11317 | October 19, 2011

mack5

Proposed Use: Office	Quantity	Unit	Rate	Total ($)

Scope:

The Administration building will continue to be used as an office building. The proposed scope of work appears to be a basic tenant improvement which will essentially result in the demolition of a the majority of existing corridor and partition walls, as well as other basic fixtures and furnishings to allow for the build out of new offices and rooms. No other major modifications or features are proposed at this time for the Administration building. Per Re-Use Feasibility Study, Reuse Description on page 87



Control Quantities (per digital take-off):

Stories	1	EA
Enclosed area	7,755	SF
Roof area (includes slope factor)	12,185	SF
Interior partitions	320	LF
Plumbing fixtures - allow	14	FX
Subtotal: Gross floor area	7,755	SF

Construction Costs (see below):

Structural Improvements			$85.02	$659,343
Code Improvements*			$31.20	$241,955
Architectural Improvements			$50.19	$389,248
Site Improvements			$73.25	$568,072
Total: Construction	7,755	SF	$239.67	$1,858,619

*Please note, there is potential that Building Official can excuse Code Requirement

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VI.6 BUIDING 26 – COMMUNITY CENTER (FORMER CHAPEL)

Reuse Description

The proposed re-use for the Chapel building is a new community center. The scope of work is to include the following: demolition of the interior partitions, demolition and relocation of existing stairway at choir loft, removal of chapel furnishings, demolition of entry vestibule, and build-out mixed use spaces. No other major modifications or features are proposed at this time for the re-use of this building as a community center.

STRUCTURAL DESCRIPTION (STRUCTURAL FOCUS)

These modifications and their corresponding structural implications are summarized as follows:

1. Demolition of interior partitions and furnishings. No structural implications. The items being removed are assumed to be non-load bearing structure and thus have no effect on the overall building structure.
2. Demolition/Reconstruction of existing stairway to choir loft area. Provide new opening in existing mezzanine floor for stair way and wood framing to support new stairs.
3. General build out. Assuming the construction for the new rooms and partitions is light framing and does not impose large forces on the building elements, there are no major structural implications.

STRUCTURAL RECOMMENDATION (STRUCTURAL FOCUS)

Based on the building evaluation, there are some potential and actual deficiencies in the building that require further investigation and/or mitigation. The recommended mitigation measures for the building deficiencies are described below:

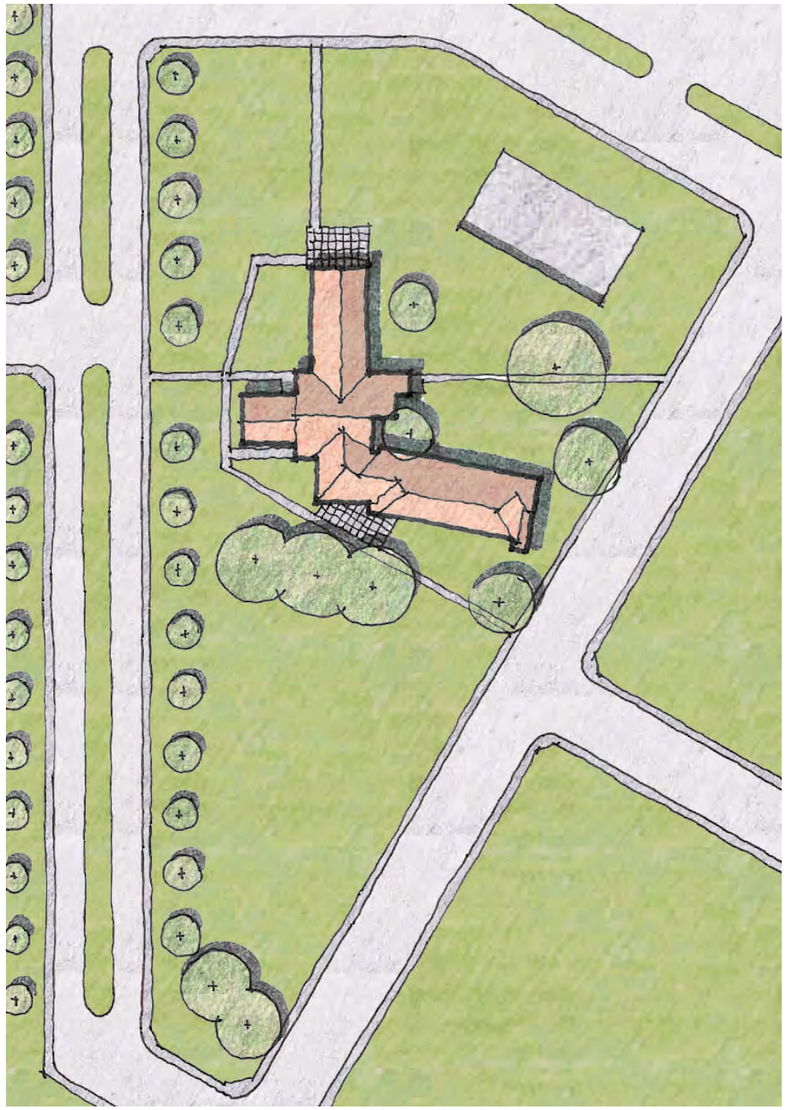
1. Provide shear transfer between the roof and existing walls by adding new wood ledgers and blocking members to connect the existing roof diaphragm to the existing shear walls.
2. Strengthen the existing roof diaphragm with new plywood sheathing added above existing 1x sheathing or attached to the underside of the existing roof framing. Provide additional framing clips/straps for collector elements and cross ties as necessary. Alternatively, provide new lateral load resisting elements (shear walls) in the building interior to reduce the overall span and aspect ratio of the diaphragm - some foundation work may also be required.
3. Strengthen the existing brick URM walls with new shotcrete or composite fiber-reinforcing (FRP) or provide new lateral load resisting elements in the building interior. New lateral elements will require connection to the existing diaphragm and likely new foundations.
4. Provide new out-of-plane anchors/hold-downs along the building perimeter for anchorage of the existing walls to the roof diaphragm. Additional wood blocking, straps and framing clips would also be required.
5. Strengthen the existing chimney. Some additional evaluation and possible exploratory demolition will likely be required to determine if there is any existing chimney anchorage and if that anchorage is adequate. Assuming the chimney is not adequately attached and cannot resist the seismic demands, provide strengthening and/or bracing. Alternatively, deconstruct and rebuild the chimney with adequate framing and reinforcing and to resist the seismic loads - reattach the original brick as a veneer to maintain the historical character of the chimney.
6. Repair/replace damaged areas of concrete slab - patch and fill existing cracks with epoxy injection.
7. Provide additional connection hardware at the beam connections to brick masonry.
8. Conduct an ASCE 31-03 Tier 2 investigation to confirm Tier 1 deficiencies where applicable.

STRUCTURAL CONCLUSION (STRUCTURAL FOCUS)

Based on available information gathered at the time of this report, a visual observation of the building and some rough calculations, the preliminary evaluation of the Chapel building, in accordance with the CHBC and a Tier 1 check per the ASCE standard 31-03, has identified several potential structural deficiencies in the building. To meet the California Historic Building Code requirements, it is recommended that the identified structural deficiencies be addressed. This would include, but is not limited to, further field investigation, and a more detailed structural evaluation following the CHBC and ASCE 31-03, and potentially structural strengthening as described. Further investigation/evaluation may eliminate some of the listed potential deficiencies and required strengthening.

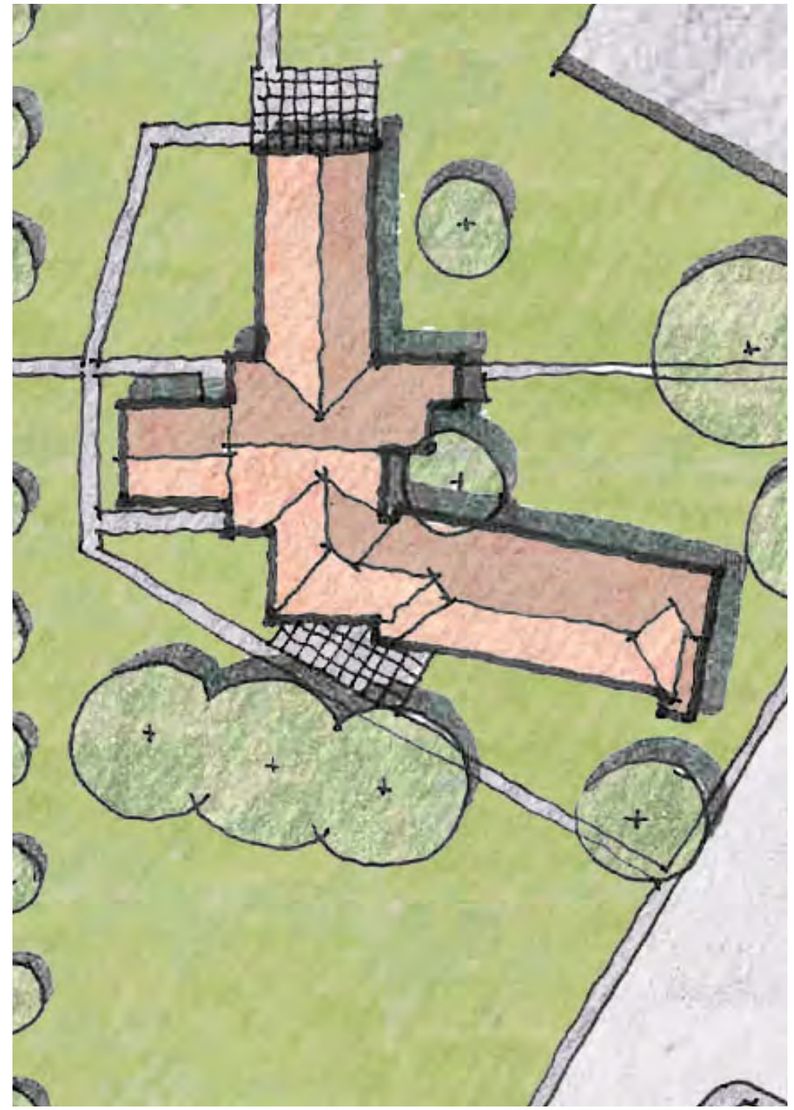
Conceptual Drawings & Program

- Proposed Site Plan
- Existing Floor Plan w/ Demo
- Proposed Floor Plan
- Proposed Exterior Elevations



SITE PLAN
Scale: 1" = 100'-0"

PROJECT NORTH



SITE PLAN
Scale: 1" = 50'-0"

PROJECT NORTH

PROPOSED USE: COMMUNITY CENTER

SITE SCOPE OF WORK

- Protect existing gardens and trees
- Reconfigure side walks to align with new parking per plan
- Repair/restore landscaping
- Provide new landscaping per plan (assume child's playground w/in Community Park)
- Provide new parking per plan
- Provide new Community Pool per plan
- Preserve/restore historic Open Space per plan

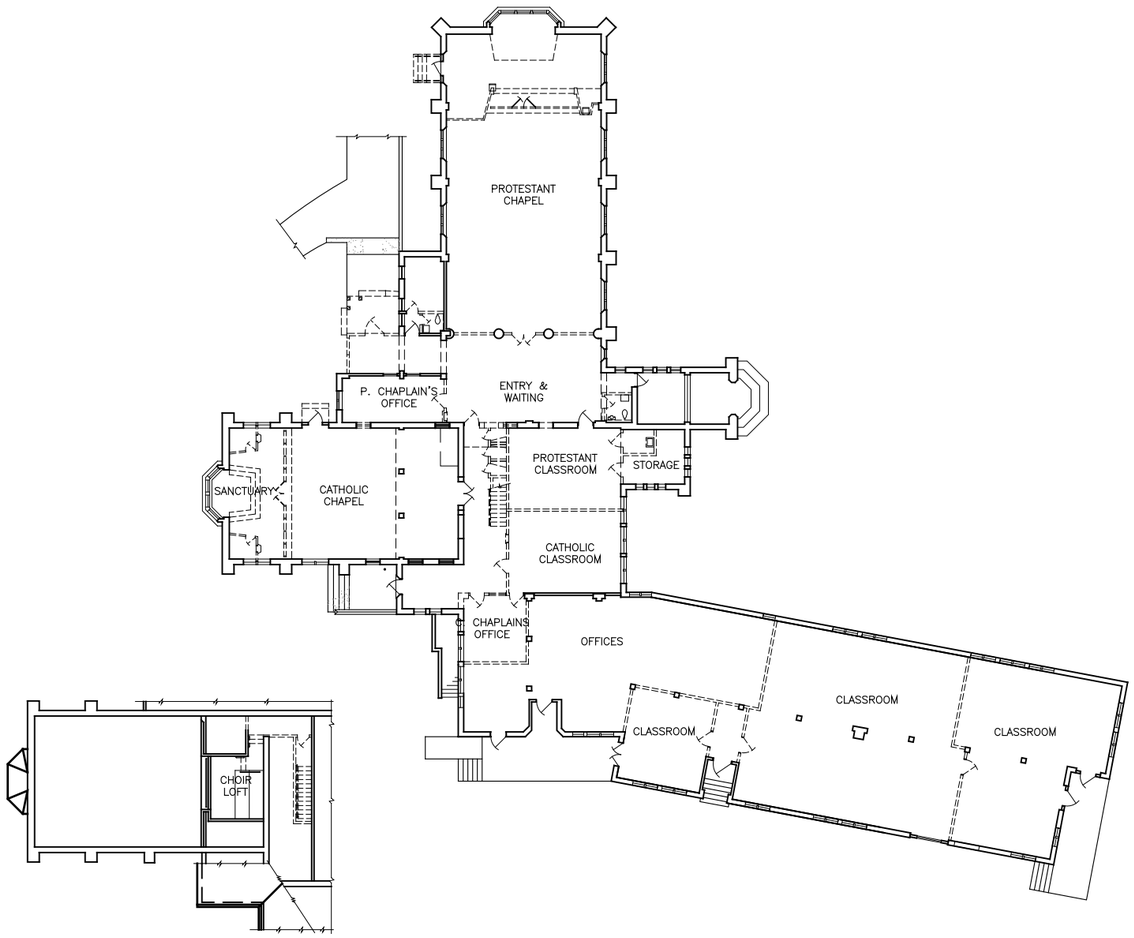
LEGEND
1 - COMMUNITY CENTER (former Chapel)
2 - CONTRIBUTING LANDSCAPE
3 - CONTRIBUTING OPEN AREA
4 - COMMUNITY PARK
5 - COMMUNITY POOL

Building 26
Chapel

PROPOSED USE: COMMUNITY CENTER

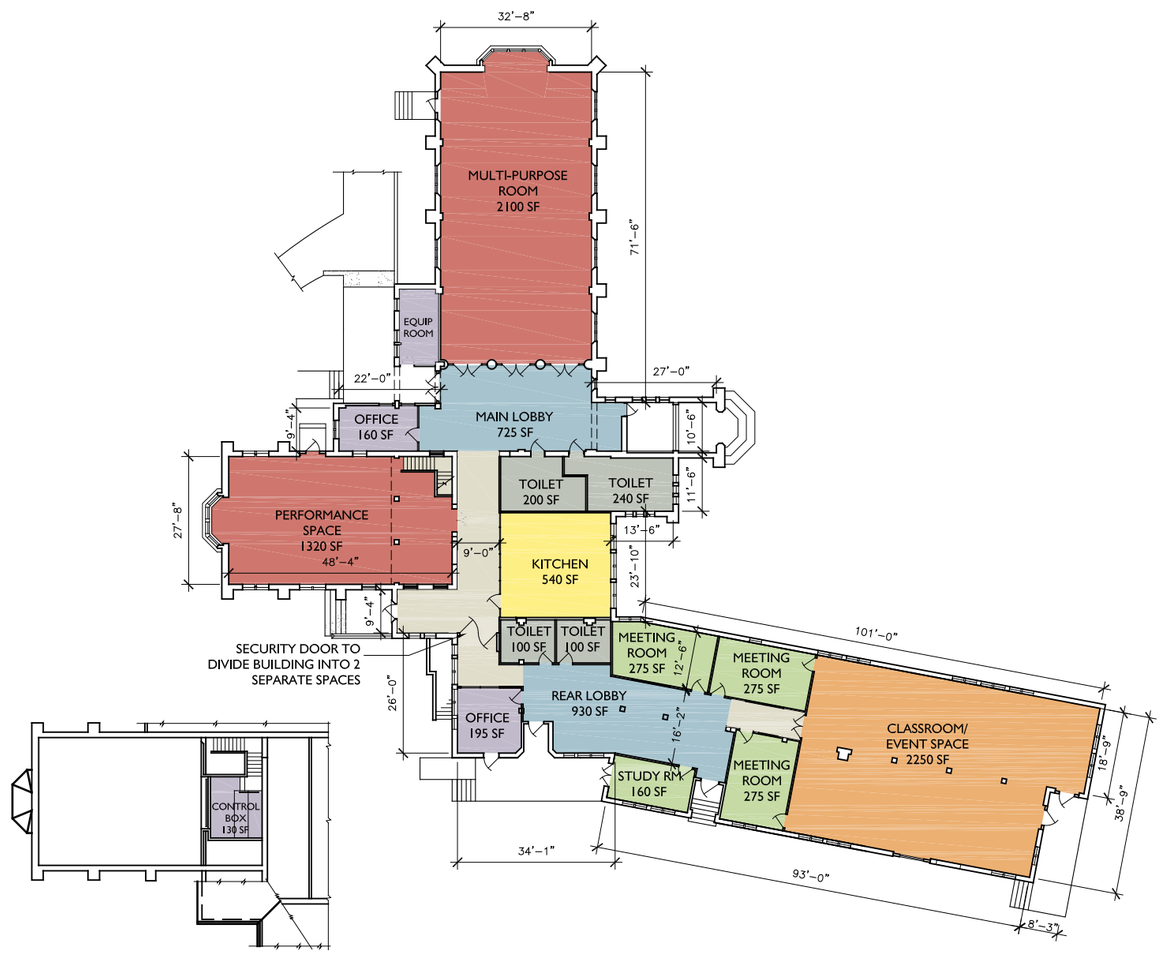
DEMOLITION SCOPE OF WORK

- Remove platforms associated with chapels
- Demo interior partitions as shown
- Remove stair to choir loft
- Repair water damage in entry & waiting area
- Demo entry vestibule on west side



EXISTING FLOOR PLAN W/ DEMO
Scale: 1/32" = 1'-0"

Building 26
Chapel



PROPOSED FLOOR PLAN
Scale: 1/32" = 1'-0"

PROPOSED USE: COMMUNITY CENTER

INTERIOR SCOPE OF WORK

- Refinish interiors while maintaining historic elements
- Install new stair to control rm
- Replace all non-original interior doors
- Install int partitions as shown
- Install fully equipped teaching kitchen

INTERIOR FEATURES

- Pointed arch masonry ribs on the ceilings
- Open plan of worship space

CODE RELATED SCOPE OF WORK

- Install auto. Sprinkler system
- Modify exit landings
- Install fire rated exit doors
- Increase toilet fixture count

BUILDING GROSS SF: 11,885 SF
PROPOSED BLDG NET SF: 11,595 SF

LEGEND

- MULTI-PURPOSE RMS 4420 SF (2)
- CLASSROOM/EVENT SPACE 2250 SF
- KITCHEN 540 SF
- SMALL MEETING ROOMS 985 SF (4)
- MAIN & REAR LOBBIES 1655 SF (2)
- OFFICE/EQUIP ROOM 455 SF (3)
- SERVICE SPACE 540 SF
- CIRCULATION 750 SF

Building 26
Chapel

WEST ELEVATION
Scale 1/16" = 1'-0"

SOUTH ELEVATION
Scale 1/16" = 1'-0"

PROPOSED USE: COMMUNITY CENTER

EXTERIOR SCOPE OF WORK

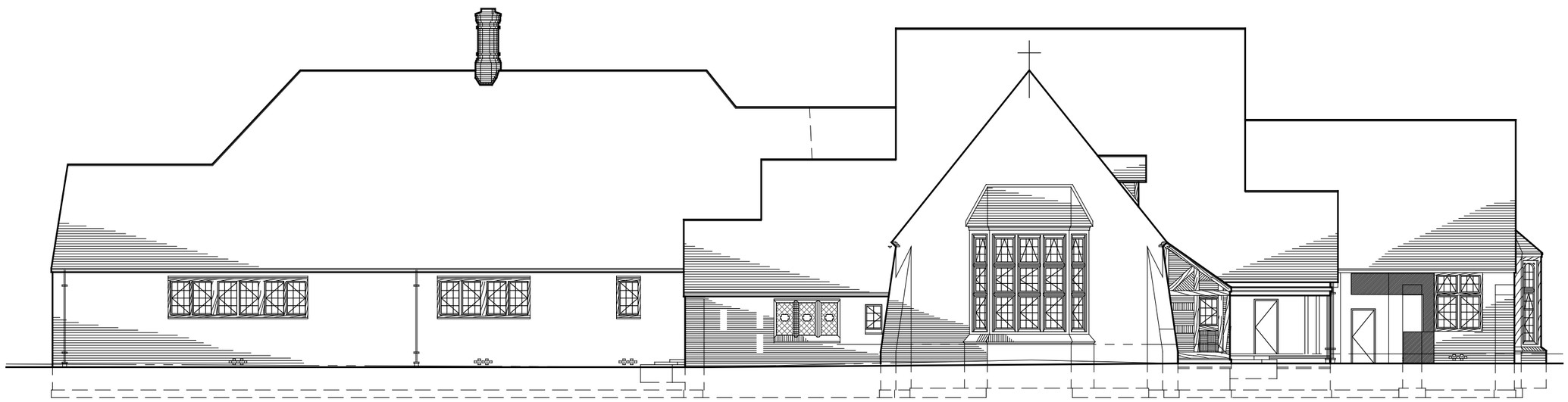
- Remove protestant chapel entrance addition
- Remove exterior air conditioning equipment (see photos)

EXTERIOR FEATURES

- "T"-shaped plan
- One-and-one-half story massing
- Steeply pitched hipped roof with cross gables
- Half-timbering in gable ends
- Wood casement multi-light windows
- Bay window with stained glass

Building 26
Chapel

NORTH ELEVATION
Scale 1/16" = 1'-0"



EAST ELEVATION
Scale 1/16" = 1'-0"

Building 26
Chapel

Zoning Summary

SECTION	ITEM	SUMMARY
	APN	8170-013-904
	Proposed Zoning	Workplace District
	Status	Historically Significant
	Proposed Use	Community Center
	Area	7,034 s.f. (not including 1936 addition)
	Date of Construction	1930-33
	Type of Construction	Brick masonry with wood roof

Required Parking:1/3 seats and 1/100 s.f. of area devoted to assembly purposes without fixed seats such as banquet, waiting, and reception rooms.

70.4 Stalls Required, assuming non fixed seating.

RELEVANT SECTIONS FROM CITY OF WHITTIER – (WBSP)

SECTION	ITEM	SUMMARY
WBSP Sect. 4.2.1	Land Use	Assembly/Meeting faculties are permitted in the Workplace District with review and approval of a Conditional Use Permit.
WBSP 1.10 (j.)	Historic Resources	Any building or structure within the Whittier Boulevard Specific Plan that has been deemed eligible for landmark designation, is listed as an historic landmark or is a contributing resource within a designated historic district on any Local, State or National Register of Historic Places may, for historic preservation and adaptive re-use purposes only, be permitted any land use to be contained within the historic building or structure, subject to the prior review and approval of a Conditional Use Permit.

Summary of Building Code Review

Proposed use: Community hall

Existing areas
- Building Gross S.F.: 11,991 sq. ft.
- Total N.S.F.: 10,633 sq. ft.

Building height
- Height at front: 44'
- Height at back: 44'

Occupancy type: Assembly; Group A-3
Construction type: Type IIIB; Brick masonry with wood roof
Occupant load: 1,106 persons
Fixture count
- Men's lavatories: 14
- Men's urinals: See code
- Men's W/C: 16
- Women's lavatories: 14
- Women's W/C: 17
- Drinking fountains: 0

See Appendix for full code analysis.

Height and Floor Area Limitations: The Nelles School Chapel Building is one story in height. The front of the building is 44' high, the rear is 44' high, and the average height is 44.0'. The total square footage of the building (10,633 sq. ft.) exceeds the maximum allowable area of 9,500 sq. ft. for Classification A-3/Type IIIB. Increases to allowable building size can be achieved through the installation of an automatic fire sprinkler system at the discretion of the governing building official.

Fire Sprinklers and Rating Requirements: It is assumed that the Nelles School Chapel Building will be sprinklered. As an existing building, code compliance would be at the discretion of the governing building official.

- Per CBC, because the fire area occupancy exceeds 300 persons, the building and exit discharges would require the installation of automatic fire sprinklers.
- No rating of the corridors is required in A occupancies with sprinkled corridors for occupant loads greater than 30 persons. This requirement can be met with the installation of an approved fire-sprinkler system.
- The existing discharge doors are not labeled as fire-rated. The existing exit passageway is not 1-hour rated as required by code, and rating identifications are not apparent on all of the existing doors or assemblies. Further evaluation would be required to determine if the existing doors meet code requirements, or new fire-rated doors would need to be installed.
- The egress path from the exit enclosure on the level of discharge is not currently protected throughout by an approved automatic sprinkler system. This requirement is not currently met, but would be met with the installation of an approved automatic fire sprinkler system.

Egress and Exit Requirements: The existing landings at the exit doors, exit doors, door thresholds, locking devices, and much of the existing hardware do not currently meet code requirements. As an existing building, compliance with various sections of the code would be at the discretion of the governing building official.

- Based upon the anticipated occupancy, the minimum required net clear width of stairways is 331.8" and of corridors is 221.2". Many of the existing exit stairs and corridors would need to be widened in order to comply with this requirement.
- The existing main exit door (north entrance to Main Lobby) of the Nelles School Chapel Building would need to be modified to provide a minimum net clear width of 110.5"
- The landings located at the exterior doors from the existing Catholic Chapel and the existing Protestant Chancel do not provide 44" inch landings. Those landings would need to be made larger if these doors serve the building as exits. Remaining exits meet this requirement.
- An egress lighting system and an emergency lighting system would need to be installed in order to comply with the code.
- Accessible means of egress are not required in alterations to existing buildings such as the Nelles School Chapel Building. Existing thresholds would need to be modified or replaced in order to comply with code requirements.
- New locking devices and door hardware would need to be installed in order to comply with the code.

- The Nelles School Chapel Building currently does not have illuminated exit signs and will require those so as to comply with these requirements. Tactile exit signs are not currently present and would also need to be installed.
- The existing fixed seating in the chapel areas not meet code requirements, and replacement of the pews would be at the discretion of the governing building official. If new pews are proposed as a part of the modification of the Nelles School Chapel Building, the layout of those seats must comply with the code. The allowable occupancy may also change based upon the capacity of those seats. No pews have been considered as a part of this analysis.
- The existing entry/exit ramps would need to be modified or replaced in order to comply with code requirements, and any new exit ramps would need to meet current code requirements.

Stairs: The existing stairs, stairway handrails, and guards do not currently meet code requirements. As an existing building, compliance with various sections of the code would be at the discretion of the governing building official.

- The existing stairs and handrails would need to be modified or replaced, and handrail extensions and new guards would need to be provided in order to meet code requirements.

Accessibility: In its current state, the Nelles School Chapel Building is not fully accessible throughout. However, as an existing building, accessibility may not be required upon discretion of the governing building official. Any future renovations shall comply with code requirements for accessibility.

- The required number of assistive listening systems is not currently met, however as an existing building, this may not be required. Future renovations shall provide accommodation per this section of the code.
- The existing restroom facilities possess many deficiencies in regard to accessibility, however code compliance would be at the discretion of the governing building official. If existing restrooms were to be renovated, they would be required to meet accessibility requirements for wheelchair clearance, clear floor space at fixtures, water closets, water closet compartments, urinals, lavatories, passageways, symbols, grab bars, and accessories. The existing space allocated to toilet facilities most like would not accommodate the accessibility clearances or the number of fixtures required by the CPC.
- Currently, drinking fountains are not provided. As an existing building, this and other building components (such as telephones, signs and identification, symbols of accessibility) may not be required. Any future modifications, however, shall be in compliance with the code.
- Currently, no accessible means of egress are provided within the building, but as an existing building, this may not be required. By code, alterations to existing buildings such as the Nelles School Gymnasium do not require an accessible means of egress. As an existing structure, those conditions may be allowed to remain at the discretion of the governing building official.
- The existing exterior entry ramps would need to be modified or replaced in order to comply with code requirements.

Building Construction: The Nelles School Chapel is classified as Type IIIB. All structural elements and bearing walls are made of non-combustible materials. The roof of the Chapel is made of wood. Type IIIB does not require that any element except the exterior bearing walls have any rating (2 hours in this case).

Structural Requirements: See Structural Analysis.

Cost Estimate Summary (Mack5)

B6 Chapel Detail | Job #11317 | October 19, 2011

mack5

Proposed Use: Community Center	Quantity	Unit	Rate	Total ($)

Scope:

The proposed re-use for the Chapel building is a new community center. The scope of work is to include the following: demolition of the interior partitions, demolition and relocation of existing stairway at choir loft, removal of chapel furnishings, demolition of entry vestibule, and build-out mixed use spaces. No other major modifications or features are proposed at this time for the re-use of this building as a church. Per Re-Use Feasibility Study, Reuse Description on page 98

Control Quantities (per digital take-off):

Stories	1	EA
Enclosed area	11,885	SF
Roof area (includes slope factor)	18,835	SF
Interior partitions	395	LF
Plumbing fixtures - allow	14	FX
Subtotal: Gross floor area	11,885	SF

Construction Costs (see below):

Structural Improvements			$83.54	$992,875
Code Improvements*			$77.63	$922,608
Architectural Improvements			$90.02	$1,069,944
Site Improvements			$78.16	$928,955
Total: Construction	11,885	SF	$329.35	$3,914,381

*Please note, there is potential that Building Official can excuse Code Requirement

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VI.7 BUIDING 14 – GROCERY STORE (FORMER GARAGE/MAINTENANCE BUILDING)

Reuse Description

The proposed re-use for the Old Maintenance Garage building is a new grocery store. The scope of work is to include the following: demolition of the interior partitions and mezzanines, infill of an existing wall opening, new loading dock/lifts for delivery, and build-out for some small offices, restrooms, and storage space. No other major modifications or features are proposed at this time for the re-use of this building as a grocery store.

STRUCTURAL DESCRIPTION (STRUCTURAL FOCUS)

These modifications and their corresponding structural implications are summarized as follows:

1. Demolition of interior partitions and partial mezzanines. No structural implications. The items being removed are assumed to be non-load bearing structure and thus have no effect on the overall building structure.
2. Infill of (E) opening. Provide new reinforced concrete or concrete masonry units along with epoxy/adhesive dowels to infill the existing opening.
3. New dock lifts for delivery trucks. New lifts will likely require strengthening of the existing concrete slab, or new foundations to support the added loads.
4. Office, restrooms, storage. Assuming the construction for these rooms is light framing and does not impose large forces on the building elements, there are no structural implications.

STRUCTURAL RECOMMENDATIONS (STRUCTURAL FOCUS)

Based on the building evaluation, there are several potential and actual deficiencies in the building that require further investigation and/or mitigation. The recommended mitigation measures for the building deficiencies are described below:

1. Provide shear transfer between the roof and existing walls by adding new wood ledgers and blocking members to connect the existing roof diaphragm to the existing shear walls.
2. Strengthen the existing roof diaphragm with new plywood sheathing added above existing 1x sheathing or attached to the underside of the existing roof framing. Provide additional framing clips/straps for collector elements and at diaphragm openings.
3. Strengthen the existing brick URM walls with new shotcrete or composite fiber-reinforcing (FRP) or provide new lateral load resisting elements in the building interior. New lateral elements will require connection to the existing diaphragm and likely new foundations.
4. Provide new out-of-plane anchors/hold-downs along the building perimeter for anchorage of the existing walls to the roof diaphragm. Additional wood blocking, straps and framing clips would also be required.
5. Repair/replace damaged masonry units, and patch and fill existing cracks with epoxy injection.
6. Provide secondary steel supports for trusses supported on URM walls
7. Conduct an ASCE 31-03 Tier 2 investigation to confirm Tier 1 deficiencies where applicable.

STRUCTURAL CONCLUSION (STRUCTURAL FOCUS)

Based on available information gathered at the time of this report, a visual observation of the building and some rough calculations, the preliminary evaluation of the Old Maintenance Garage building, in accordance with the CHBC and a Tier 1 check per the ASCE standard 31-03, has identified several potential structural deficiencies in the building. To meet the California Historic Building Code requirements, it is recommended that the identified structural deficiencies be addressed. This would include, but is not limited to, further field investigation, and a more detailed structural evaluation following the CHBC and ASCE 31-03, and potentially structural strengthening as described. Further investigation/evaluation may eliminate some of the listed potential deficiencies and required strengthening.

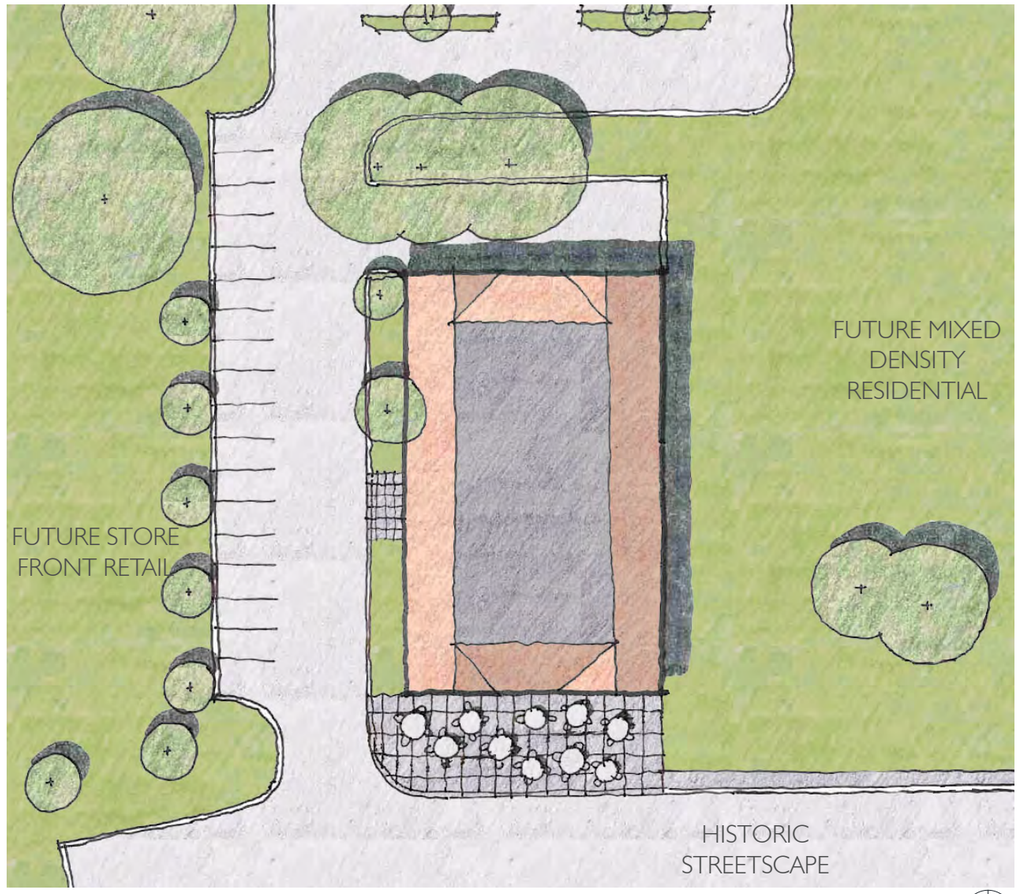
Conceptual Drawings & Program

- Proposed Site Plan
- Existing Floor Plan w/ Demo
- Proposed Floor Plan
- Proposed Exterior Elevations

PROPOSED USE: GROCERY STORE

SITE SCOPE OF WORK

- Protect existing trees
- Reconfigure side walks to align with new parking per plan
- Repair/restore landscaping
- Provide new parking per plan



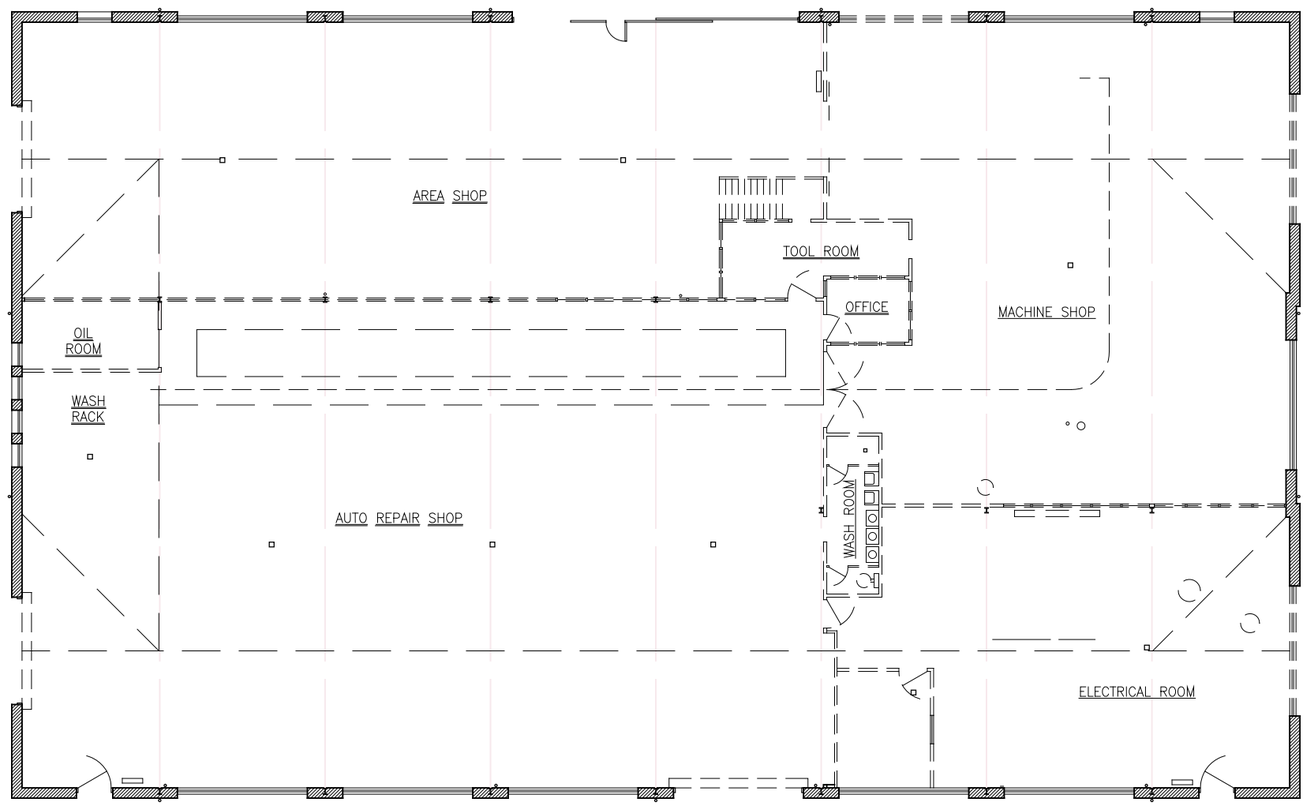
SITE PLAN
Scale: 1" = 50'-0"

Building 14
Maintenance Building (Garage)

EXISTING CONDITIONS

DEMOLITION SCOPE OF WORK

- Demo all interior partitions
- Remove all existing equipment
- Demo plywood infill and windows at east facade
- Demo overhead doors at west and south facade



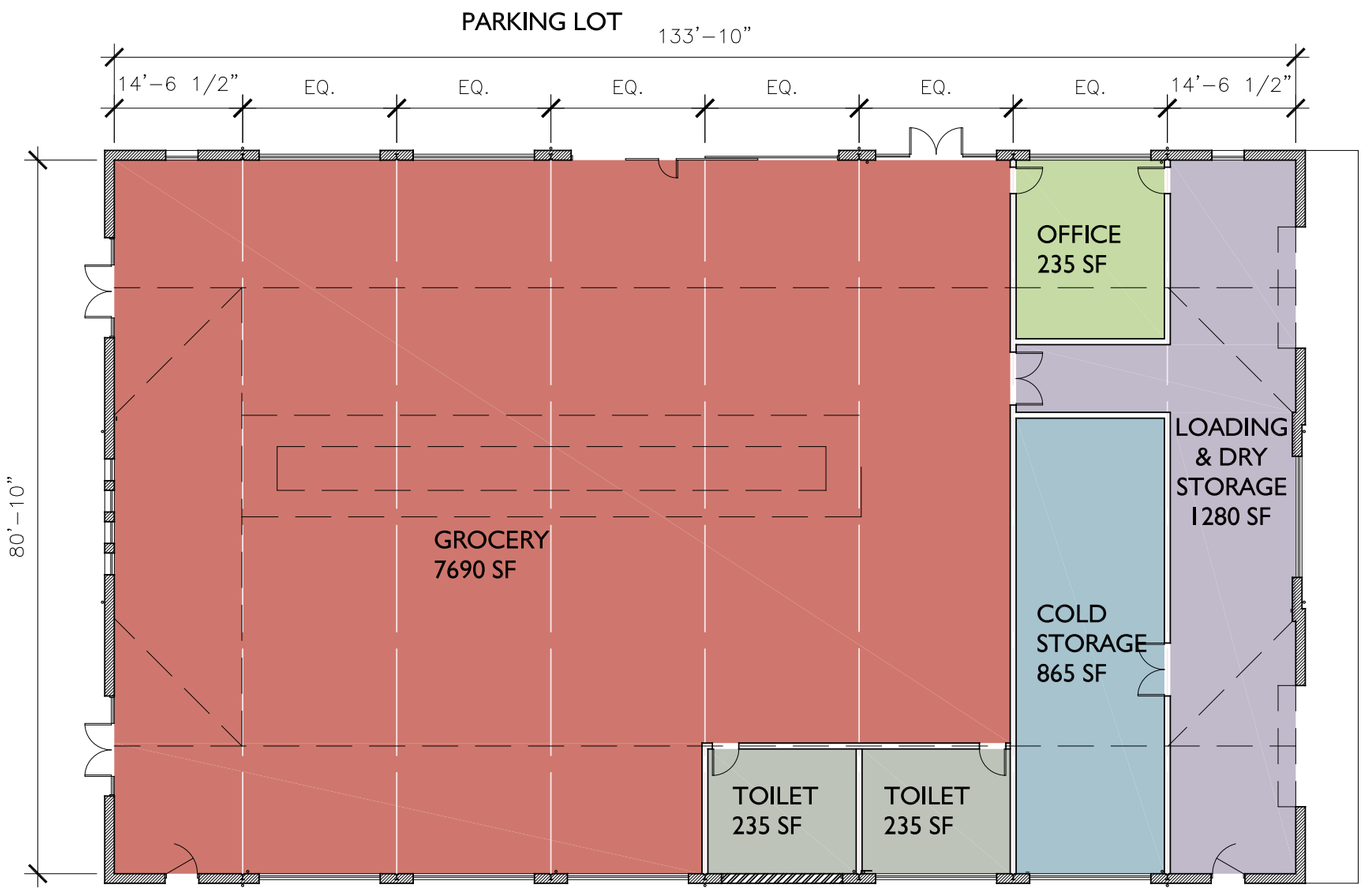
EXISTING FLOOR PLAN W/ DEMO
Scale: 1/16" = 1'-0"

LEGEND

DEMO

OVERHEAD

Building 14
Maintenance Building (Garage)



PROPOSED FLOOR PLAN
Scale: 1/16" = 1'-0"

PROPOSED USE: GROCERY STORE

INTERIOR SCOPE OF WORK

- Full interior fit out
- Provide dock levelers for loading
- Preserve existing skylight
- New storefront infill at west facade
- Infill opening at south facade
- Provide sun protection for windows on south facade
- Preserve exposed metal truss
- Repair or replace flat roof
- Repair original windows

CODE RELATED SCOPE OF WORK

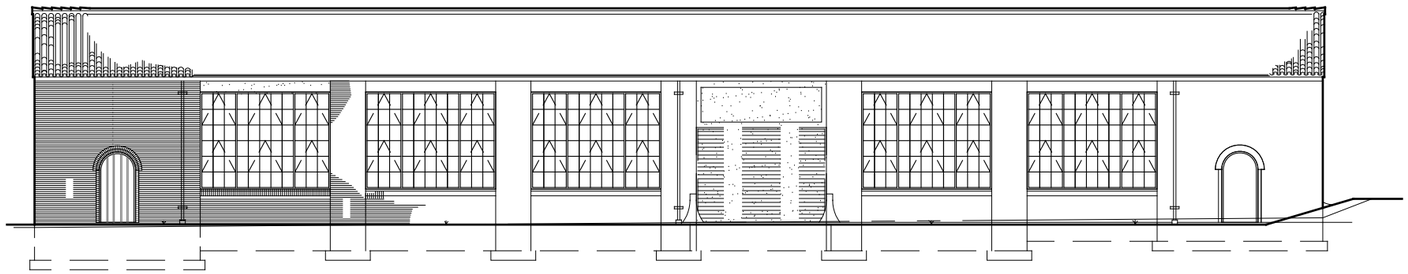
- Modify existing doors to meet code requirements
- Increase toilet count
- Provide exit signage

BUILDING GROSS SF: 11,295 SF
BUILDING NET SF: 10,540 SF

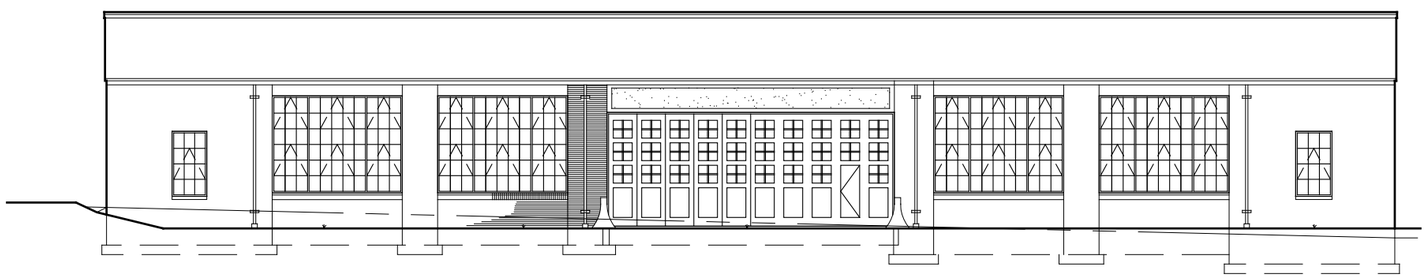
LEGEND

- GROCERY 7690 SF
- OFFICE 235 SF
- COLD STORAGE 865 SF
- LOADING & DRY STORAGE 1280 SF
- SERVICE 470 SF

Building 14
Maintenance Building (Garage)



NORTH ELEVATION
Scale 1/16"=1'-0"



SOUTH ELEVATION
Scale 1/16"=1'-0"

PROPOSED USE: GROCERY STORE

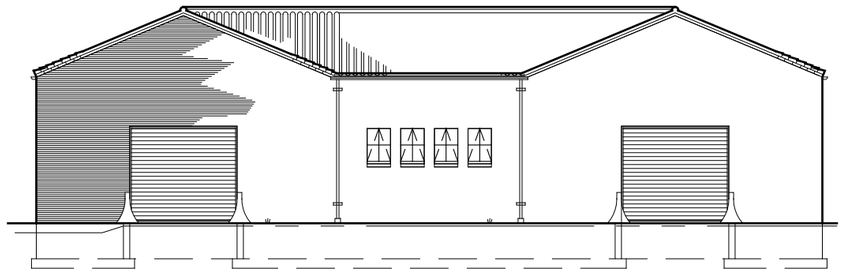
EXTERIOR SCOPE OF WORK

- Repair original windows
- Replace swing doors on north elevation
- Repair large sliding door on south elevation
- Infill door opening on north elevation

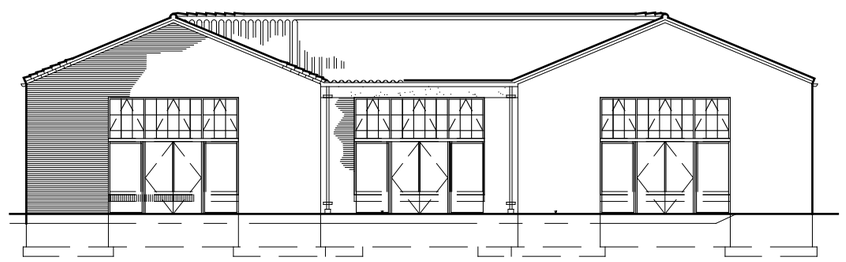
EXTERIOR FEATURES

- Rectilinear plan
- One-story massing
- Gabled roof with terra cotta cladding
- Multi-light, steel-sash windows
- Sliding, multi-light garage door on steel tracks

Building 14
Maintenance Building (Garage)



WEST ELEVATION
Scale 1/16"=1'-0"



EAST ELEVATION
Scale 1/16"=1'-0"

PROPOSED USE: GROCERY STORE

EXTERIOR SCOPE OF WORK

- Replace existing plywood infill panels with glass doors on east elevation
- Repair original windows at west elevation
- Replace glazing in existing upper windows on east elevation

EXTERIOR FEATURES

- Rectilinear plan
- One-story massing
- Gabled roof with terra cotta cladding
- Multi-light, steel-sash windows
- Sliding, multi-light garage door on steel tracks

Building 14
Maintenance Building (Garage)

Zoning Summary

SECTION	ITEM	SUMMARY
	APN	8170-013-904
	Proposed Zoning	Workplace District
	Status	Contributor
	Proposed Use	Grocery, Artist Studio, Restaurant or Branch Library
	Area	10,679 s.f.
	Date of Construction	1931
	Type of Construction	Brick masonry/concrete with steel trusses and wood roof

Required Parking General Retail:1/250 s.f.

43 Required Stalls

RELEVANT SECTIONS FROM CITY OF WHITTIER – (WBSP)

SECTION	ITEM	SUMMARY
WBSP Sect. 4.2.1	Land Use	Limited office uses which are compatible with residential uses are permitted in the Workplace District Zone. While residentially compatible, art/craft-oriented businesses are encouraged in the Workplace Zone, only limited retail uses are allowed. Restaurant/Cafe uses are permitted within the Workplace District Zone in designated locations. Restaurants/Cafes serving alcohol require review and approval of a Conditional Use Permit. Libraries uses are not specifically listed in *Table 4-1: Allowable Uses and Permit Requirements* of the WBSP. Government Facilities are however permitted. The proposed use of the structure may also be allowed under Section 1.10 (j) of the WBSP. (See *"Service Uses;"* Table 4-1)
WBSP 1.10 (j.)	Historic Resources	Any building or structure within the Whittier Boulevard Specific Plan that has been deemed eligible for landmark designation, is listed as an historic landmark or is a contributing resource within a designated historic district on any Local, State or National Register of Historic Places may, for historic preservation and adaptive re-use purposes only, be permitted any land use to be contained within the historic building or structure, subject to the prior review and approval of a Conditional Use Permit.

Summary of Building Code Review

Proposed use: Mercantile (grocery)

Existing areas
- Building Gross S.F.: 11,288 sq. ft.
- Total N.S.F.: 10,679 sq. ft.

Building height
- Height at front: 43'
- Height at back: 46'

Occupancy type: Mercantile; Group M
Construction type: Type IIIB; Brick masonry and concrete with wood over steel roof trusses
Occupant load: 164 persons
Fixture count
- Men's lavatories: 2
- Men's urinals: See code
- Men's W/C: 2
- Women's lavatories: 2
- Women's W/C: 4
- Drinking fountains: 0

See Appendix for full code analysis.

Height and Floor Area Limitations: The Nelles School Old Infirmary is one story in height. The front of the building is 43' high, the rear is 46' high, and the average height is 44.5'. The total square footage of the building (10,679 sq. ft.) is less than the maximum allowable 12,500 sq. ft. for Classification M/Type IIIB.

Fire Sprinklers and Rating Requirements: It is assumed that the sales floor area of the Nelles School Maintenance Building will be non-sprinklered. As an existing building, code compliance would be at the discretion of the governing building official.

- If converted to mercantile (grocery) use, most likely the use would include an incidental use of a storage room of over 100 square feet, and thus may require separation as specified in Table 508.2 (automatic fire-extinguishing system) for that portion.
- Per CBC, the occupancy level of the sales floor would not require installation of an automatic sprinkler system. However, a stockroom over 100 square feet may require separation as specified in Table 508.2 (automatic fire-extinguishing system) for that portion.

Egress and Exit Requirements: The existing exit doors, door thresholds, locking devices, and much of the existing hardware do not currently meet code requirements. As an existing building, compliance with various sections of the code would be at the discretion of the governing building official.

- Although the building currently has two exit doors, they are both located on the south side of the building and do not provide the separation of exits as required by the 2010 CBC. A number of existing openings are present that conform to the separation requirements and would provide the necessary separation. The existing sliding or folding doors would, however, have to be modified to side-hinged swinging doors in order to meet egress requirements.
- Although the building currently has two exit doors, both swing inward. The swing pattern of those doors would need to be reversed in order to comply with code requirements.

- The Nelles School Maintenance Building does not currently contain exit enclosures. Any future exit enclosures would need to meet current code requirements.
- An egress lighting system and an emergency lighting system would need to be installed in order to comply with the code.
- Accessible means of egress are not required in alterations to existing buildings such as the Nelles School Maintenance Building. Existing thresholds would need to be modified or replaced in order to comply with code requirements.
- New locking devices and door hardware would need to be installed in order to comply with the code.
- The Nelles School Maintenance Building currently does not have illuminated exit signs and will require those so as to comply with these requirements. Tactile exit signs are not currently present and would also need to be installed.

Stairs: The existing stairway handrails and guards do not currently meet code requirements. As an existing building, compliance with various sections of the code would be at the discretion of the governing building official.

- Although the Nelles School Maintenance Building is a one-story structure, it does contain an elevated observation platform served by a set of stairs. The existing stairway treads, risers, handrails, and guard heights do not currently meet code requirements. If the observation platform is retained, the existing stairs and handrails would need to be modified or replaced, and handrail extensions and new guards would need to be provided in order to meet code requirements.

Accessibility: In its current state, the Nelles School Maintenance Building is not fully accessible throughout. However, as an existing building, accessibility may not be required upon discretion of the governing building official. Any future renovations shall comply with code requirements for accessibility.

- Assuming restrooms would be added as part of the adaptation of this building, those spaces would be required to meet accessibility requirements for wheelchair clearance, clear floor space at fixtures, water closets, water closet compartments, urinals, lavatories, passageways, symbols, grab bars, and accessories. New restroom spaces would also be required to accommodate the number of fixtures required by the CPC.
- Currently, drinking fountains are not provided. As an existing building, this and other building components (such as telephones, signs and identification, symbols of accessibility) may not be required. Any future modifications, however, shall be in compliance with the code.
- By code, alterations to existing buildings such as the Nelles School Maintenance Building do not require an accessible means of egress. As an existing structure, those conditions may be allowed to remain at the discretion of the governing building official.

Building Construction: The Nelles School Maintenance Building is classified as Type IIIB. All structural elements and bearing walls are made of non-combustible materials. The roof of the Maintenance Building is made of wood decking over steel. Type IIIB does not require that any element except the exterior bearing walls have any rating (2 hours in this case).

Structural Requirements: See Structural Analysis.

Cost Estimate Summary (Mack5)

B7 Maintenance Building Detail | Job #11357 | October 10, 2011

mack5

Proposed Use: Grocery Store	Quantity	Unit	Rate	Total ($)

Scope:

The proposed re-use for the Old Maintenance Garage building is a new grocery store. The scope of work is to include the following: demolition of the interior partitions and mezzanines, infill of an existing wall opening, new loading dock/lifts for delivery, and build-out for some small offices, restrooms, and storage space. No other major modifications or features are proposed at this time for the re-use of this building as a grocery store. Per Re-Use Feasibility Study, Reuse Description on page 109

Control Quantities (per digital take-off):

Stories	1	EA
Enclosed area	11,295	SF
Roof area (includes slope factor)	16,655	SF
Interior partitions	255	LF
Plumbing fixtures - allow	6	FX
Subtotal: Gross floor area	11,295	SF

Construction Costs (see below):

Structural Improvements			$53.36	$602,746
Code Improvements*			$38.37	$433,428
Architectural Improvements			$68.41	$772,681
Site Improvements			$33.82	$381,967
Total: Construction	11,295	SF	$193.96	$2,190,822

*Please note, there is potential that Building Official can excuse Code Requirement

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VI.8 BUIDING 5 – CHURCH (FORMER GYMNASIUM)

Reuse Description

The proposed re-use for the Gymnasium building is a church. The scope of work includes the following: demolition of the entire 1962 southwest addition area, demolition of interior partition walls, demolition of plumbing, doors, and other non-structural items, reconstruct the patio area at southwest corner to match original building construction, new openings in first floor for elevator and stairway to ground floor/basement, new windows in exterior walls at ground level, and build out of new rooms/offices in the existing building (on the first floor and in the basement). No other major modifications or features are proposed at this time for the re-use of this building as a community theater.

STRUCTURAL DESCRIPTION (STRUCTURAL FOCUS)

The modifications and their corresponding structural implications are summarized as follows:

1. Demolition of existing addition area for new patio. It is our understanding that the existing addition will be demolished and rebuilt as a patio to match the existing construction. The building will be restored to its original construction, so there will be no major structural implications. The new patio will need to be designed and constructed for current code forces, and will likely be wood framed with concrete foundations. It is assumed that the existing foundations are not salvageable or reusable.
2. New floor opening (stairway). The new floor opening for the stairway will likely require additional framing members to support the existing wood floor joists, as well strengthening and/or replacement of floor beams. In addition new steel or wood framing members will be required for the stair structure itself. Some strengthening of the existing floor slab and new foundations may also be required.
3. New floor opening (elevator). The new floor opening for the elevator will likely require additional framing members to support the existing wood floor joists, as well strengthening and/or replacement of floor beams. Alternatively, the new elevator walls can be used as bearing walls for the existing framing. The elevator walls will likely be concrete or masonry block and will require a new concrete elevator pit/foundation.
4. New window openings. The windows will require new openings to be cut in the existing concrete walls. Exact size/quantity/locations are not known at this time, but this will likely not require any extensive structural work. Some steel strong-backs with epoxy anchors to the existing concrete may be required around the new window openings.
5. Demolition of interior partitions. No structural implications. The walls being removed are assumed to be non-load bearing partitions and thus have no effect on the building structure.
6. Build out for new rooms, restrooms, offices. Assuming the construction for these rooms is light framing and does not impose large forces on the building elements, there are no structural implications. Some minor work may be required for floor or wall penetrations for MEP, typical details will likely apply.
7. New organ/piano. The floor will need to be analyzed for the large concentrated load for this and any other equipment supported by existing framing. If programming allows for relocation of the equipment, it is suggested that it is located above posts or beams below in order to minimize or eliminate the need for strengthening of the floor joists.

STRUCTURAL RECOMMENDATIONS (STRUCTURAL FOCUS)

Based on the building evaluation, there are some potential deficiencies in the building that require further investigation and/or mitigation. The recommended mitigation measures for the building deficiencies are described below:

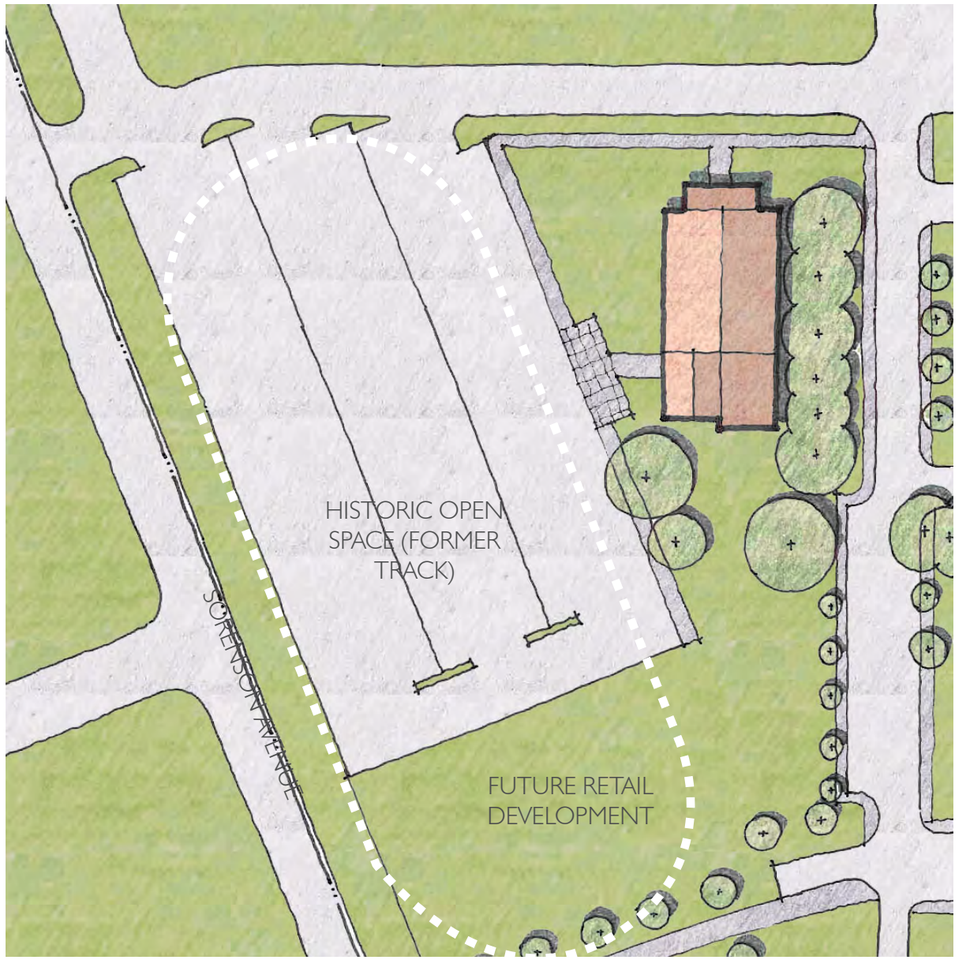
1. Strengthen the existing roof diaphragm with new plywood sheathing added above existing 1x sheathing or attached to the underside of the existing roof framing. Provide additional framing clips/straps for collector elements and cross ties.
2. Strengthen the connections or provide new out-of-plane anchors/hold-downs along the building perimeter for anchorage of the existing walls to the roof diaphragm. Additional wood blocking, straps and framing clips would likely also be required.
3. Repair cracks in existing wall with epoxy injection.
4. Conduct an ASCE 31-03 Tier 2 investigation to confirm Tier 1 deficiencies where applicable.

STRUCTURAL CONCLUSION (STRUCTURAL FOCUS)

Based on available information gathered at the time of this report, a visual observation of the building and some rough calculations, the preliminary evaluation of the Auditorium building, in accordance with the CHBC and a Tier 1 check per the ASCE standard 31-03, has identified some potential structural deficiencies in the building. To meet the California Historic Building Code requirements, it is recommended that the identified structural deficiencies be addressed. This would include, but is not limited to, further field investigation, and a more detailed structural evaluation following the CHBC and ASCE 31-03, and potentially structural strengthening as described. Further investigation/evaluation may eliminate some of the listed potential deficiencies and required strengthening.

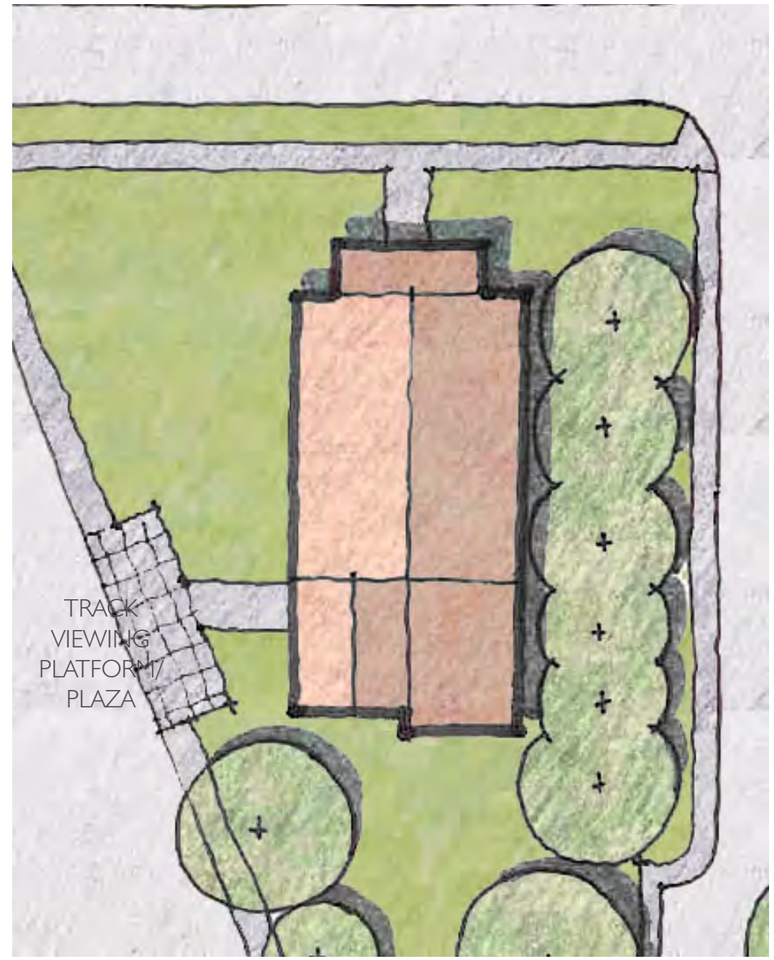
Conceptual Drawings & Program

- Proposed Site Plan
- Existing Basement Floor Plan w/ Demo
- Existing Ground Floor Plan w/ Demo
- Proposed Basement Floor Plan
- Proposed Ground Floor
- Proposed Exterior Elevations



SITE PLAN
Scale: 1" = 100'-0"

PROJECT NORTH



SITE PLAN
Scale: 1" = 50'-0"

PROJECT NORTH

PROPOSED USE: CHURCH

SITE SCOPE OF WORK

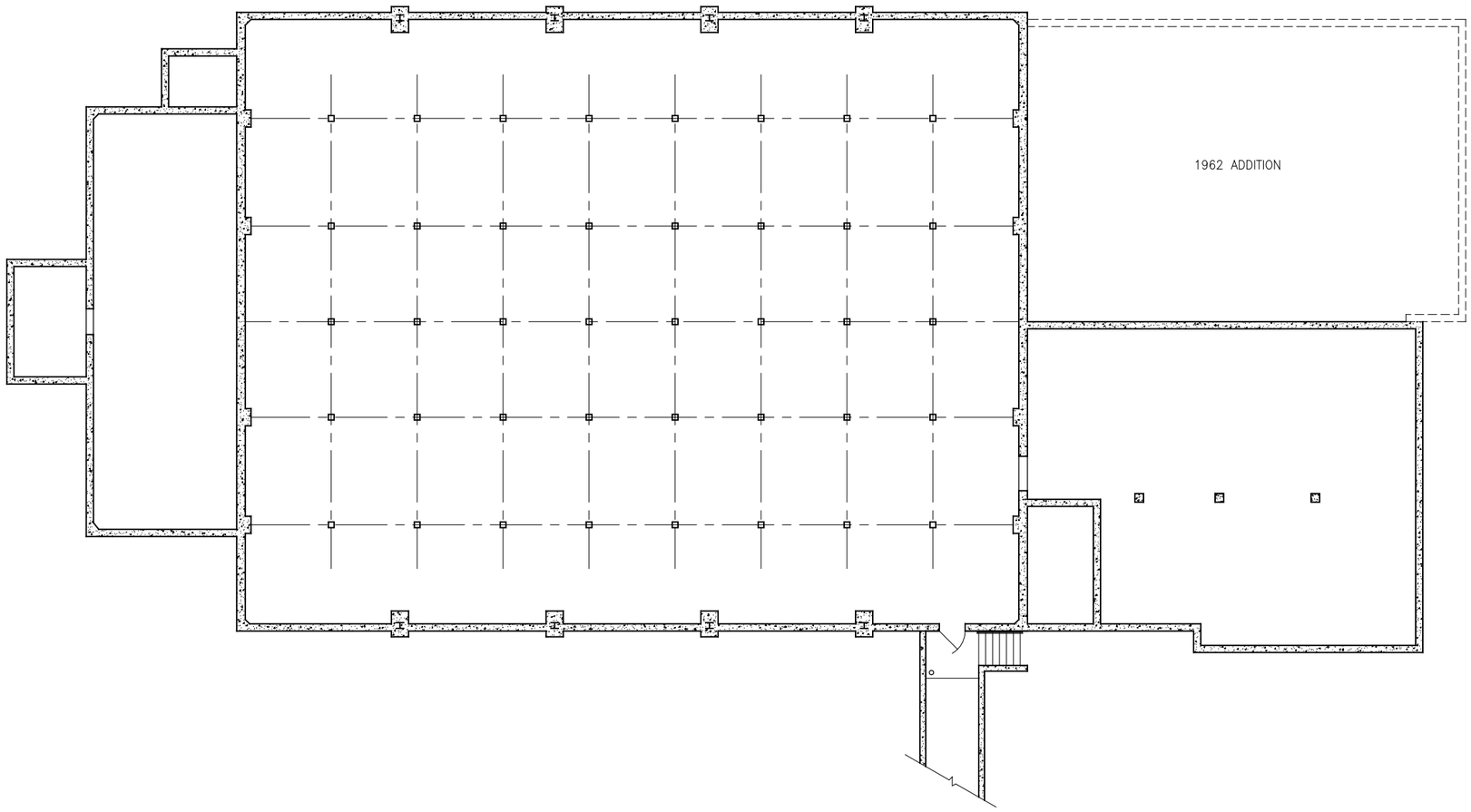
- Protect existing gardens and trees
- Reconfigure side walks to align with new parking per plan
- Repair/restore landscaping
- New parking per plan
- Protect and retain viewing platform

Building 5
Gymnasium

EXISTING CONDITIONS

DEMOLITION SCOPE OF WORK

- Demo portions of exterior wall for new window openings (see proposed plan)
- Demo 1962 addition



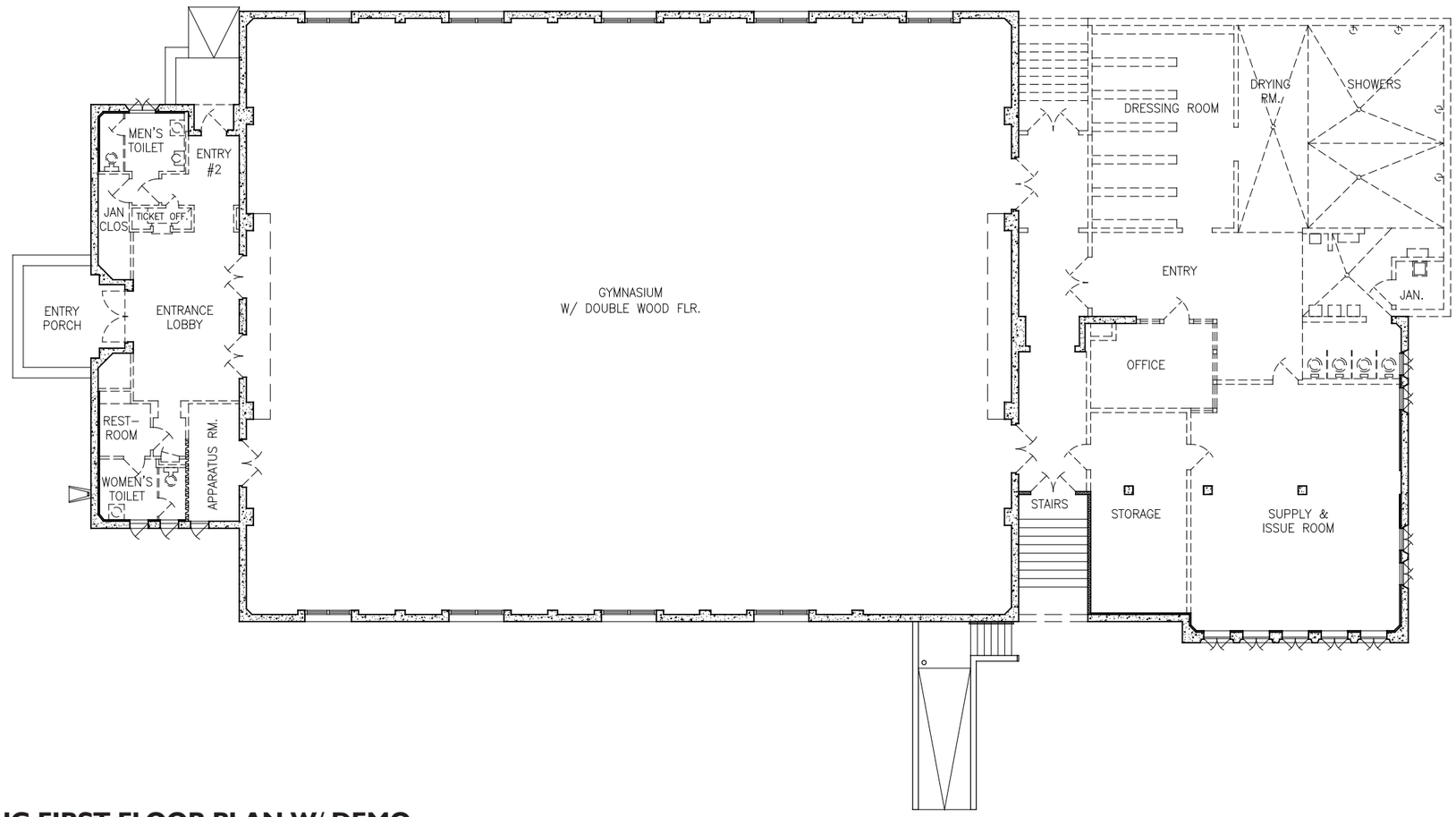
EXISTING GROUND FLOOR PLAN W/ DEMO
Scale: 1/16" = 1'-0"

LEGEND

(E) TO BE DEMOLISHED

(E) TO REMAIN

Building 5
Gymnasium



EXISTING FIRST FLOOR PLAN W/ DEMO
Scale: 1/16" = 1'-0"

EXISTING CONDITIONS

DEMOLITION SCOPE OF WORK

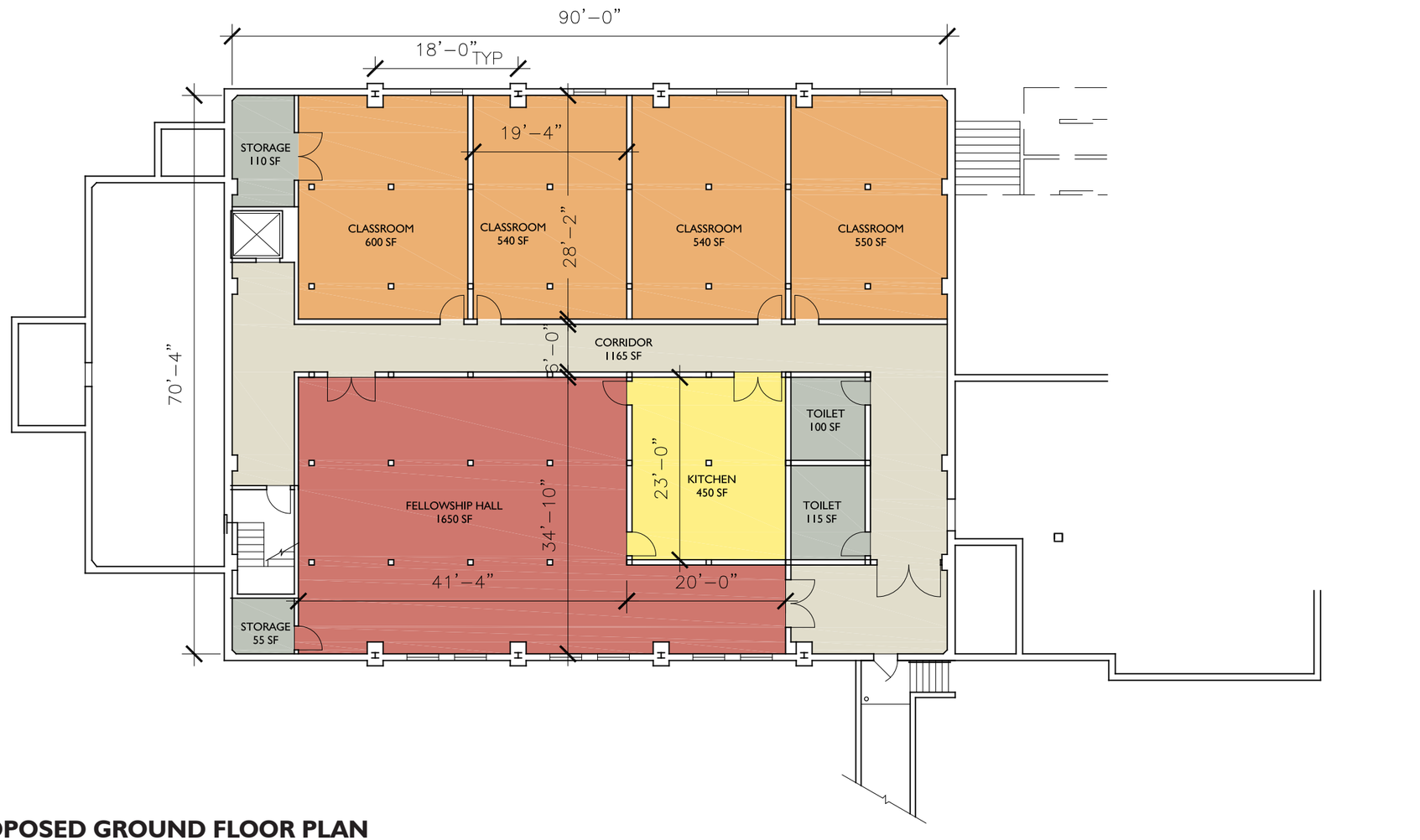
- Demo (e) non-historic doors
- Demo (e) interior partitions as shown
- Demo (e) toilet partitions & plumbing fixtures as shown
- Demo (e) sloped tile floors as shown
- Demo (e) concrete stairs @ north side
- Demo (e) floor finish @ entrance lobby & entry #2
- Demo (e) exterior walls as shown

EXISTING FIRST FLOOR GSF: 9,230 SF
EXISTING FIRST FLOOR NSF: 8,219 SF

LEGEND

(E) TO BE DEMOLISHED
(E) TO REMAIN

Building 5
Gymnasium



PROPOSED GROUND FLOOR PLAN
Scale: 1/16" = 1'-0"

PROPOSED USE: CHURCH

GROUND FLOOR SCOPE OF WORK

- Patio foundation
- New interior partitions as shown
- New full kitchen for catering
- New interior finishes throughout ground floor
- New elevator
- New windows along north & south walls

CODE RELATED SCOPE OF WORK

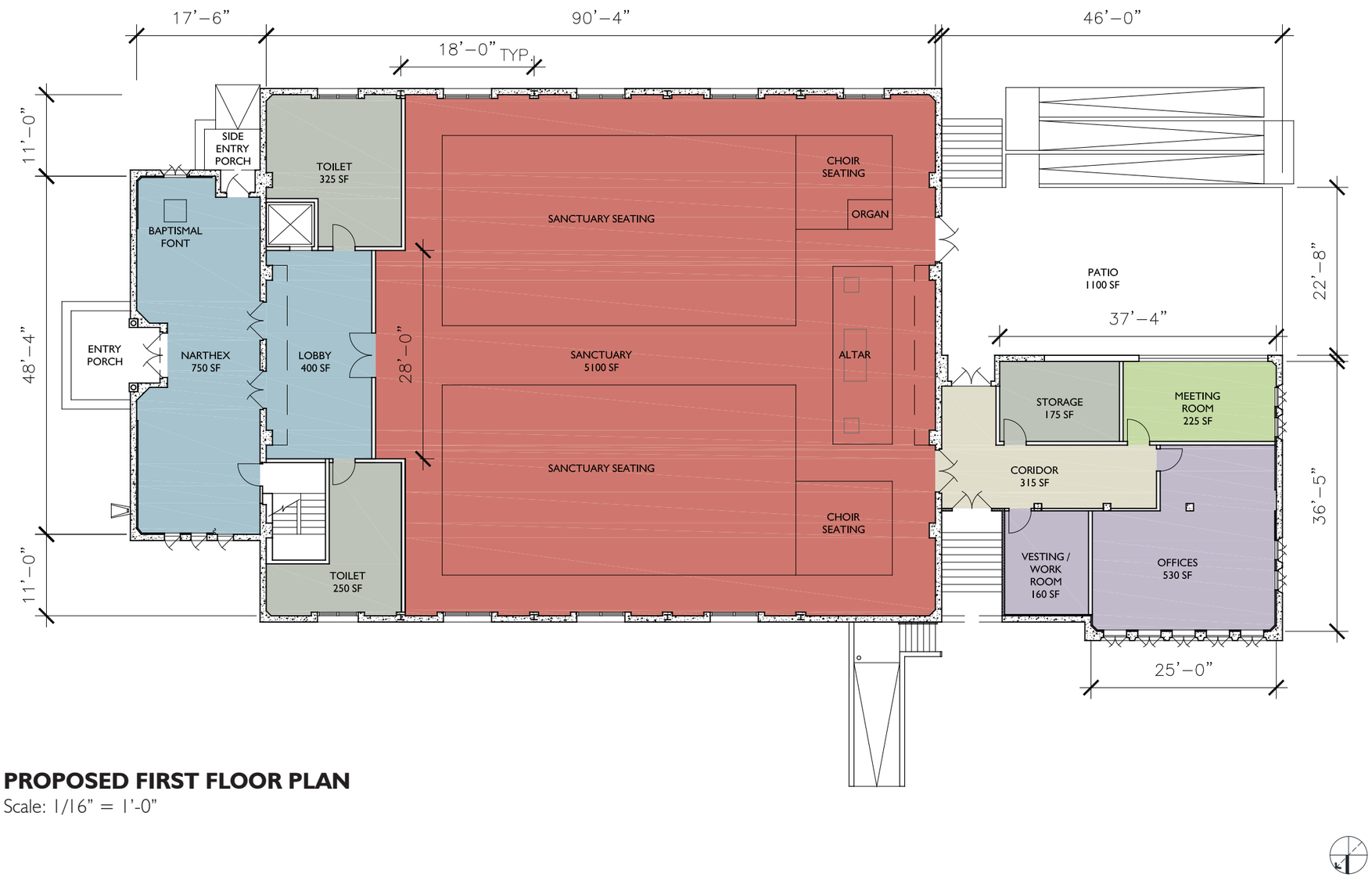
- New interior exit stair
- New rated exit passageway
- New automatic sprinkler system
- New rated exit doors

PROPOSED GROUND FLOOR GSF: 6,580 SF
PROPOSED GROUND FLOOR NSF: 5,875 SF

LEGEND

- GATHERING SPACE 1,650 SF
- CLASSROOM 2,230 SF (4)
- KITCHEN 450 SF
- MEETING ROOM
- LOBBY SPACE
- OFFICE
- SERVICE SPACES 380 SF (4)
- CIRCULATION 1165 SF

Building 5
Gymnasium



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

PROPOSED USE: CHURCH

FIRST FLOOR INTERIOR SCOPE OF WORK

- Full interior fit-up
- New exterior patio
- New office space at rear of building

CODE RELATED SCOPE OF WORK

- New interior exit stair
- New toilets
- New automatic sprinkler system
- New rated exit doors

INTERIOR FEATURES

- Open plan (gymnasium)
- Exposed ceiling trusses

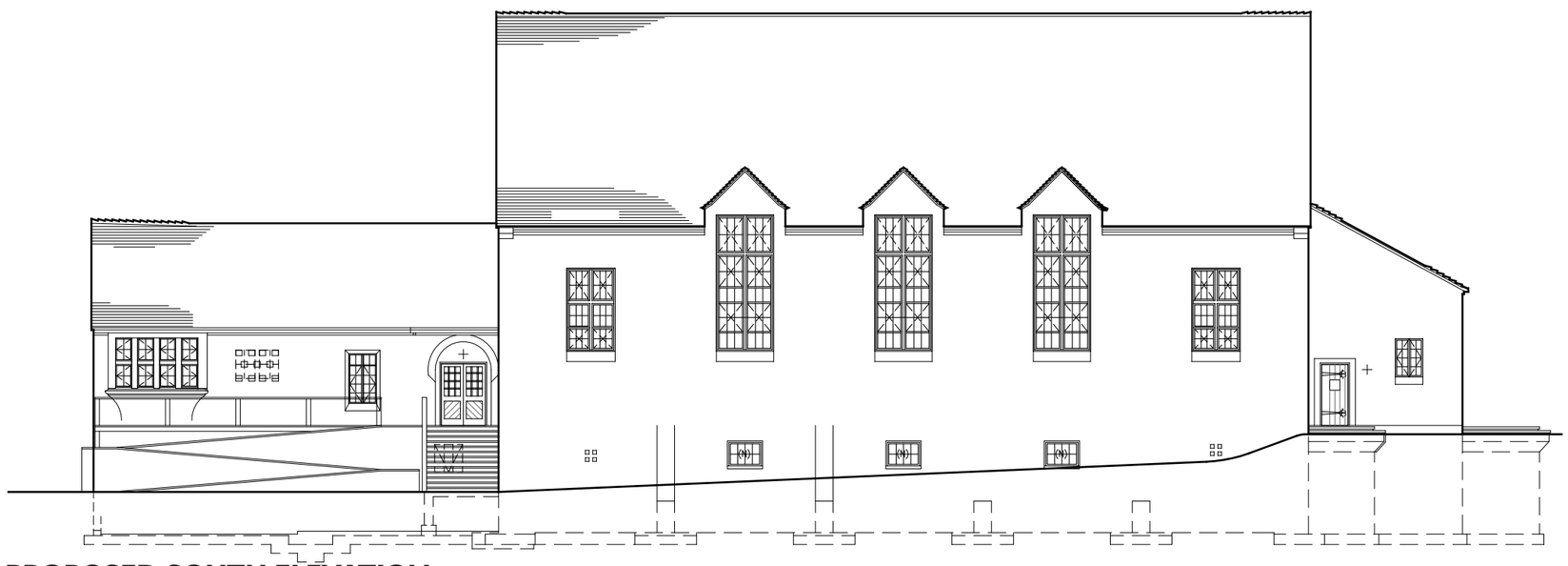
PROPOSED FIRST FLOOR GSF: 9,030 SF
PROPOSED FIRST FLOOR NSF: 7,195 SF

LEGEND

- SANCTUARY 5,100 SF
- CLASSROOM
- KITCHEN
- MEETING ROOM 225 SF
- NARTHEX/LOBBY 1,150 SF (2)
- OFFICE 690 SF (2)
- SERVICE SPACES 750 SF (3)

Building 5
Gymnasium

PROPOSED NORTH ELEVATION
Scale: 1/16" = 1'-0"



PROPOSED SOUTH ELEVATION
Scale: 1/16" = 1'-0"

PROPOSED USE: CHURCH

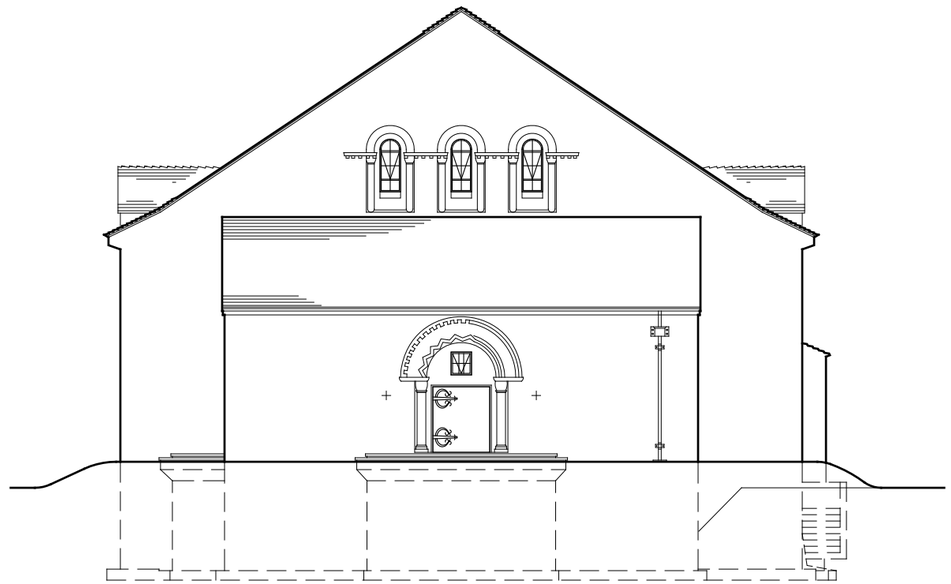
EXTERIOR SCOPE OF WORK

- Repair stucco as necessary
- Remove rear addition
- New patio with accessible ramp
- Repair windows as necessary
- New windows in office wing (similar to historic windows)
- New windows at ground level

EXTERIOR FEATURES

- Rectilinear plan
- Two-story massing
- Poured-in-place concrete
- Decorative, arched entry
- Recessed, arched, wood casement windows

Building 5
Gymnasium



PROPOSED WEST ELEVATION
Scale: 1/16" = 1'-0"

PROPOSED EAST ELEVATION
Scale: 1/16" = 1'-0"

PROPOSED USE: CHURCH

EXTERIOR SCOPE OF WORK

- Repair stucco as necessary
- Remove rear addition
- Build porch outside of office wing
- Repair windows as necessary
- Install new windows in office wing

EXTERIOR FEATURES

- Rectilinear plan
- Two-story massing
- Poured-in-place concrete
- Decorative, arched entry
- Recessed, arched, wood casement windows

Building 5
Gymnasium

Zoning Summary

SECTION	ITEM	SUMMARY
	APN	8170-013-904
	Proposed Zoning	Workplace District
	Status	Historically Significant
	Proposed Use	Church
	Area	9,230 s.f.
	Date of Construction	1934
	Type of Construction	Reinforced concrete with steel trusses and wood roof

Required Parking:1/3 seats and 1/100 s.f. of area devoted to assembly purposes without fixed seats such as banquet, waiting, and reception rooms.

92.3 Stalls Required, assuming non fixed seating.

RELEVANT SECTIONS FROM CITY OF WHITTIER – (WBSP)

SECTION	ITEM	SUMMARY
WBSP Sect. 4.2.1	Land Use	Church/Religious uses are not specifically listed in *Table 4-1: Allowable Uses and Permit Requirements* of the WBSP. Assembly/Meeting faculties are however permitted in the Workplace District, with review and approval of a Conditional Use Permit.
WBSP 1.10 (j.)	Historic Resources	Any building or structure within the Whittier Boulevard Specific Plan that has been deemed eligible for landmark designation, is listed as an historic landmark or is a contributing resource within a designated historic district on any Local, State or National Register of Historic Places may, for historic preservation and adaptive re-use purposes only, be permitted any land use to be contained within the historic building or structure, subject to the prior review and approval of a Conditional Use Permit.

Summary of Building Code Review

Proposed use: Place of religious worship

Existing areas
- Building Gross S.F.: 9,230 sq. ft.
- Total N.S.F.: 8,219 sq. ft.

Building height
- Height at front: 43'
- Height at back: 46'

Occupancy type: Assembly; Group A-3
Construction type: Type IIIB; Reinforced concrete with wood over steel roof trusses
Occupant load: 1,019 persons

Fixture count
- Men's lavatories: 14
- Men's urinals: See code
- Men's W/C: 16
- Women's lavatories: 14
- Women's W/C: 17
- Drinking fountains: 0

See Appendix for full code analysis.

Height and Floor Area Limitations: If converted to religious use, the Nelles School Gymnasium would be classified as an A-3 occupancy. The gymnasium is one story in height. The front of the building is 43' high, the rear is 46' high, and the average height is 44.5'. The total square footage of the building (8,219 sq. ft.) is less than the maximum allowable 9,500 sq. ft. for Classification A-3/Type IIIB.

Fire Sprinklers and Rating Requirements: Per CBC, because the fire area occupancy exceeds 300 persons, the Nelles School Gymnasium and exit discharges would require the installation of automatic fire sprinklers.

- No rating of the corridors is required in A occupancies with sprinkled corridors for occupant loads greater than 30 persons, and the CBC does recognize some plaster, lath, and wood framed walls and ceilings as being 1-hour compliant. Further evaluation would need to be performed in order to determine that the existing walls and ceilings meet those requirements. This requirement can also be met with the installation of an approved fire-sprinkler system.
- The existing discharge doors are not labeled as fire-rated. Further evaluation would be required to determine if the existing doors meet code requirements, or new fire-rated doors would need to be installed.

Egress and Exit Requirements: The existing exit doors, door thresholds, locking devices, and much of the existing hardware do not currently meet code requirements. As an existing building, compliance with various sections of the code would be at the discretion of the governing building official.

- The exit discharge openings would need to be increased in width or additional exits would need to be created to accommodate the anticipated occupancy.
- An emergency lighting system would need to be installed in order to comply with the code.
- Accessible means of egress are not required in alterations to existing buildings such as the Nelles School Gymnasium. Existing thresholds would need to be modified or replaced in order to comply with code requirements. Replacement of steps would be at the discretion of the governing building official.
- New locking devices and door hardware would need to be installed in order to comply with the code.
- The Nelles School Gymnasium currently does not have illuminated exit signs and will require those so as to comply with these requirements. Tactile exit signs are not currently present and would also need to be installed.
- The gymnasium does not currently have fixed seating. If fixed seating is proposed as a part of the modification of this structure, the layout of those seats must comply with the code. The allowable occupancy would also change with the inclusion of fixed seats.
- Although the requirement for exit discharge openings is currently met, the openings would need to be increased in width or additional exits would need to be created to accommodate the anticipated occupancy.
- The exit passageways would need to be increased in width or additional exits would need to be created to accommodate the anticipated occupancy.

- The existing passageway is not of 1-hour construction as required by code, and rating identifications are not apparent on all of the existing doors or assemblies. Further evaluation would be required to determine if the existing doors meet code requirements, or new fire-rated doors would need to be installed.
- The Nelles School Gymnasium does not currently include any exit ramps, and any new exit ramps would need to meet current code requirements. By code, alterations to existing buildings such as the Nelles School Gymnasium do not require an accessible means of egress and would be at the discretion of the governing building official.
- The egress path from the exit enclosure on the level of discharge is not currently protected throughout by an approved automatic sprinkler system. This requirement is not currently met, but would be met with the installation of an approved automatic fire sprinkler system.

Stairs: The existing stairway handrails and guards do not currently meet code requirements. As an existing building, compliance with various sections of the code would be at the discretion of the governing building official.

- Existing handrail heights do not meet the code requirements and no handrail extensions are currently present. Handrails would need to be modified or replaced at all exterior stairs and extensions added in order to comply with code requirements.
- Existing stairway guard heights and openings in the guards do not meet the code requirements. New guards which meet code requirements will need to be provided at the basement stairs, and replacement of the guards would be at the discretion of the governing building official.

Accessibility: In its current state, the Nelles School Gymnasium is not fully accessible throughout. However, as an existing building, accessibility may not be required upon discretion of the governing building official. Any future renovations shall comply with code requirements for accessibility.

- The required number of assistive listening systems is not currently met, however as an existing building, this may not be required. Future renovations shall provide accommodation per this section of the code.
- The existing restroom facilities possess many deficiencies in regard to accessibility, however code compliance would be at the discretion of the governing building official. If existing restrooms were to be renovated, they would be required to meet accessibility requirements for wheelchair clearance, clear floor space at fixtures, water closets, water closet compartments, urinals, lavatories, passageways, symbols, grab bars, and accessories. The existing space allocated to toilet facilities most like would not accommodate the accessibility clearances or the number of fixtures required by the CPC.
- Currently, drinking fountains are not provided. As an existing building, this and other building components (such as telephones, signs and identification, symbols of accessibility) may not be required. Any future modifications however, shall be in compliance with this section of the code.
- Currently, no accessible means of egress are provided within the building, but as an existing building, this may not be required. By code, alterations to existing buildings such as the Nelles School Gymnasium do not require an accessible means of egress. Replacement of the guards would be at the discretion of the governing building official.

Building Construction: The Nelles School Gymnasium is classified as Type IIIB. All structural elements and bearing walls are made of non-combustible materials. The roof of the gymnasium space is made of wood over steel. Type IIIB does not require that any element except the exterior bearing walls have any rating (2 hours in this case).

Structural Requirements: See Structural Analysis.

Cost Estimate Summary (Mack5)

B8 Gymnasium Detail | Job #11317 | October 19, 2011

mack5

Proposed Use: Church	Quantity	Unit	Rate	Total ($)

Scope:

The proposed re-use for the Gymnasium building is a chapel. The scope of work includes the following: demolition of the entire 1962 southwest addition area, demolition of interior partition walls, demolition of plumbing, doors, and other non-structural items, demolition of existing exterior wall for new window openings, reconstruct the patio area at southwest corner to match original building construction, build out of new rooms/offices in the existing building, build out of basement for fellowship hall, classrooms and kitchen, addition of interior fire stairs, and addition of elevator. No other major modifications or features are proposed at this time for the re-use of this building as a chapel. Per Re-Use Feasibility Study, Reuse Description on page 120

Control Quantities (per digital take-off):

Stories	2	EA		
Enclosed area	15,610	SF		
Roof area (includes slope factor)	14,015	SF		
Interior partitions	720	LF		
Plumbing fixtures - allow	16	FX		
Subtotal: Gross floor area	15,610	SF		

Construction Costs (see below):

Structural Improvements			$26.15	$408,188
Code Improvements*			$72.15	$1,126,248
Architectural Improvements			$87.13	$1,360,072
Site Improvements			$159.86	$2,495,407
Total: Construction	15,610	SF	$345.29	$5,389,915

*Please note, there is potential that Building Official can excuse Code Requirement

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VII. APPENDIX (SEE VOLUME 2)

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APPENDIX: Volume 2 of 2

HISTORIC SIGNIFICANCE FINDINGS
CODE ANALYSES
COST ESTIMATE
ECONOMIC ANALYSIS

Prepared for
State of California
Department of General Services Real Estate Division (DGS)

PAGE & TURNBULL
imagining change in historic environments through design, research, and technology

NOVEMBER 14, 2011
[11002]

VII. APPENDIX

VII.1 CRITERIA FOR HISTORIC SIGNIFICANCE FINDINGS 2

VII.2 CODE ANALYSES 6

VII.3 COST ESTIMATE 102

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VII.1 CRITERIA FOR HISTORIC SIGNIFICANCE FINDINGS

National Register of Historic Places
The National Register is the United States' official list of districts, sites, buildings, structures, and objects worthy of preservation. Currently, the National Register includes approximately 80,000 listings, including icons of American architecture, engineering, culture, and history. According to Section 106, a "historic property" is defined as:

> Any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria (36 *Code of Federal Regulations* (*CFR*) Part 800 Protection of Historic Properties, Section 800.16 Definitions l 1).

Overseen by the National Park Service (NPS), under the Department of the Interior, the National Register was authorized under the National Historic Preservation Act as amended. Its listings encompass all National Historic Landmarks as well as historic areas administered by NPS.

National Register guidelines for evaluation of significance were developed to be flexible and to recognize accomplishments of all who have made significant contributions to the nation's history and heritage. Its criteria were designed to guide state and local governments, federal agencies, and others in evaluating potential entries in the National Register. For a property to be listed or determined eligible for listing, it must be demonstrated as possessing integrity and meeting at least one of the following criteria. It must be demonstrated that:

> The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:
>
> A. Associated with events that have made a significant contribution to the broad patterns of our history; or
>
> B. Associated with the lives of persons significant in our past; or
>
> C. Embodies the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
>
> D. Has yielded, or may be likely to yield, information important in prehistory or history.

Integrity is defined in National Register guidance, *How to Apply the National Register Criteria,* as "the ability of a property to convey its significance. To be listed in the National Register…a property must not only be shown to be significant under the National Register criteria, but it also must have integrity" (NPS 1990). The seven aspects of integrity are location, design, setting, materials, workmanship, feeling, and association.

The National Register guidance asserts that properties be at least 50 years old to be considered for eligibility. Properties completed less than 50 years before evaluation must be "exceptionally important" (Criteria Consideration G) to be considered eligible for listing.

The eight (8) subject properties and Fred C. Nelles Historic District were determined eligible for the National Register in 2005 in the Historic Resource Assessment Report by Chattel Architecture prepared in support of the FEIR.

California Environmental Quality Act
CEQA equates a "substantial adverse change" in the significance of a historical resource with a significant effect on the environment (*California Public Resources Code* or *PRC* Section 21084.1).

Historical resources are defined in *PRC* Section 21084.1 as:

> a resource listed in, or determined eligible for listing in, the California Register of Historical Resources. Historical resources included in a local register of historical resources..., or deemed significant pursuant to criteria set forth in subdivision (g) of Section 5024.1, [is] … presumed to be historically or culturally significant for purposes of this section, unless the preponderance of the evidence demonstrates that the resource is not historically or culturally significant.

Substantial Adverse Change
Thresholds of substantial adverse change are established in *PRC* Section 5020.1 as demolition, destruction, relocation, or "alteration activities that would impair the significance of the historic resource." Material impairment occurs when a project results in demolition, or materially alters in an adverse manner, the physical characteristics that convey a property's historic significance, or is the reason for that property's inclusion in an official register of historic resources (*PRC* Section 15064.5(b)(2.)).

The *CEQA Guidelines* define a significant impact as one that would cause "a substantial adverse change" defined as "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings *such that the significance of an historical resource would be materially impaired*" (emphasis added *CEQA Guidelines* Section15064.5(4)(b)(1)).

> The significance of an historical resource is materially impaired when a project:
>
> (A) Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources; or
>
> (B) Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to Section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of Section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of the evidence that the resource is not historically or culturally significant; or
>
> (C) Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA (*PRC* Section 15064.5).

The concept of substantial adverse change includes both direct effects (or impacts) to historical resources and indirect effects to the immediate surroundings of the resource. Examples of direct impacts include:

- physical destruction of, or damage to, all or part of an historical resource
- demolition of a building that contributes to the significance of an historic district, damaging the cohesiveness and overall character of the district
- alteration of historical resources, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation, and provision of accessibility features that are not consistent with concepts in the *Standards for Rehabilitation,* applicable related guidelines or technical advisories

Examples of indirect impacts to the immediate surroundings of a historical resource include:

- alteration of the character of physical features within the setting of the historical resource that contribute to its historic significance
- introduction of visual, atmospheric or audible elements that diminish the integrity of the character defining features if the historical resource

Alteration of an historical resource that is not found in compliance with *The Secretary of Interior's Standards for Rehabilitation* may also be considered an impact under CEQA.

Impacts

The terms "effects" and "impacts" are used in *CEQA Guidelines* interchangeably. In the *Guidelines* under Section 15358 (a) effects are clarified:

> (1) Direct or primary effects which are caused by the project and occur at the same time and place.
>
> (2) Indirect or secondary effects which are caused by the project and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect or secondary effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density, or growth rate, and related effects on air and water and other natural systems, including ecosystems.

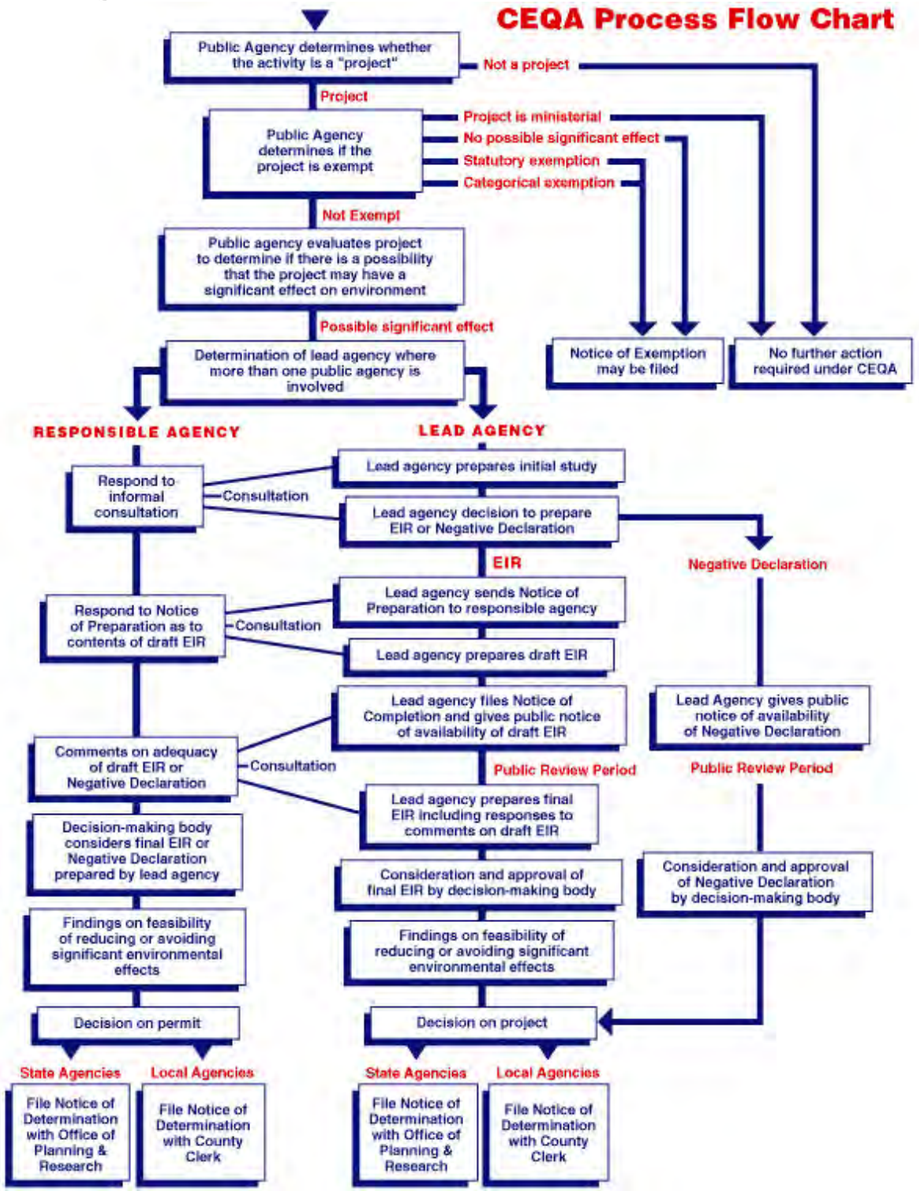
Furthermore, the CEQA Guidelines direct that "Effects analyzed under CEQA must be related to a physical change" (Section 15358 (b))

Analysis of impacts requires comparison of post-project conditions against baseline conditions. CEQA case law is generally clear: setting is existing, current conditions at the time a draft EIR is prepared. Because of the strict CEQA definition of "setting" conditions, this technical report uses existing conditions as the baseline. Impacts or effects compared to these existing conditions are considered project impacts.

If a proposed project could be expected to cause an impact or substantial adverse change to a historical resource, environmental clearance for the project would require the evaluation of alternatives or implementation of mitigation measures to reduce or avoid impacts. If a project is expected to result in an effect on historical resources, CEQA Guidelines require analysis of a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project and avoid or substantially lessen any significant effects on the historical resource.

A proposed project that may affect historical resources is submitted to the State Historic Preservation Officer (SHPO) for review and comment prior to project approval by the lead agency, and before any project-related clearance, demolition, or construction activities commence.

Table 1: CEQA Process Flow Chart



Source: *CEQA: The California Environmental Quality Act.* Available HTTP: http://ceres.ca.gov/ceqa/flowchart/ (Accessed: 08/22/2011)

California Register of Historical Resources

Under California Public Resources Code Section 5024.1, the California Register was established to serve as an authoritative guide to the state's significant historical and archaeological resources. Historical resources are defined in PRC Section 21084.1 as:

> a resource listed in, or determined eligible for listing in, the California Register of Historical Resources. Historical resources included in a local register of historical resources..., or deemed significant pursuant to criteria set forth in subdivision (g) of Section 5024.1, [is] … presumed to be historically or culturally significant for purposes of this section, unless the preponderance of the evidence demonstrates that the resource is not historically or culturally significant.

In order for a property to be considered eligible for listing in the California Register, it must be found by the State Historical Resources Commission to be significant under at least one of the following four criteria.

> If the resource:
>
> 1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
> 2) Is associated with the lives of persons important in our past.
> 3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual or possesses high artistic values.
> 4) Has yielded, or may be likely to yield, information important in prehistory or history.

In addition to possessing one of the above-listed significance characteristics, to be eligible for listing in the California Register, resources must retain "substantial" integrity to their period of significance. California Office of Historic Preservation Technical Assistance Series No. 3, California Register guidance on the subject asserts "Simply, resources must retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance" ("What is the California Register?" September 2002). As set forth in the National Park Service–prepared "How to Apply the National Register [of Historic Places] Criteria for Evaluation," the seven aspects or qualities that, in various combinations, define integrity are: location, design, setting, materials, workmanship, feeling, and association. To retain its historic integrity, a property must possess several, and usually most, of these aspects. Properties judged not to retain requisite integrity were not evaluated for historic significance.

Individual properties that may be affected by a proposed project can be part of previously identified or unidentified historic districts. "What is the California Register?" provides the following definition of California Register–eligible historic districts:

> Historic Districts are a concentration of historic buildings, structures, objects, or sites within precise boundaries that share a common historical, cultural or architectural background. Individual resources within an historic district may lack individual significance but be considered a contributor to the significance of the historic district.

The California Register also includes properties that:

> Have been formally *determined eligible for listing in*, or are *listed in* the National Register; (emphasis added)
>
> Are registered as State Historical Landmark No. 770 and all consecutively numbered landmarks above Number 770;
>
> Are points of historical interest that have been reviewed and recommended to the State Historical Resources Commission for listing; and
>
> Are city- and county-designated landmarks or districts (if criteria for designation are determined by the California Office of Historic Preservation to be consistent with California Register criteria).

With regard to surveys, or evaluations of multiple properties conducted simultaneously to establish historic significance, PRC Section 5024.1(g) states:

> A resource identified as significant in an historical resource survey may be listed in the California Register if the survey meets all of the following criteria:
>
> 1) The survey has been or will be included in the State Historical Resources Inventory.
> 2) The survey and the survey documentation were prepared in accordance with [OHP]… procedures and requirements.
> 3) The resource is evaluated and determined by the office to have a significance rating of category 1-5 on DPR [Department of Parks and Recreation] form 523.
> 4) If the survey is five or more years old at the time of its nomination for inclusion in the California Register, the survey is updated to identify historical resources which have become eligible or ineligible due to changed circumstances or further documentation and those which have been demolished or altered in a manner that substantially diminishes the significance of the resource.

For CEQA, three classes of historic significance can apply to any given property found to be noteworthy. Those properties possess either mandatory, presumptive or discretionary historic significance (*PRC* Section 21084.1).

If the resource is listed in, or has been found by the California Historic Resources Commission to be eligible for listing in, the California Register, that property possesses *mandatory* or obvious significance. However, if a resource is listed in a local register or survey of historical resources it has merely *presumptive* or likely historic significance. In both cases, those resources would be presumed to be historically significant for the purposes of CEQA. In contrast, resources which have discretionary significance are those resources which, while not listed in either the California Register, or found to possess significance in a local register or survey, and may be found, at the lead agency's discretion, based on substantial evidence (facts), to be historically significant.

The eight (8) subject properties were determined eligible for listing in the National Register in 2005 by Chattel Architecture and are therefore listed in the California Register.

California Historical Points of Interest

California Points of Historical Interest include "sites, buildings, features, or events that are of local (city or county) significance and have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value" (Office of Historic Preservation 2008). Points of Historical Interest designated after December 1997 and recommended by the State Historical Resources Commission are also listed in the California Register. To be designated, a property must be demonstrated to meet at least one of the following criteria:

> 1) The first, last, only, or most significant of its type within the local geographic region (City or County).
> 2) Associated with an individual or group having a profound influence on the history of the local area.
> 3) A prototype of, or an outstanding example of, a period, style, architectural movement or construction or is one of the more notable works or the best-surviving work in the local region of a pioneer architect, designer, or master builder.

Addresses are not included in California Office of Historic Preservation listings on the current website; however, the East Whittier Woman's Improvement Club, the only Whittier-based resource listed as a California Point of Historical Interest in Whittier, is not located within the immediate vicinity of the subject properties.[43]

California Historical Landmarks

Designated California Historical Landmarks are numbered sequentially as they are listed by the State Historical Resources Commission. California Historical Landmarks numbered 770 and above are automatically listed in the California Register. According to PRC Section 5031(a), to be eligible for California Historical Landmark designation, a property must be of statewide historical importance and must demonstrate its statewide significance by meeting one of the following three requirements:

1. *The property is the first, last, only, or most significant historical property of its type in the region.* The regions are Southern California, Central California, and Northern California. If a property has lost its historic appearance (integrity), it may still be listed as a site.
2. *The property is associated with an individual or group having a profound influence on the history of California.* The primary emphasis should be the place or places of achievement of an individual. Birthplace, death place, or place of interment shall not be a consideration unless something of historical importance is connected with the person's birth or death. If a property has lost its historic appearance (integrity), it may still be listed as a site.
3. *The property is a prototype of, or an outstanding example of, a period, style, architectural movement, or construction, or…it is one of the more notable works, or the best surviving work in a region of a pioneer architect, designer, or master builder.*
4. An architectural landmark must have excellent physical integrity, including integrity of location. An architectural landmark generally will be considered on its original site, particularly if its significance is basically derived from its design relationship to its site.

Note: Only preeminent examples will be listed for architectural importance. Good representative examples of a style, period, or method of construction are more appropriately nominated to other registration programs.

The Fred C. Nelles Youth Correctional Facility is California Historical Landmark No. 947. It was listed on March 1, 1982.

Local Designation: City of Whittier

The 1993 Whittier General Plan Historic Resources Element "contains a listing of structures identified by different agencies as suitable candidates for preservation, criteria for evaluating historical significance, and programs to minimize the alteration and prevent the destruction of significant structures or sites."

In addition to the City's General Plan and Historic Resources Element, the City of Whittier has a Historic Preservation Ordinance (Chapter 18.84 – Historic Resources) which applies to all historic resources and structures that are at least fifty years old in the city. According to the ordinance:

> A historic resource shall be designated a historic landmark if the council finds that it meets the criteria for listing on the National Register of Historic Places or the California Register of Historic Places or meets one or more of the following criteria:
>
> A. It is particularly representative of a distinct historical period, type, style, region or way of life:
> B. It is connected with someone renowned, important, or a local personality;
> C. It is connected with a use that was once common, but is now rare;
> D. It represents the work of a master builder, engineer, designer, artist or architect whose individual genius influenced his age;
> E. It is the site of an important historic event or is associated with events that have made a meaningful contribution to the nation, state or city;
> F. It exemplifies a particular architectural style;
> G. It exemplifies the best remaining architectural type of a neighborhood;
> H. It embodies the elements of outstanding attention to architectural or engineering design, detail, material or craftsmanship; or
> I. It has a unique location, singular characteristic or is an established and familiar visual feature of a neighborhood, community or the city.

The Fred C. Nelles facility and eight (8) subject buildings are eligible for listing on the National Register of Historic Places and the California Register of Historical Resources; therefore, the Fred C. Nelles facility and subject properties are also City of Whittier historic resources.

The Fred C. Nelles facility is included in Subarea B of the Whittier Commercial Corridor Redevelopment Plan Amendment. As such, per the Historic Preservation Ordinance (18.84.140), "the provisions of a disposition and development agreement or owner participation agreement, approved and entered into by the City of Whittier redevelopment agency, may contain provisions superseding provisions of this chapter [Historic Preservation Ordinance]" (18.84.140).

The Historic Preservation Ordinance also references the State Historic Building Code (18.84.440), Historic Preservation Easements (18.84.450) and Historic Preservation Guidelines (18.84.460), which are adapted from the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings.

[43] California, State of. California Office of Historic Preservation. "California Historical Landmarks" http://ohp.parks.ca.gov/listed_resources/?view=county&criteria=38

VII.2 CODE ANALYSES

Superintendent's Residence Detailed Code Analysis

Applicable Codes:
California Building Code (CBC) – 2010 ed.
California Electrical Code (CEC) – 2010 ed.
California Plumbing Code (CPC)– 2010 ed.
California Mechanical Code (CMC)– 2010 ed.

Proposed Use: Single-Family Residence

California Building Code Analysis

Existing Areas:

First Floor:	2,439 sq. ft.
Second Floor:	1,501 sq. ft.
Garage: (not included in total s.f.)	228 sq. ft.
Total:	4,540 sq. ft.

Building Height:

Height at front of building:	32'
Height at back of building:	32'

SECTION	ITEM	SUMMARY
301	*Use & Occupancy Classification*	
302.1	*Classification*	Structures or portions of structures shall be classified with respect to the occupancy in one more of the groups listed below. A room or space that is intended to be occupied at different times for different purposes shall comply with the requirements that are applicable to each of the purposes for which the room or space will be occupied. Structures with multiple occupancies or uses shall comply with Section 508. Where a structure is proposed for a purpose that is not specifically provided for in this code, such structure shall be classified in the group that the occupancy most nearly resembles, according to the fire safety and relative hazard involved.
310.1	*Residential Group R-3*	Residentail Group R , includes among others, the use of a building or structure, or a portion thereof, for sleeping purposes when not classified as an Institutional Group I. Residential occupancies shall include the following:
303.1	*Assembly Group R-3 Occupancy Defined*	Group R-3: Residential occupancies where the occupancies are primarily permanent in nature and are not classified as Group R-1, R-2, *R-3.1*, R-4 or I,… ***The Nelles School Superintendent's Residence is classified as R-3 occupancy.***
508.2	*Incidental uses*	Incidental use areas shall comply with the provisions of this section.
508.2.1	*Occupancy classification.*	An incidental use area shall be classified in accordance with the occupancy of that portion of the building in which it is located or the building shall be classified as a mixed occupancy and shall comply with section 508.3
508.2.2	*Separation*	Incidental use areas shall be separated or protected, or both in accordance with Table 508.2
508.2	*Table 508.2*	Below is a list of potential incidental uses and their protection requirements per Table 508.2: • Furnace room where any piece of equipment is over 400,000 Btu per hour input: 1 hour or provide automatic fire-extinguishing system. • Rooms with boilers where the largest piece of equipment is over 15 psi and 10 horse power: 1 hour or provide automatic fire-extinguishing system. [a] • Refrigerant machinery rooms: 1 hour or provide automatic fire-extinguishing system. [a] • Parking garage (Section 4.6.2): 2 hours; or 1 hour and provide automatic fire-extinguishing system. • Hydrogen cut-off rooms, not classified as Group H: 1-hour in Group B, F, M, S and U occupancies. 2-hour in Group A, E, I and R occupancies. • Incinerator rooms: 2 hours and automatic sprinkler system. • Paint shops not classified as Group H, located in occupancies other than Group F. 2 hours; or 1 hour and provide automatic fire-extinguishing system. • Laboratories and vocational shops, not classified as Group H, located in Group I-2 and *I-2.1* occupancies. • *[SFM] Rooms or areas with special hazards such as laboratories, vocational shops and other such areas not classified as Group H, located in Group E occupancies where hazardous materials in exempt amounts are used or stored: 1 hour* • Laundry rooms over 100 square feet: 1 hour or provide

SECTION	ITEM	SUMMARY
		automatic fire-extinguishing system.[a] • Storage rooms over 100 square feet: 1 hour or provide automatic fire-extinguishing system.[a] • Group I-2 and *I-2.1* waste and linen collection rooms over 100 square feet: 1 hour or provide automatic fire-extinguishing system.[a] • Stationary storage battery systems having a liquid capacity of more than 100 gallons used for facility standby power, emergency power or uninterrupted power supplies: 1-hour in Group B, F, M, S and U occupancies, 2-hour in Group A, E, I and R occupancies.[a] *a. [SFM] Fire barrier protection and automatic sprinkler protection required throughout the fire area in I-2 and I-2.1 occupancies as indicated.*
508.3.1	*Accessory occupancies*	Accessory occupancies are those occupancies subsidiary to the main occupancies of the building or portion thereof. Aggregate accessory occupancies shall not occupy more than 10 percent of the area of the story in which they are located and shall exceed the tabular values in Table 503, without height and area increases in accordance with Sections 504 and 506 for such accessory occupancies. ***There are no existing or proposed uses for the Nelles Superintendent's Residence which meet the definition of accessory occupancies.***
[F] 903.2	*Sprinkler requirements*	Approved automatic sprinkler system installed in accordance with Section 903.3 shall be provided throughout all buildings with a Group R fire area Exceptions: 1. Detached one-and two-family dwellings (townhouses) not more than three stories above grade plane in height and with a separate means of egress, unless specifically required buy other sections of this code… ***This requirement is met.***
[F]903.2.1	*Sprinklers Group A-1*	An automatic sprinkler system shall be provided throughout buildings and portions thereof used as Group A occupancies as provided in this section. For Group A-1 occupancies, the automatic sprinkler system shall be provided throughout the floor area where Group A occupancy is located, and in all floors between the Group A occupancy and the level of exit discharge.
601	*Types of Construction*	Brick Masonry with wood roof

SECTION	ITEM	SUMMARY
602.1	*Construction Classification*	Buildings and structures erected or to be erected, altered or extended in height or area shall be classified in one of the five construction types defined in Sections 602.2 through 602.5.
602.3		**Type II-B**. Type I and II construction are those types of construction in which the building elements listed in table 601 are of noncombustible materials, except as permitted in Section 603 and elsewhere in this code. ***The Nelles School Superintendent's Residence should be classified as a Type II-B.***
503.1	*General Height and Area Limitations*	The height and area for building of different construction types shall be governed by the intended use of the building and shall not exceed the limits in Table 503 except as modified hereafter. Each part of the building included within the exterior walls and fire walls where provided shall be permitted to be a separate building.
Table 503	*Allowable Height and Building Areas*	***See relevant portions of Table 503 below.*** ***Group A-1/Type IIIB Max. Allowable Stories 4*** ***Max. Allowable Area UL*** ***The Nelles School Superintendent's Residence is two stories in height.*** ***The total square footage of the building (4,540 sq. ft.) is less than the "unlimited" allowable square feet. (Classification Type II-B).*** ***This requirement is met.***
503.1.2	*Buildings on Same Lot*	Two or more buildings on the same lot shall be regarded as separate buildings or shall be considered as portions of one building if the height of each building and the aggregate area of the buildings are within the limitations of Table 503 a modified by Sections 504 and 506. The provisions of this code applicable to the aggregate building shall be applicable to each building. ***The Nelles School Superintendent's Residence will be considered as separate building and complies with 503.1.2.***
1004.1	*Design Occupant Load*	In determining means of egress requirements, the number of occupants for whom means of egress facilities shall be provided shall be determined in accordance with this section. Where occupants from accessory areas egress through a primary space,

SECTION	ITEM	SUMMARY
		the calculated occupant load for the primary space shall include the number of occupants egressing through it from the accessory area.
Per Table 1004	*Occupant Load*	*Areas* *Residential 23 (4,540 s.f. / 200 = 22.7)* *Total Occupant Load: 23 persons*
1005.1	*Egress width and distribution*	The means of egress width shall not be less than required by this section. The total width of means of egress in inches shall not be less that the total occupant load served by the means of egress multiplied by the factors in Table 1005.1 and not less than specified elsewhere in the code. Multiple means of egress shall be sized such that the loss of any one means of egress shall not reduce the available capacity to less than 50 percent of the required capacity. The maximum capacity required from any story of a building shall be maintained to the termination of the means of egress.
Per table 1005.1		*Min. egress widths from Residence* *Stairways:* *Residence occupancy: 23 x 0.3 inches = 6.9"* *(minimum not less than 32 inches)* *Other egress components:* *Residence occupancy: 23 x .0.2 inches = 4.6"* *(minimum not less than 36 inches)* ***The existing primary entrance to the Nelles Superintendent's Residence has a clear opening of 44".*** ***This requirement is met.***
1006.1	*Illumination Requirement*	The means of egress shall be illuminated at all times the building space served by the means of egress is occupied. Exceptions: 2. Dwelling units and sleeping rooms in Groups R-1, R-2 and R-3. ***This requirement is met.***
1007.1	*Accessible means of egress*	Accessible means of egress shall comply with this section. Accessible spaces shall be provided with not less that one accessible means of egress. Where more than one means of egress is required by Sections 1015.1 or 1019.1 from any accessible space, each accessible portion of the space shall be served by accessible means of egress in at least the same number as required by Section 1015.1 or 1019.1. In addition to the requirements of this chapter; means of egress which provide access to, or egress from, buildings for persons with disabilities, shall also comply with the requirements of Chapter 11A or 11B, as applicable. **Exceptions:** 1. Accessible means of egress are not required in alterations to existing buildings. ***By code, alterations to existing buildings such as the The Superintendent's Residence do not require an accessible means of egress. As an existing structure, those conditions may be allowed to remain <u>at the discretion of the governing building official.</u>***
1008.1	*Doors*	Means of egress doors shall meet the requirements of this section. Doors serving a means of egress system shall meet the requirements of this section and Section 1018.2. Doors provided for egress purposes in numbers greater than required by this code shall meet the requirements of this section. Means of egress doors shall be readily distinguishable from the adjacent construction and finishes such that the doors are easily recognizable as doors. Means of egress doors shall not be concealed by curtains drapes, decorations or similar materials.
1008.1.1	*Sizes of doors*	The minimum width of each door shall be sufficient for the occupant load thereof and shall provide a clear width of not less than 32 inches. The maximum width of swinging door widths shall be 48" nominal. The height of doors shall not be less than 80". Exceptions: The minimum and maximum width shall not apply to door openings that are not part of the required means of egress in Group R-2 and R-3 occupancies. ***This requirement is met.***
1008.1.2	*Door Swing*	Egress doors shall be side-hinged swinging. Exceptions: 3. Doors within or serving a single dwelling unit in Groups R-2 and R-3.

SECTION	ITEM	SUMMARY
		This requirement is met.
1008.1.4	*Floor Elevation*	There shall be a floor landing on each side of a door. Such floor or landing shall be at the same elevation on each side of the door. Landings shall be level except at exterior landings, which are permitted to have a slope not to exceed .25 unit vertical in 12 units horizontal (2-percent slope). Exceptions: 3. In Group R-3 occupancies not required to be adaptable or accessible, the landing at an exterior doorway shall not be more than 7.75 inches below the top of the threshold, provided the door, other than an exterior door or screen door, does not swing over the landing. ***This requirement is met.***
1008.1.5	*Landings at doors*	Landings shall have a clear width of not less than the width of the stairway or the door, whichever is greater. Doors in the fully open position shall not reduce a required dimension by more than 7 inches. When a landing serves an occupant load of 50 or more, doors in any position shall not reduce than landing to less than one-half its required width. Landings shall have a length measured in the direction of travel of not less than 44 inches. Exceptions: Landing length in the direction of travel in Groups R-3 and U and within individual units of group R-2 need not exceed 36 inches. ***This requirement is met.***
1008.1.6	*Thresholds*	Thresholds at doorways shall not exceed 0.75 inch inch in height for sliding doors serving a dwelling units or 0.5 inch for other doors. Raised thresholds and floor level changes greater than .25 inch at doorways shall be beveled with a slo[pe not greater than one unit vertical in two units horizontal (50-percent slope). Exceptions: The threshold height shall be limited to 7.75 inches where the occupancy is group R-2 or R-3; the door is an exterior door that is not a component of the required means of egress; the door, other than an exterior storm or screen door does not swing over the landing or step; the doorway is not an accessible route as required by Chapter 11A or 11B and is not part of an adaptable or accessible dwelling unit. Landing length in the direction of travel in Groups R-3 and U and within individual units of group R-2 need not exceed 36 inches. ***This requirement is met.***
1008.1.7	*Door Arrangement*	Space between two doors in a series shall be 48 inches minimum plus the width of a door swinging into the space. Doors in a series shall swing in the same direction or away from the space between the doors. Exceptions: 3. Doors within individual dwelling units in Groups R-2 and R-3 occupancies other than adaptable or accessible dwelling units. ***This requirement is met.***
1008.1.8	*Door Operations*	Except as specifically permitted by this section, egress doors shall be readily openable from the egress side without the use of a key or special knowledge. ***This requirement is met.***
1008.1.8.1	*Hardware*	Door handles, pulls, latches, locks and other operating devices on doors required to be accessible by Chapter 11A or 11B shall not require tight grasping, tight inching or twisting of the wrist to operate. *1102A.2 Existing Buildings. The building standards contained in this chapter do not apply to the alteration, repair, rehabilitation or maintenance of Group R occupancies constructed for first occupancy prior to March 13, 1991.* ***This requirement is met.***
1008.1.8.2	*Hardware Height*	Door handles, pulls, latches, locks and other operating devices shall be installed 34 inches minimum and 48 inches maximum above the finished floor. Locks used only for security purposes and not used for normal operation are permited at any height. ***This requirement is met.***
1008.1.8.3	*Locks and Latches*	Locks and latches shall be permitted to prevent operation of doors where any of the following exists: 4. Places of detention 5. In buildings in occupancy Group A having an occupant load of less than 300 or less, Groups, B,F,M, and S, and in places of religious worship, the main exterior doorr or odors are permitted to be equipped

SECTION	ITEM	SUMMARY
		with key-operated locking devices from the egress side: 1.1 The locking device is readily distinguishable as locked. 1.2 A readily durable sign is posted on the egress side on or adjacent to the door. 1.3 The use of the key-operated locking device is revocable by the building official for due cause. 6. Where egress doors are used in pairs, approved automatic flush bolts shall be permitted to be used provided that the door leaf having the automatic flush bolt has no doorknob or surface-mounted hardware. 7. Doors in individual dwelling or sleeping units of Group R occupancies having an occupant load of 10 or less permitted to be equipped with a night latch, dead bolt or security chain, provided such devices are openable from the inside without the use of a key or tool. ***This requirement is met.***
1009.3	*Stairway treads and risers*	Stair riser heights shall be 7 inches maximum and 4 inches minimum. Stair tread depths shall be 11 inches minimum. . . ***The treads and risers of the existing interior stairways and exterior steps of the Nelles School Superintendent's Residence do not meet this requirement, however no change in use is proposed and it reasonable to assume the existing stairs would remain in use. As an existing structure, those conditions may be allowed to remain <u>at the discretion of the governing building official.</u>***
1009.3.2	*Dimensional Uniformity*	Stair treads and risers shall be uniform in size and shape. The tolerance between the largest and the smallest riser height or between the largest and smallest tread depth shall not exceed 0.375 inch in any flight of stairs. ***This requirement is met.***
1012.1	*Stairway and ramp handrails*	Where required. Handrails for stairways and ramps shall be adequate in strength and attachment in accordance with Section 1607.7. Handrails required for stairways by Section 1009.10 shall comply with Sections 1012.2 through 1012.8. Handrails required for ramps by Section 1010.8 shall comply with Sections 1012.2 through 1012.7.
1012.2	*Handrail Height*	Handrail height, measured above stair tread nosing, or finish surface of ramp slope shall be uniform not less than 34" and not more than 38".

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		The handrails of the existing interior stairways of the Nelles School Superintendent's Residence do not meet this requirement, however no change in use is proposed and it reasonable to assume the existing stairs would remain in use. As an existing structure, those conditions may be allowed to remain <u>at the discretion of the governing building official.</u>
1012.5	*Handrail extensions*	Handrail shall return to a wall, guard, or the walking surface or shall be continuous to the handrail of an adjacent stair flight or ramp run. At stairways where handrails are not continuous between flights, the handrails shall extend horizontally at least 12 inches beyond the top riser and continue to slope for the depth of one tread beyond the bottom riser. Exceptions: 1. Handrails within a dwelling unit that is not required to be accessible need extend only form the top riser to the top of the bottom riser. ***The handrails of the existing interior stairways of the Nelles School Superintendent's Residence do not meet this requirement, however no change in use is proposed and it reasonable to assume the existing stairs would remain in use. As an existing structure, those conditions may be allowed to remain <u>at the discretion of the governing building official.</u>***
1013.1	*Guards*	**Where required.** Guards shall be located along open-sided walking surfaces, mezzanines, industrial equipment platforms, stairways, ramps and landings that are located more than 30" above the floor or grade below. . . Exception: Guards are not required for the following locations. 1. On the loading side of loading docks. 2. On the audience side of stages and raised platforms, including steps leading to the stage and raised platforms. 3. On raised stages and platform floor areas, such as runways, ramps and side stages used for entertainment or presentations. 4. At vertical openings in the performance areas of stages and platforms. 5. At elevated walking surfaces appurtentant to stages and platforms for access to and utilization of special lighting or equipment. 6. In assembly seating where guards in accordance with Section 1025.14 are permitted and provided.
1013.2	*Guard height*	Guards shall form a protective barrier not less than 42" high, measured vertically above the leading edge of the tread, adjacent

SECTION	ITEM	SUMMARY
		walking surface or adjacent seat board. Exceptions: For Occupancies in Group R-3, and within individual dwelling unties in occupancies in Ggroup-2, guards whose top rail also serves as a handrail shall have a height not less than 34" inches measured vertically from the leading edge of the stair tread nosing. ***The guardrails of the existing interior stairways of the Nelles School Superintendent's Residence do not meet this requirement, however no change in use is proposed and it reasonable to assume the existing stairs would remain in use. As an existing structure, those conditions may be allowed to remain <u>at the discretion of the governing building official.</u>***
1013.3	*Opening limitations for guards*	Open guards shall have balusters or ornamental patterns such that a 4-inch-diameter sphere cannot pass through any opening. ***The guardrails of the existing interior stairways of the Nelles School Superintendent's Residence do not meet this requirement, however no change in use is proposed and it reasonable to assume the existing stairs would remain in use.***
1014	*Exit Access*	The exit access arrangement shall comply with Sections 1014 through 1017 and the applicable provision of Sections 1003 through 1013.
1014.2	*Egress through intervening spaces*	Egress from room or space shall not pass through adjoining or intervening rooms or areas, except where such adjoining rooms are accessory to the served, are not a high-hazard occupancy and provide a discernible path of travel to an exit. Exceptions: 5. [HCD 1] For one- and two- family dwellings and townhouses, means of egress is allowed to pass through rooms and intervening spaces except garages. ***This requirement is met.***
1014.3	*Common path of egress travel*	In occupancies other than Groups H-1, H-2, and H-3, the common path of egress travel shall not exceed 75 feet. ***This requirement is met.***
1015.1	*Number of exit and exit access doorways*	Two exits or exit access doorways form any space shall be provided where one of the following conditions exits: 1. The occupant load of the space exceeds the values in Table 1015.1 2. The common path of egress travel exceeds the limitations of section 1014.3

SECTION	ITEM	SUMMARY
		3. Where required by Sections 1015.3, 1015.4, and 1015.5
1015.2.1	*Egress separation*	Where two exits or exit access doorways are required from any portion of the exit access, the exit doors or exit access doorways shall be placed a distance apart equal to not less than one-half of the length of the maximum diagonal dimension of the building or area to be serviced measured in a straight line between exit doors or exit access doorways. Exception: 1. Where exit enclosures are provided as a portion of the required exit and are interconnected by a 1-hour fire-resistance-rated corridor, conforming to the requirements of Section 1017, the required exit separation shall be measured along the shortest direct line of travel within a corridor. 2. Where a building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2, the separation distance of the exit doors or exit access doorways shall not be less than one-third of the length of the maximum overall diagonal dimension of the area served. ***This requirement is met.***
1016.1	*Travel distance limitations*	Exits shall be so located on each story such that the maximum length of exit access travel, measured from the most remote point within a story to the entrance to an exit along the natural and unobstructed path of egress travel, shall not exceed the distance given in Table 1016.1 Where the path of travel exit access includes unenclosed stairways or ramps within the exit access or includes unenclosed ramps or stairways as permitted in Section 1020.1, the distance of travel on such means of egress components shall also be included in the travel distance measurement. The measurement along stairways shall be made on a plane parallel and tangent to the stair tread nosings in the center of the stairway. ***This requirement is met.***
Per Table 1016	*Exit Access Travel Distance*	*The maximum exit access travel distance for group* R *occupancy is 200 feet without an automatic sprinkler system.* *The maximum exit access travel distance for group* R *occupancy is 250 feet without an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2 for occupancies where automatic sprinkler systems*

SECTION	ITEM	SUMMARY
		are permitted in accordance with Section 903.3.1.2. ***This requirement is met***
1028.7	*Travel Distance*	*Exits and aisles shall be located so that the travel distance to an exit door shall be greater than 200 feet measured along the line of travel in non-sprinkled buildings. Travel distance shall not be more than 250 feet in sprinkled buildings. Where aisles are provided for seating, the distance shall be measured along the aisles access way without travel over or on the seats.* ***This requirement is met***
1017.1	*Corridor construction*	Corridors shall be fire-resistance rated in accordance with Table 1017.1 Exceptions: 2. Fire-resistive rating is not required for corridors contained within a dwelling or sleeping unit in an occupancy in Group R. ***This requirement is met***
Table 1017.1		***No rating of the corridors is required in R occupancies when the occupant load served y the corridor is less than 10.*** ***This requirement is met***
1019.2	*Number of exits*	Buildings with one exit. Only on exit shall be provided in buildings as described below. 3. Buildings of Group R-3 occupancy. ***This requirement is met.***
1103B.1	*Accessibility Scope*	Accessibility to buildings or portions of buildings shall be provided for all occupancy classifications. An accessible route of travel complying with Section 1114B.1.2 shall connect all elements and spaces within a building or facility. Multi-story buildings must provide access to each level, including mezzanines, by ramp or passenger elevator. . ***Existing, single-family residential units are not required to meet the accessibility requirements of CBC Chapter 11.***
3403.1	*Existing Buildings – alterations, additions, or repairs*	Additions or alterations to any building or structure shall comply with the requirements of the code for new construction. Additions or alterations shall not be made to an existing building or structure that will cause the existing building or structure to be in violation of any portions of this code. . . Portions of the structure not altered and not affected by the alteration are not required to comply with the code requirements for a new structure. *Rooms and areas that are not upgraded can remain in their existing condition, unless a modification to some other item has an un-intentional impact on an area that was not scheduled to be modified.*
3403.2	*Structural impact to existing buildings*	Additions or alterations to an existing structure shall not increase the force in any structural element by more than 5%. . .
3403.3	*Nonstructural modifications to existing buildings*	Nonstructural alterations or repairs to an existing building or structure are permitted to be made of the same materials of which the building or structure is constructed, provided that they do not adversely affect any structural member or the fire-resistance rating of any part of the building or structure.
3410.2.3	*Alterations and repairs to existing buildings*	An existing building or portion thereof, which does not comply with the requirements of this code for new construction, shall not be altered or repaired in such a manner that results in the building being less safe or sanitary than such building is currently.

TABLE 503 (RELEVANT SECTIONS)

GROUP		TYPE IIIB	SUMMARY
	Height (feet)	55' High max.	*The Nelles School Superintendent's Residence is 32' feet high at the back and 32' high at the front. Neither exceeds the allowable height. The code requires an average of the heights based on areas for the height measurement.* *The Nelles School Superintendent's Residence meets this requirement.*
	Height (Stories)	4 Stories max.	*The Nelles School Superintendent's Residence is two stories in height*
R-3	Stories	4 Stories max.	*The Nelles School Superintendent's Residence is two stories in height. This requirement is met.*
	Area	Unlimited	*The Nelles School Superintendent's Residence is 4,540 sq. ft.*

OCCUPANT LOAD (PER TABLE 1004.1.1 CBC)

AREA	AREA	OCCUPANT LOAD FACTOR	TOTAL OCCUPANTS

All Areas	4,540 s.f.	200	23 persons
Total			**23 persons**

MINIMUM EGRESS WIDTH OF STAIRS, ASSUMED NON-SPRINKLERED (PER TABLE 1005.1 CBC)

AREA	OCCUPANCY TYPE	OCCUPANTS	STAIRWAY WIDTH FACTOR	TOTAL WIDTH REQUIRED (INCHES)
All Areas	Residential	23	0.2	6.9" (min. 36")

MINIMUM EGRESS WIDTH OF OTHER COMPONENTS (DOOR WAYS, ETC.), ASSUMED NON-SPRINKLERED (PER TABLE 1005.1 CBC)

AREA	OCCUPANCY TYPE	OCCUPANTS	COMPONENT FACTOR	TOTAL WIDTH REQUIRED (INCHES)
All Areas	Residential	23	0.15	4.6" (min. 36")

Auditorium Detailed Code Analysis

Applied Codes:
California Building Code (CBC) – 2010 ed.
California Electrical Code (CEC) – 2010 ed.
California Plumbing Code (CPC)– 2010 ed.
California Mechanical Code (CMC)– 2010 ed.

Proposed Use - Community Theater

Existing Areas:

Building Gross S.F:	6,393 sq. ft.
Total N.S.F:	5,686 sq. ft.

Building Height:

Height at front of building:	43'
Height at back of building:	46'

SECTION	ITEM	SUMMARY
301	*Use & Occupancy Classification*	
302.1	*Classification*	Structures or portions of structures shall be classified with respect to the occupancy in one more of the groups listed below. A room or space that is intended to be occupied at different times for different purposes shall comply with the requirements that are applicable to each of the purposes for which the room or space will be occupied. Structures with multiple occupancies or uses shall comply with Section 508. Where a structure is proposed for a purpose that is not specifically provided for in this code, such structure shall be classified in the group that the occupancy most nearly resembles, according to the fire safety and relative hazard involved.
310.1	*Assembly Group A*	Assembly Group A occupancy includes, among others, the use of a building or structure, or a portion thereof, for the gathering of persons for purposes such as civic, social or religious functions; recreation, food or drink consumption; or awaiting transportation or motion picture and television production studio sound stages, approved production facilities and production locations. **Exceptions:** 1. A building or tenant space used for assembly purposes with an occupant load of less than 50 persons shall be classified as a Group B occupancy. 2. A room or space used for assembly purposes with an occupant load of less than 50 persons and accessory to another occupancy shall be classified as a Group B occupancy or as part of that occupancy. 3. A room or space used for assembly purposes that is less than 750 square feet in area and is accessory to another occupancy shall be classified as a Group B occupancy or as part of that occupancy. 4. Assembly areas that are accessory to Group E occupancies are not considered separate occupancies except applying the assembly occupancy requirements of Chapter 11B. 5. Accessory religious educational rooms and religious community theater with occupant loads less than 100 are not considered separate occupancies. Assembly occupancies include the following:
303.1	*Assembly Group A-1 Occupancy Defined*	A-1 Assembly uses, usually with fixed seating, intended for the production and viewing of the performing arts or motion picture including but not limited to: • Motion picture and television production studio sound stages, approved production facilities and production locations (with live audiences). • Motion Picture theaters • Symphony and Concert Halls • Television and radio studios admitting in audience • Theaters ***For the purposes of this analysis, the Community Theater building would be classified is classified as A-1 occupancy.***
508.2	*Incidental uses*	Incidental use areas shall comply with the provisions of this section.
508.2.1	*Occupancy classification.*	An incidental use area shall be classified in accordance with the occupancy of that potion of the building in which it is located or the building shall be classified as a mixed occupancy and shall comply with section 508.3 ***No incidental uses are anticipated in this analysis.***
508.2.2	*Separation*	Incidental use areas shall be separated or protected, or both in accordance with Table 508.2
508.2	*Table 508.2*	Below is a list of potential incidental uses and their protection requirements per Table 508.2: • Furnace room where any piece of equipment is over

SECTION	ITEM	SUMMARY
		400,000 Btu per hour input: 1 hour or provide automatic fire-extinguishing system. • Rooms with boilers where the largest piece of equipment is over 15 psi and 10 horse power: 1 hour or provide automatic fire-extinguishing system.[a] • Refrigerant machinery rooms: 1 hour or provide automatic fire-extinguishing system.[a] • Parking garage (Section 4.6.2): 2 hours; or 1 hour and provide automatic fire-extinguishing system. • Hydrogen cut-off rooms, not classified as Group H: 1-hour in Group B, F, M, S and U occupancies. 2-hour in Group A, E, I and R occupancies. • Incinerator rooms: 2 hours and automatic sprinkler system. • Paint shops not classified as Group H, located in occupancies other than Group F. 2 hours; or 1 hour and provide automatic fire-extinguishing system. • Laboratories and vocational shops, not classified as Group H, located in Group I-2 and *I-2.1* occupancies. • *[SFM] Rooms or areas with special hazards such as laboratories, vocational shops and other such areas not classified as Group H, located in Group E occupancies where hazardous materials in exempt amounts are used or stored: 1 hour* • Laundry rooms over 100 square feet: 1 hour or provide automatic fire-extinguishing system.[a] • Storage rooms over 100 square feet: 1 hour or provide automatic fire-extinguishing system.[a] • Group I-2 and *I-2.1* waste and linen collection rooms over 100 square feet: 1 hour or provide automatic fire-extinguishing system.[a] • Stationary storage battery systems having a liquid capacity of more than 100 gallons used for facility standby power, emergency power or uninterrupted power supplies: 1-hour in Group B, F, M, S and U occupancies, 2-hour in Group A, E, I and R occupancies.[a] *a. [SFM] Fire barrier protection and automatic sprinkler protection required throughout the fire area in I-2 and I-2.1 occupancies as indicated.* ***No incidental occupancy uses are anticipated in this analysis.***
508.3.1	*Accessory occupancies*	Accessory occupancies are those occupancies subsidiary to the main occupancies of the building or portion thereof. Aggregate accessory occupancies shall not occupy more than 10 percent of the area of the story in which they are located and shall exceed the tabular values in Table 503, without height and area increases in accordance with Sections 504 and 506 for such accessory occupancies. ***There are no existing or proposed uses for the Community Theater building which meets the definition of accessory occupancies.***
903.2	*Sprinkler requirements*	Approved automatic sprinkler systems in new buildings and structures shall be provided in the locations described in this section.
[F]903.2.1	*Sprinklers Group A-1*	An automatic sprinkler system shall be provided throughout buildings and portions thereof used as Group A occupancies as provided in this section. For Group A-1 occupancies, the automatic sprinkler system shall be provided throughout the floor area where Group A occupancy is located, and in all floors between the Group A occupancy and the level of exit discharge.
[F]903.2.1.1 Group A-1	*Sprinklers Group A-1*	An automatic sprinkler system shall be provided for Group A-1 occupancies where one of the following conditions exists: 1. The fire area exceeds 12,000 sq.ft. 2. The fire area has an occupant load of 300 or more 3. The Fire area is located on a floor other than the level of exit discharge. 4. The fire area contains a multitheater complex. ***This requirement <u>is not</u> met.*** ***Group A occupancies which exceed 300 persons, assembly space and the exit discharge are required to have an automatic fire sprinkler system. <u>As an existing building, compliance with this section would be at the discretion of the governing building official.</u>***
601	*Types of Construction*	***Brick masonry and concrete with wood over steel truss roof.***
602.1	*Construction Classification*	Buildings and structures erected or to be erected, altered or extended in height or area shall be classified in one of the five construction types defined in Sections 602.2 through 602.5.
602.3		**Type III**. Type III construction type of construction in which the exterior walls are of noncombustible materials and the interior building elements are of any material permitted by this code. *Per Table 601, the roof requires a 1-hour rating for type IIIA, with the following conditions applying:*

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		(b2), For Groups A occupancies, high-rise buildings and other applications listed in Section 1.11 regulated by the Office of the State Fire Marshal, fire protection of members other than the structural frame shall not be required, including protection of roof framing and decking where every part of the roof construction is 20 feet or more above any floor immediately below. Fire- retardant-treated wood members shall be allowed to be used for such unprotected members.
		(c), In all occupancies, heavy timber shall be allowed where 1-hour or less fire-resistance rating is required.
		(d) An approved automatic sprinkler system in accordance with Section 903.3.1.1 shall be allowed to be substituted for 1-hour fire-resistance-rated construction, provided such system is not otherwise required by other provisions of the code or used for an allowable area increase in accordance with Section 506.3 for an allowable height increase in accordance with Section 504.2. The 1-hour substitution for the fire resistance of exterior walls shall not be permitted.
		For the purposes of this analysis, the Community Theater building is classified as a Type IIIB.
		All bearing walls are made of non-combustible materials (brick masonry and concrete) and the roof is made of wood over steel frame.
		All structural elements and bearing walls are made of non-combustible materials. The roof of the community theater space however, is made of wood over steel. Per Table 601, the roof requires a 1-hour rating for type IIIA, which is not possible with existing wood sheathing. Type IIIB does not require that any element except the exterior bearing walls have any rating (2 hours in this case).
503.1	*General Height and Area Limitations*	The height and area for building of different construction types shall be governed by the intended use of the building and shall not exceed the limits in Table 503 except as modified hereafter. Each part of the building included within the exterior walls and fire walls where provided shall be permitted to be a separate building.
Table 503	*Allowable Height and Building Areas*	***See relevant portions of Table 503 below.***
		Group A-1/Type IIIB Max. Allowable Stories 2 ***Max. Allowable Height 55'*** ***Max. Allowable Area 8,500 s.f.***
		The Community Theater Building is one story in height. The front of the building is 43' high —the rear is 46' high. The average height is 44.0'. This requirement is met.
		The total square footage of the building (5,686 sq. ft.) is less than the maximum allowable of 8,500 sq. ft. (Classification A-1/Type IIIB).
		This requirement is met.
503.1.2	*Buildings on Same Lot*	Two or more buildings on the same lot shall be regarded as separate buildings or shall be considered as portions of one building if the height of each building and the aggregate area of the buildings are within the limitations of Table 503 a modified by Sections 504 and 506. The provisions of this code applicable to the aggregate building shall be applicable to each building.
		For the purposes of this analysis, the Community Theater building will be considered as separate building and complies with 503.1.2.
1004.1.1	*Areas without fixed seating*	*The number of occupants shall be computed at the rate of one occupant per unit of area as prescribed in Table 1004.1.1.*
1004.7	*Fixed seating*	*For areas having fixed seats and aisles, the occupant load shall be determined by the number of fixed seats installed therein. The occupant load for areas in which fixed seating is not installed, such as waiting spaces and wheelchair spaces, shall be determined in accordance with Section 1004.1 and added to the number of fixed seats.*
Per Table 1004	*Occupant Load*	*Areas*
		Community theater (fixed seats) — *361* — *(361 seats x 1 = 361)*
		Stage — *45* — *(670 s.f./15net = 44.66)*
		Ticketbooth — *1* — *(65s.f. / 100net = .65)*
		Dressing Room — *1* — *(69 s.f. /50 gross = 1)*
		Storage Room — *2* — *(400 s.f. / 300gross = 2)*
		Total Community theater Occupant Load = 410 persons
1004.3	*Posting of Occupant Load*	Every room or space that is an assembly occupancy shall have the occupant load of the room or space posted in a conspicuous place, near a main exit or exit access doorway from the room or space. Posted signs shall be of an approved legible permanent design and shall be maintained by the owner or authorized agent.

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		The Community Theater building will require posting of occupancy load in order to comply with this requirement.
1005.1	*Egress width and distribution*	The means of egress width shall not be less than required by this section. The total width of means of egress in inches shall not be less that the total occupant load served by the means of egress multiplied by the factors in Table 1005.1 and not less than specified elsewhere in the code. Multiple means of egress shall be sized such that the loss of any one means of egress shall not reduce the available capacity to less than 50 percent of the required capacity. The maximum capacity required from any story of a building shall be maintained to the termination of the means of egress.
Per table 1005.1		*Min. egress widths from Community Theater with an automatic sprinkler system.* *Stairways:* *Community theater occupancy: 410 x .0.3 inches = 123.0"* *Other egress components:* *Community theater occupancy: 410 x .0.2 inches = 82.0"* *For the purposes of this analysis, it is assumed that an automatic sprinkler system would be installed in the building.*
1007.3	*Exit stairways*	In order to be considered part of an accessible means of egress, an exit stairway shall have a clear width of 48" minimum between handrails and shall have either incorporate an area of refuge with an enlarged floor-level landing or shall be accessed from either an area of refuge complying with section 1007.6 or a horizontal exit. In addition, exit stairways shall comply with Chapter 11A, Sections 1115A and 1123A, or Chapter 11B, Section 1133B.4, as applicable. Exceptions: 1. Unenclosed exit stairways as permitted by Section 1020.1 are permitted to be considered part of an accessible means of egress. 2. The area of refuge is not requires at unenclosed exit stairways as permitted by Section 1020.1 in buildings or facilities that are equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1. 3. The clear width of 48 inches between handrails is not required at exit stairways in buildings or faculties equipped throughout with an automatic sprinkler system installed in accordance with Section 903.1.1 or 903.3.1.2.

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		This requirement is not met. ***The stairs which access the dressing room area behind the stage have a net clear width of 2'-4", and do not meet the minimum req. width of 36" for areas serving occupant loads less than 50 persons (Section 1009.1). The stairs would have to be modified to comply with this requirement. As an existing building, compliance with this section would be at the discretion of the governing building official.*** ***The steps that provide egress from the south side of the stage provide a net clear width of 2'-6', and do not meet the minimum required width of 36" for areas serving less than 50 persons. The stairs would have to be modified to comply with this requirement. As an existing building, compliance with this section would be at the discretion of the governing building official.*** ***There are two sets of steps that provide egress from the north side of the stage. One provides a net clear width of 2'-6', and do not meet the minimum required width of 36" for areas serving less than 50 persons. The other provides a net clear width of 36" which meets the minimum req. for egress stairs that serve occupancies less than 50 persons. The door located in the proscenium wall currently swings into that path, and effectively reduces the path to 0".*** ***The stairs/egressway would have to be modified to comply with this requirement. As an existing building, compliance with this section would be at the discretion of the governing building official.***
1017.2	*Corridor width*	The minimum corridor width shall be determined in Section 1005.1, but not less than 44". Exceptions: 1. Twenty-four inches - For access to and utilization of electrical, mechanical and plumbing systems or equipment. 2. Thirty-six inches - With a required occupant capacity of less than 50. 3. Thirty-six inches - Within a dwelling unit. 4. Seventy-two inches-In group E with a corridor having a required capacity of 100 or more. 5. Seventy-two inches – In corridors serving surgical Group I, health care centers for ambulatory patients receiving outpatient care, which causes a patient to not be capable of self-preservation.

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		This requirement is met.
1008.1	*Sizes of doors*	The minimum width of each door opening shall be sufficient to for the occupant load thereof and shall provide a clear width of not less than 32 inches. Clear openings of doorways with swinging doors shall be measured between the face of the door and the stop, with the door open 90 degrees. Where this section requires a minimum clear width of 32 inches and a door opening includes two door leaves without a mullion, one leaf shall provide a clear width of 32 inches. The maximum width of a swinging door leaf shall be 48 inches nominal. Means of egress doors in Group I-2 occupancy used for the movement of beds and *litter patients* shall provide a clear width not less than 80 inches. The height of the doors shall not be less than 80 inches. Exceptions: 1. The minimum and maximum width shall not apply to door openings that are not part of the required means of egress in Group R-2 and R-3 occupancies. 2. *Other than those required to be accessible by Chapter 11B,* door openings to resident sleeping units in group I-3 occupancies shall have a clear width of no less than 28 inches. 3. Door openings to storage closets less than 10 square feet in area shall not be limited by the minimum width. 4. Width of door leafs in revolving doors that comply with Section 1008.1.3.1 shall not be limited. 5. Door openings in a dwelling unit or sleeping unit shall not be less than 78 inches in height. 6. Exterior door openings in dwelling units and sleeping units, other than the required exit door, shall not be less than 76 inches in height. 7. In other Group R-1 occupancies, the minimum width widths shall not apply to interior egress doors within a dwelling unit or sleeping unit that is not required to be *adaptable or accessible as specified in Chapter 11A or 11B, as applicable.* 8. Door openings required to be accessible within *dwelling* units shall have a minimum clear width *as specified in Chapter 11A or 11B, as applicable.* ***This requirement <u>is not</u> met.*** ***The existing main pairs exit doors (outer) from the Community Theater (one pair) has a clear opening of 98". This meets the minimum width requirement of 46". Those doors however do not swing with the direction of travel. The direction of door swing would have to be reversed in order to comply with this requirement. <u>As an existing building, compliance with this section will be at the discretion of the governing building official</u>.*** ***The existing pair of exit doors (inner) from the Community Theater has a clear opening of 72". This meets the minimum width requirement of 46".*** ***The existing pair of exit doors located at the south side of the stage provides a net clear opening width of 50". The two leaves of these doors do not meet the requirements of this section where an opening includes two door leaves without a mullion. In such cases, one leaf shall provide a clear opening width of 32". The leaves of these doors will need to be modified in order to comply with this section of the code. <u>As an existing building, compliance with this section will be at the discretion of the governing building official</u>.*** ***The existing pair of exit doors located at the north side of the stage provides a net clear opening width of 48". The two leaves of these doors do not meet the requirements of this section where an opening includes two door leaves without a mullion. In such cases, one leaf shall provide a clear opening width of 32". The leaves of these doors will need to be modified in order to comply with this section of the code. <u>As an existing building, compliance with this section will be at the discretion of the governing building official</u>.*** ***The interior doors located in the proscenium wall flanking the stage that lead to the accessways, have clear opening widths of 38". Those doors would need to be increased to a minimum width of 44".***
1006	*Means of Egress Illumination*	
1006.1	*Illumination Required*	The means of egress, including the exit discharge, shall be illuminated at all times the building space by the means of egress is occupied.
	Illumination Level	The means of egress illumination level shall not be less than 1-foot candle at the walking surface level. ***This requirement <u>is not</u> met.*** ***An egress lighting system would need to be installed in order to comply with this requirement. <u>As an existing building, compliance with this section would be at the discretion of the governing building official.</u>***
1006.3	*Emergency Lighting*	The power supply for means of egress illumination shall

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		normally be provided by the premises' electrical supply. In the event of power failure, an emergency electrical system shall automatically illuminate the following areas: 1. Aisles and unenclosed egress stairways in rooms and spaces that require two or more means of egress. 2. Corridors, exit enclosures and exit passageways in buildings required to have two or more exists. 3. Exterior egress components at other than level of exit discharge until the exit discharge is accomplished for buildings required to have two or more exits. 4. Interior exterior discharge elements, as permitted in Section 1024.1 in buildings required to have two or more exists. 5. Exterior landings, as required by Section 1008.1.5 for exit discharge doorways in buildings required to have two or more exists. The emergency power systems shall provide power for a duration of not less than 90 minutes and shall consist or storage batteries, unit equipment or an on-site generator. The installation of the power system shall be in accordance with Section 2702.
1006.4	*Performance of System*	Emergency lighting facilities shall be arranged to provide initial illumination that is at least an average of 1 foot-candle and a minimum at any point of 0.1 foot candle measured along a path of egress at floor level. Illumination levels shall be permitted to decline to 0.6 foot-candle average and a minimum at any point of 0.06 foot-candle at the end of the emergency lighting time duration. A maximum-to minimum illumination uniformity ratio of 40 to 1 shall not be exceeded. ***This requirement <u>is not</u> met.*** ***An emergency lighting system would need to be installed in order to comply with this requirement. <u>As an existing building, compliance with this section would be at the discretion of the governing building official.</u>***
1007.1	*Accessible means of egress*	Accessible means of egress shall comply with this section. Accessible spaces shall be provided with not less than one accessible means of egress. Where more than one means of egress is required by Sections 1015.1 or 1019.1 from any accessible space, each accessible portion of the space shall be served by accessible means of egress in at least the same number as required by Section 1015.1 or 1019.1. In addition to the requirements of this chapter; means of egress which provide access to, or egress from, buildings for persons with disabilities, shall also comply with the requirements of Chapter 11A or 11B, as applicable. **Exceptions:** 2. Accessible means of egress are not required in alterations to existing buildings. ***Accessible means of egress are not required in alterations to existing buildings. Compliance with CBC Section 1007.1 would be at the <u>discretion of the governing building official</u>.***
1008.1	*Doors*	Means of egress doors shall meet the requirements of this section. Doors serving a means of egress system shall meet the requirements of this section and Section 1018.2. Doors provided for egress purposes in numbers greater than required by this code shall meet the requirements of this section. Means of egress doors shall be readily distinguishable from the adjacent construction and finishes such that the doors are easily recognizable as doors. Means of egress doors shall not be concealed by curtains drapes, decorations or similar materials.
1008.1.1	*Sizes of doors*	The minimum width of each door shall be sufficient for the occupant load thereof and shall provide a clear width of not less than 32". The maximum width of swinging door widths shall be 48" nominal. The height of doors shall not be less than 80". ***This requirement <u>is not</u> met.*** ***The existing main exit from the Community Theater (one pair) has a clear opening of 72". This meets the minimum width requirement of 46".*** ***The exit doors that flank the sides of the stage provide clear opening widths of 36". This meets the minimum width requirement of 32".*** ***The interior doors located in the proscenium wall flanking the stage that lead to the accessways, have clear opening widths of 38". Those doors would need to be increased to a minimum width of 44".***
1008.1.2	*Door Swing*	Egress doors shall be side-hinged swinging. Doors shall swing in the direction of egress travel where serving an occupancy load of 50 or more. ***This requirement is met.***

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1008.1.4	*Floor Elevation*	There shall be a floor landing on each side of a door. Such floor or landing shall be at the same elevation on each side of the door. Landings shall be level except at exterior landings, which are permitted to have a slope not to exceed .25 unit vertical in 12 units horizontal (2-percent slope).
1008.1.5	*Landings at doors*	Landings shall have a clear width of not less than the width of the stairway or the door, whichever is greater. Doors in the fully open position shall not reduce a required dimension by more than 7 inches. When a landing serves an occupant load of 50 or more, doors in any position shall not reduce than landing to less than one-half its required width. Landings shall have a length measured in the direction of travel of not less than 44 inches. ***This requirement is met.***
1008.1.6	*Thresholds*	Thresholds at doorways shall not exceed 0.75 inch inch in height for sliding doors serving a dwelling units or 0.5 inch for other doors. Raised thresholds and floor level changes greater than .25 inch at doorways shall be beveled with a slo[pe not greater than one unit vertical in two units horizontal (50-percent slope). ***This requirement is not met.*** ***The existing door thresholds do not currently meet this requirement. Existing thresholds would need to be modified/replaced in order to comply with the requirements prescribed in Section 1008.1.6. As an existing building, compliance with this section would be at the discretion of the governing building official.***
1008.1.7	*Door Arrangement*	Space between two doors in a series shall be 48 inches minimum plus the width of a door swinging into the space. Doors in a series shall swing in the same direction or away from the space between the doors. ***This requirement is not met.*** ***A series of existing doors located in the woman's restroom do not meet this requirement. It is presumed that the restrooms would be reconfigured as part of the project. As an existing building, compliance with this section would be at the discretion of the governing building official.***
1008.1.8	*Door Operations*	Except as specifically permitted by this section, egress doors shall be readily openable from the egress side without the use of a key or special knowledge. ***This requirement is not met.*** ***The existing egress doors require the use of a key. The egress doors do not currently meet this requirement. New locking devices would need to be installed in order to comply with this requirement. As an existing building, compliance with this section would be at the discretion of the governing building official.***
1008.1.8.1	*Hardware*	Door handles, pulls, latches, locks and other operating devices on doors required to be accessible by Chapter 11A or 11B shall not require tight grasping, tight inching or twisting of the wrist to operate. ***Much of the existing hardware does not currently meet this requirement. New hardware would need to be installed in order to comply with this requirement. As an existing building, compliance with this section would be at the discretion of the governing building official.***
1008.1.8.2	*Hardware Height*	Door handles, pulls, latches, locks and other operating devices shall be installed 34 inches minimum and 48 inches maximum above the finished floor. Locks used only for security purposes and not used for normal operation are permitted at any height. ***This requirement is not met.*** ***Much of the existing hardware does not currently meet this requirement. New hardware would need to be installed in order to comply with this requirement. As an existing building, compliance with this section would be at the discretion of the governing building official.***
1008.1.8.3	*Locks and Latches*	Locks and latches shall be permitted to prevent operation of doors where any of the following exists: 2. Places of detention 3. In buildings in occupancy Group A having an occupant load of less than 300 or less, Groups, B,F,M, and S, and in places of religious worship, the main exterior door or odors are permitted to be equipped with key-operated locking devices from the egress side: 3.1 The locking device is readily distinguishable as locked. 3.2 A readily durable sign is posted on the egress side on or adjacent to the door. 3.3 The use of the key-operated locking device is

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		revocable by the building official for due cause. 4. Where egress doors are used in pairs, approved automatic flush bolts shall be permitted to be used provided that the door leaf having the automatic flush bolt has no doorknob or surface-mounted hardware. 5. Doors in individual dwelling or sleeping units of Group R occupancies having an occupant load of 10 or less permitted to be equipped with a night latch, dead bolt or security chain, provided such devices are openable from the inside without the use of a key or tool. ***This requirement is not met.*** ***The existing latches and locks do not currently meet this requirement. New latches and locks would need to be installed in order to comply with this requirement. As an existing building, compliance with this section would be at the discretion of the governing building official.***
1009.3	*Stairway treads and risers*	Stair riser heights shall be 7 inches maximum and 4 inches minimum. Stair tread depths shall be 11 inches minimum. . .
1009.3.2	*Dimensional Uniformity*	Stair treads and risers shall be uniform in size and shape. The tolerance between the largest and the smallest riser height or between the largest and smallest tread depth shall not exceed 0.375 inch in any flight of stairs. ***This requirement is not met.*** ***The treads of the existing interior stairways of the Community Theater building are 5'-10" in length (min. 11"). As an existing building, compliance with this section would be at the discretion of the governing building official.*** ***The vertical clearance must be no less than 80".*** ***This requirement is met.***
1011.1	*Exit Signs*	Exits and exit access doors shall be marked with an approved exit sign readily visible form any direction of egress travel. Access to exits shall be marked by readily visible exit signs in cases where the exit or the path of egress travel is not immediately visible to the occupants.
1101.2	*Illumination*	Exit signs shall be internally lit.
1011.3	*Tactile exit signs*	For the purposes of Section 1.11.3 the term "tactile exit signs" shall mean those signs that comply with Section 1117B.5.1, Item 1. tactile exit signs shall be required at locations as specified in Section 1011.3
1011.5.3	*Power Source*	Exit signs shall be illuminated at all times. To ensure continued illumination for a duration of not less than 90 minutes, in case of primary poser loss, the design illumination means shall be connected to an emergency power system provided from storage batteries , unit equipment or an on site generator. ***This requirement is not met,*** ***The Community Theater building currently does not have illuminated exit signs and will require those so as to comply with these requirements. Tactile exits signs are not currently present and would also need to be installed.***
1012.1	*Stairway and ramp handrails*	Where required. Handrails for stairways and ramps shall be adequate in strength and attachment in accordance with Section 1607.7. Handrails required for stairways by Section 1009.10 shall comply with Sections 1012.2 through 1012.8. Handrails required for ramps by Section 1010.8 shall comply with Sections 1012.2 through 1012.7.
1012.2	*Handrail Height*	Handrail height, measured above stair tread nosing, or finish surface of ramp slope shall be uniform not less than 34" and not more than 38".
1012.5	*Handrail extensions*	Handrail shall return to a wall, guard, or the walking surface or shall be continuous to the handrail of an adjacent stair flight or ramp run. At stairways where handrails are not continuous between flights, the handrails shall extend horizontally at least 12 inches beyond the top riser and continue to slope for the depth of one tread beyond the bottom riser. ***This requirement is not met.*** ***The existing stairway handrail heights do not meet this requirement. No handrail extensions are currently present. Handrails would need to modified/replaced and extensions added in order to comply with this requirement. As an existing structure compliance with this section would be at the discretion of the governing building official.***
1013.1	*Guards*	**Where required.** Guards shall be located along open-sided walking surfaces, mezzanines, industrial equipment platforms, stairways, ramps and landings that are located more than 30" above the floor or grade below. . . Exception: Guards are not required for the following locations.

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		7. On the loading side of loading docks. 8. On the audience side of stages and raised platforms, including steps leading to the stage and raised platforms. 9. On raised stages and platform floor areas, such as runways, ramps and side stages used for entertainment or presentations. 10. At vertical openings in the performance areas of stages and platforms. 11. At elevated walking surfaces appurtentant to stages and platforms for access to and utilization of special lighting or equipment. 12. In assembly seating where guards in accordance with Section 1025.14 are permitted and provided.
1013.2	*Guard height*	Guards shall form a protective barrier not less than 42" high, measured vertically above the leading edge of the tread, adjacent walking surface or adjacent seatboard.
1013.3	*Opening limitations for guards*	Open guards shall have balusters or ornamental patterns such that a 4-inch-diameter sphere cannot pass through any opening. ***This requirement <u>is not</u> met.*** ***The existing basement stairway guard height does not meet this requirement. The existing guard would need to modified/replaced in order to comply with this requirement.*** ***As an existing structure, and because the stairs serve a non-public service area, the basement stairs, if left unaltered, may not require modification. <u>As an existing building, compliance with this section would be at the discretion of the governing building official.</u>***
1014	*Exit Access*	The exit access arrangement shall comply with Sections 1014 through 1017 and the applicable provision of Sections 1003 through 1013.
1014.2	*Egress through intervening spaces*	Egress from room or space shall not pass through adjoining or intervening rooms or areas, except where such adjoining rooms are accessory to the served, are not a high-hazard occupancy and provide a discernible path of travel to an exit. ***This requirement is met.***
1014.3	*Common path of egress travel*	In occupancies other than Groups H-1, H-2, and H-3, the common path of egress travel shall not exceed 75 feet.

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		This requirement is met.
1025.8	*Common path of egress travel for Group A Occupancies.*	The common path of egress travel shall not exceed 30 feet from any seat to a point where an occupant has a choice of two paths of egress. ***This requirement is met.***
1014.4	*Aisles*	Aisles serving as a portion of the exit access and the means of egress system shall comply other the requirements of this sections. Aisles shall be provided from all occupied portions of the exit access which contains seats, tables, furnishings, displays and similar fixtures or equipment. Aisles serving assembly areas, other than seating at tables, shall comply with Section 1025. The required width of aisles shall be unobstructed. ***Any modifications to the seating layout of the community theater will need to comply with this section of the CBC.***
1015.1	*Number of exit and exit access doorways*	Two exits or exit access doorways form any space shall be provided where one of the following conditions exits: 4. The occupant load of the space exceeds the values in Table 1015.1 5. The common path of egress travel exceeds the limitations of section 1014.3 6. Where required by Sections 1015.3, 1015.4, and 1015.5 ***The maximum load for a single exit in an A occupancy is 49. The current community theater requires three exits as the anticipated load is 410 persons. (min number of exits is 2 /1-500 persons)*** ***This requirement can be met. (See 1008.1.1-Sizes of Doors)***
1015.2.1	*Egress separation*	Where two exits or exit access doorways are required from any portion of the exit access, the exit doors or exit access doorways shall be placed a distance apart equal to not less than one-half of the length of the maximum diagonal dimension of the building or area to be serviced measured in a straight line between exit doors or exit access doorways. Exception: 4. Where exit enclosures are provided as a portion of the required exit and are interconnected by a 1-hour fire-resistance-rated corridor, conforming to the requirements of Section 1017, the required exit separation shall be measured along the shortest direct

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		line of travel within a corridor. 5. Where a building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2, the separation distance of the exit doors or exit access doorways shall not be less than one-third of the length of the maximum overall diagonal dimension of the area served.
1016.1	*Travel distance limitations*	Exits shall be so located on each story such that the maximum length of exit access travel, measured from the most remote point within a story to the entrance to an exit along the natural and unobstructed path of egress travel, shall not exceed the distance given in Table 1016.1 Where the path of travel exit access includes unenclosed stairways or ramps within the exit access or includes unenclosed ramps or stairways as permitted in Section 1020.1, the distance of travel on such means of egress components shall also be included in the travel distance measurement. The measurement along stairways shall be made on a plane parallel and tangent to the stair tread nosings in the center of the stairway.
Per Table 1016	*Exit Access Travel Distance*	*The maximum exit access travel distance for group A occupancy is 200 feet without an automatic sprinkler system.* *The maximum exit access travel distance for group A occupancy is 250 feet without an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2 for occupancies where automatic sprinkler systems are permitted in accordance with Section 903.3.1.2.* ***This requirement is met***
1028.7	*Travel Distance*	*Exits and aisles shall be located so that the travel distance to an exit door shall be no greater than 200 feet measured along the line of travel in non-sprinkled buildings. Travel distance shall not be more than 250 feet in sprinkled buildings. Where aisles are provided for seating, the distance shall be measured along the aisles accessway without travel over or on the seats.* ***This requirement is met***
1017.1	*Corridor construction*	Corridors shall be fire-resistance rated in accordance with Table 1017.1
Table 1017.1		***No rating of the corridors is required in A occupancies with sprinkled corridors for occupant loads greater than 30 persons. (1-hour rating is required in A occupancies with non-sprinkled corridors for occupant loads greater than 30 persons.)***

SECTION	ITEM	SUMMARY
		The 2010 CBC does recognize some plaster/lath/wood framed walls and ceilings as being 1-hr compliant. Further evaluation would need to be performed in order to determine that the existing walls and ceilings meet those requirements. ***This requirement can also be met with the installation of an approved fire-sprinkler system. For the purposes of this analysis, it is assumed that an automatic sprinkler system would be installed in the building.***
1019.1	*Number of exits*	All rooms and spaces within each story shall be provided with and have access to the minimum number of required independent exits required by Table 1019.1 based on the occupant load of the story. . . The required number of exits from any story, basement or individual space shall be maintained until arrival at grade of the public way.
Table 1019.		***Per table 1019.1; Occupancy of 1-500 persons requires a minimum of 2 exits.*** ***This requirement is met.***
1020.1.1	*Openings and penetrations*	Exit enclosure opening protectives shall be in accordance with the requirements of Section 715. Except as permitted in Section 402.4.6, openings in exit enclosures other than the unprotected exterior openings shall be limited to those necessary for exit access to the enclosure from normally occupied spaces and for egress from the enclosure. Where interior exit enclosures are extended to the exterior of the building by an exit passageway, the door assembly from the exit enclosure to the exit passageway shall be protected by a fire door assembly conforming to the requirements in Section 715.4. Fire Door assemblies in exit enclosures shall comply with Section 715.4.4. ***This requirement <u>is not</u> met.*** ***The existing corridor and discharge doors are not fire-rated. This requirement can be met through the installation fire-rated doors or with the installation of an approved fire-sprinkler system or modifications to the openings and penetrations.***
1021	*Exit Passageways*	Exit passageways serving as an exit component in a means of egress system shall comply with the requirements of the section.

SECTION	ITEM	SUMMARY
		An exit passageway shall not be used for any purpose other than as a means of egress.
1021.2	*Width*	The width of exit passageways shall be determined as specified in Section 1005.1 but such width shall not be less than 44 inches. The required width of exit passageways shall be unobstructed. Exception: Doors when fully opened, and handrails, shall not reduce the required width by more than 7 inches. Doors in any position shall not reduce the required width by more than one half. Other nonstructural projections such as trim and similar decorative features are permitted to project into the required width 1.5 inches on each side.
Per Table 1005.1		***This requirement <u>is not</u> met.*** ***If equipped with an automatic sprinkler system, the egress passageway must be a minimum of 44 inches wide. The existing egress passageways flanking the stage meet the minimum required width.*** ***The interior doors which provide access to the passageways do not meet the minimum required widths of 44". Those doors will need to be modified to comply with this section. As an existing building, compliance with this section will be at the discretion of the governing building official.***
1021.3	*Construction*	Exit passageway enclosures shall have w1alls, floors and ceilings of not less than 1-hour fire-resistance rating, and not less that required for any connecting exit enclosure. ***This requirement <u>is not</u> met.*** ***The 2010 CBC does recognize some plaster/lath/wood framed walls and ceilings as being 1-hr compliant. Further evaluation would need to be performed in order to determine that the existing walls and ceilings meet those requirements.***
715	*Opening protectives*	Exit passageways with a required minimum 1-hour fire rating, shall contain doors with a minimum required 20-minute fire rating, and assembly ratings of 1-hour. (per Table 715.4). ***This requirement <u>is not</u> met.*** ***The existing corridor is not fire-rated. This requirement can be met through the installation fire-rated doors or with the installation of an approved fire-sprinkler system. For the purposes of this analysis, it is assumed that an automatic sprinkler system would be installed in the building.***
1021.4	*Openings and penetrations*	Openings in exit passageways other than unexposed exterior openings shall be limited to those necessary for exit access to the exit passageway from normally occupied spaces and for egress from the exit passageway.
1024	*Exit Discharge*	Exits shall discharge directly to the exterior of the building. The exit discharge shall be at grade or shall provide direct access to grade. ***The exit passageways that lead to the exit doors that flank the stage are required to be of 1-hour construction. Doors located in the passageway must be 20-minute fire-rated, and assemblies must be identified as having 1-hour ratings. The existing passageway does not meet this requirement, and no rating identifications are apparent on the existing doors or assemblies.***
1023	*Exterior exit ramps and stairways.*	Exterior exit ramps and stairways serving as an element of a required means of egress shall comply with this section.
1023.3	*Open side*	Exterior exit ramps and stairways shall serving as an element of required means of egress shall be open on at least one side. An open side shall have a minimum of 35 square feet of aggregate open area adjacent to each floor level and the level of each intermediate landing. The required open area shall be located not less than 42 inches above the adjacent floor or landing level. ***The Community Theater building does not currently include any exit ramps. Any new exit ramps would need to meet current code requirements.***
1024	*Exit Discharge*	Exits shall discharge directly to the exterior of the building. The exit discharge shall be at grade or shall provide direct access to grade.
1024.1	*Exit discharge*	Exits shall discharge directly to the exterior of the building. The exit discharge shall be at grade or shall provide direct access to grade. The exit discharge shall not reenter a building. A maximum of 50 percent of the number and capacity of the exit enclosure is permitted to egress through areas on the level of discharge provided all of the following are met: 1.1 Such exit enclosures egress to a free and un-obstructed way to the exterior of the building. . .

SECTION	ITEM	SUMMARY
		1.2 The entire area of the level of discharge is separated form areas below by construction conforming to the fire – resistance rating the exit enclosure. 1.3 The egress path from the exit enclosure on the level of discharge is protected throughout by an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.1.2, or separated from the egress path in accordance with the requirements for the enclosure of exists. ***This requirement is met.*** ***The existing exits discharge directly to the exterior of the building. The exit discharges are at grade. For the purposes of this analysis, it is assumed an automatic fire sprinkler system will be installed.***
1025.2	*Egress for assembly occupancies*	Assembly main exit. Group A occupancies that have an occupant load of greater than 300 shall be provided with a main exit. The main exit shall be of sufficient width to accommodate not less than one-half of the occupant load,... Where the building is classified as Group A occupancy, the main exit shall front on at least one street or an unoccupied space of not less that 20 feet in width that adjoins a street or public way. Group A occupancies that have an occupant load greater than 300 shall be provide with at least 0.20-inch total exit width for each occupant served. *Min. total exit width from Community Theater building:* *Minimum Stairway widths: 410 x 0.3 inches = 123"* *Minimum Egress Component width: 410 x 0.2 inches = 82.0"* ***The existing main exit from the Community Theater building, (one pair doors at lobby) has a clear opening of 72".*** ***This requirement is met.***
1025.3	Assembly other exits	In addition to having access to a main exit, each level in a Group A occupancy having an occupant load greater than 300 shall be provided with additional means of egress that shall provide an egress capacity of at least one-half of the total occupant load. . . ***Per table 1019.1 the minimum number of exits for the community theater space is two (2).***

SECTION	ITEM	SUMMARY
1025.4	Foyers and lobbies	In Group A-1 occupancies, where persons are admitted to the building at times when seats are not available and are allowed to wait in a lobby or similar space, such use of a lobby or similar space shall not encroach upon the required clear width of the means of egress by substantial permanent partitions of by fixed rigid railings not less than 42" high. Such foyer if not directly connect to a public street by all the main entrances or exits, shall have a straight and unobstructed corridor or path of travel to every such main entrance or exit. ***The Community Theater building meets this requirement.***
1103B.1	*Accessibility Scope*	Accessibility to buildings or portions of buildings shall be provided for all occupancy classifications. An accessible route of travel complying with Section 1114B.1.2 shall connect all elements and spaces within a building or facility. Multi-story buildings must provide access to each level, including mezzanines, by ramp or passenger elevator. . ***This requirement <u>is not</u> met.*** ***In its current state, the Community Theater Building is not fully accessible throughout. <u>As an existing building, compliance with this section would be at the discretion of the governing building official.</u>*** ***Any future renovations shall be made accessible per this section of the code.***
1104B	*Accessibility for Group A occupancies*	All Group A occupancies shall be accessible as provided in this chapter. See also the general requirements in the section.
1104B.2	*Assistive-listening systems in assembly areas.*	Assembly area, conference and meeting rooms shall provide assistive listening systems for persons with hearing impairments as provided in this section. 1. Number of personal receivers required. The minimum number of receivers to be provided shall be equal to 4 percent of the total number of seats but in no case less than two. ***15 receivers would be required in the theater space. (361 x .04 = 14.44)*** ***This requirement <u>is not</u> currently met, however as an existing building, this may not be required. Future renovations shall provide accommodation per this section of the code.***

SECTION	ITEM	SUMMARY
1115B	*Accessibility restroom Facility requirements*	*This section addresses the minimum requirements for restroom facilities. It should be used in the proposed upgrade of the restrooms.*
1115B.3.1	*Toilet Facilities*	***New, multiple-accommodation toilets facilities shall include the following in accordance with Section 1115B.3.1 – 1115B.4.5;*** ***1. Wheelchair clearance*** ***2. Clear floorspace at fixtures*** ***3. Accessible water closet*** ***4. Accessible water closet compartment*** ***5. Accessible urinals*** ***6. Accessible lavatories*** ***7. Accessible passageways*** ***8. Accessible symbols*** ***9. Accessible grab bars*** ***10. Accessible accessories*** ***The existing restroom facilities possess many deficiencies in regard to accessibility. <u>As an existing building, compliance with this section would be at the discretion of the governing building official.</u>*** ***If existing restrooms were to be renovated, they would be required to meet accessibility requirements for wheelchair clearance, clear floorspace at fixtures, water closets, water closet compartments, urinals, lavatories, passageways, symbols, grab bars and accessories.*** ***The existing space allocated to toilet facilities most like would not accommodate the accessibility clearances or the number of fixtures required by CPC 2010 Table 4-1.***
1115B.4.6	*Accessible Drinking Fountains*	*The installation of new drinking foundations shall comply with the requirements of Section 1115B.4.6.* ***Currently, drinking fountains are not provided. As an existing building, this may not be required. Any future modifications however, shall be in compliance with this section of the code***
1117B	*Other Building Components*	***Modifications to the community theater shall include the following in accordance with Section 1115B.3.1;*** ***1. Water fountains*** ***2. Telephones*** ***3. Signs and identification*** ***4. Symbols of Accessibility*** ***5. Controls and operating mechanisms*** ***As an existing building, this may not be required. Any future modifications however, shall be in compliance with this section of the code***
1118B	*Space Allowance and reach ranges*	*Modification of the community theater shall comply with the requirements of Section 1118B.* ***As an existing building, this may not be required. Any future modifications however, shall be in compliance with this section of the code***
11120B.1	*Floor and levels*	In buildings and facilities, floors of a given story shall be a common level throughout, shall be connected by pedestrian ramps, passenger elevators or special access lifts. ***Currently, no accessible means (i.e. ramp of lift) are provided to the stage/backstage area. As an existing building, this may not be required.*** ***Any modifications of the community theater shall comply with the requirements of this section.***
1122B	*Fixed or built-in seating*	Buildings containing fixed or built-in seating shall comply with requirements of sections 1112B.1 – 1122B.5.
1104B.3.4 Per Table 11B-1	*Wheelchair seating*	The number of such spaces is as shown in Table 11b-1. **301 to 500 persons = 6 Req. Wheelchair Seating Spaces** ***<u>As an existing building, compliance with this section would be at the discretion of the governing building official.</u>*** On addition, 1 percent, but not less than one, of all fixed seats, shall be aisle seats with no armrests on the aisle side, or removable or folding armrests on the aisle side. Each such seat shall be identified by a sign or marker with the International Symbol of Accessibility. Signage notifying patrons of the availability of such seats shall be posted at the ticket office. Signs and markers shall comply with Section 1117B.5.1, Items 2 and 3, as applicable.
1124B.1	*Floor Surfaces*	Ground and floor surfaces along accessible routes and in accessible rooms and spaces, including floors, walks, ramps, stairs and curb ramps, shall be stable, firm, slip resistant and shall comply with Sections 1124B.1-1124B.4 ***<u>As an existing building, compliance with this section would be at the discretion of the governing building official.</u> Any modifications of the community theater shall comply with the requirements of floor surfaces, change in level, carpet and grating as specified in Section 1124B.1.***

SECTION	ITEM	SUMMARY
1125B	*Storage*	If fixed storage faculties such as cabinets, shelves, closets or drawers are provided where access is required be Section 109.1, at least one of each type shall comply with this section. ***As an existing building, compliance with this section would be at the discretion of the governing building official. Any new storage facilities shall comply with the requirements for clear space, height and hardware as specified ins section 1125B.***
1127B.1	*Exterior routes of travel*	***By code, alterations to existing buildings such as the Community Theater building, do not require an accessible means of egress.***
3403.1	*Existing Buildings – alterations, additions, or repairs*	Additions or alterations to any building or structure shall comply with the requirements of the code for new construction. Additions or alterations shall not be made to an existing building or structure that will cause the existing building or structure to be in violation of any portions of this code. . . Portions of the structure not altered and not affected by the alteration are not required to comply with the code requirements for a new structure. *Rooms and areas that are not upgraded can remain in their existing condition, unless a modification to some other item has an un-intentional impact on an area that was not scheduled to be modified.*
3403.2	*Structural impact to existing buildings*	Additions or alterations to an existing structure shall not increase the force in any structural element by more than 5%. . .
3403.3	*Nonstructural modifications to existing buildings*	Nonstructural alterations or repairs to an existing building or structure are permitted to be made of the same materials of which the building or structure is constructed, provided that they do not adversely affect any structural member or the fire-resistance rating of any part of the building or structure.
3410.2.3	*Alterations and repairs to existing buildings*	An existing building or portion thereof, which does not comply with the requirements of this code for new construction, shall not be altered or repaired in such a manner that results in the building being less safe or sanitary than such building is currently.

TABLE 503 (RELEVANT SECTIONS)

		TYPE IIIB	SUMMARY
GROUP A-1	Height (feet)	55' High max.	*The Community Theater is 46' feet high at the back and 42' high at the front. Neither exceeds the allowable height.*
			The code requires an average of the heights based on areas for the height measurement. *The Community Theater meets this requirement.*
	Height (Stories)	2 Stories max.	*The Nelles School Community theater does not exceed two stories in height* *This requirement is met.*
	Area	8,500 sq.ft. Max.	*The Community Theater is 5,686 sq. ft.*

OCCUPANT LOAD (PER TABLE 1004.1.1 CBC)

AREA	FUNCTION OF SPACE	AREA	OCCUPANT LOAD FACTOR	TOTAL OCCUPANTS
Theater	Assembly with fixed seats	3,410 s.f.	361 fixed seats	361 persons
Stage	Assembly (nc)	670 s.f.	15	45 persons
Ticketbooth	Business	65 s.f.	100	1 person
Dress'g Room (2)		69 s.f.	50	1 person
Toilet	-	-	-	-
Storage/Mech.	Storage	400 s.f.	300	2 persons
Storage/Mech.	Storage	130 s.f.	300	1 person
Circulation	-	-	-	-
Total		(combined exiting)		**410 persons**
Total		(separate exit)		**1 person**

MINIMUM EGRESS WIDTH OF STAIRS, ASSUMED SPRINKLERED (PER TABLE 1005.1 CBC)

AREA	OCCUPANCY TYPE	OCCUPANTS	STAIRWAY WIDTH FACTOR	TOTAL WIDTH REQUIRED (INCHES)
Community Theater	Assembly	410	0.3	123.0"

MINIMUM EGRESS WIDTH OF OTHER COMPONENTS (DOOR WAYS, ETC.), ASSUMED SPRINKLERED (PER TABLE 1005.1 CBC)

AREA	OCCUPANCY TYPE	OCCUPANTS	COMPONENT FACTOR	TOTAL WIDTH REQUIRED (INCHES)
Community Theater	Assembly	410	0.2	82.0"

PLUMBING FIXTURE COUNTS (PER TABLE 4-1, CALIFORNIA PLUMBING CODE)

TYPE OF	AREA	OCCUPANT	OCCUPANTS	MEN'S	MEN'S	MEN'S	WOMEN'S	WOMEN'S	DRINKING

BUILDING OCCUPANCY		LOAD FACTOR	OF EACH SEX*	LAV.	URINAL	W/C	LAV	W/C	FOUNTAINS
Assembly Places	5,686 sq.ft.	411	206	2	See below	3	2	11	2

Urinals may be installed instead of water closets in toilet rooms to be used only be men provided that the number of water closets shall not be less than two thirds of the minimum number of toilet facilities specified.

* per Table A. Occupant Load Factor in CPC, 2010

Infirmary Detailed Code Analysis

Applied Codes:
California Building Code (CBC) – 2010 ed.
California Electrical Code (CEC) – 2010 ed.
California Plumbing Code (CPC)– 2010 ed.
California Mechanical Code (CMC)– 2010 ed.

Proposed Use - Office

Existing Areas:
Building Gross S.F: 4,612 sq. ft.
Total N.S.F: 4,077 sq. ft.

Building Height:
Height at front of building: 32'
Height at back of building: 32'

SECTION	ITEM	SUMMARY
301	*Use & Occupancy Classification*	
302.1	*Classification*	Structures or portions of structures shall be classified with respect to the occupancy in one more of the groups listed below. A room or space that is intended to be occupied at different times for different purposes shall comply with the requirements that are applicable to each of the purposes for which the room or space will be occupied. Structures with multiple occupancies or uses shall comply with Section 508. Where a structure is proposed for a purpose that is not specifically provided for in this code, such structure shall be classified in the group that the occupancy most nearly resembles, according to the fire safety and relative hazard involved.
304.1	*Business Group B*	Business Group B Occupancy includes, among others, the use of a building or structure, or a portion thereof, for office, professional or service-type transactions, including storage of records and accounts. Business occupancies shall include, but not be limited to, the following: Airport traffic control towers Animal hospitals, kennels and pounds Banks Barber and Beauty shops Car wash Civic administration Clinic-outpatient *[SFM] (not classified as Group I-2.1)* Dry-cleaning and laundries: pick-up and delivery stations and self-service Educational occupancies for students above the 12th grade Electronic data processing Laboratories: testing and research Motor vehicle showrooms Post office Print Shops Professional services (architects, attorney, dentists, physicians, engineers, etc.) Radio and television stations Telephone exchanges Training and skill development not within a school or academic program ***If converted to office use, the Old Infirmary building would be classified as Group B Occupancy.***
508.2	*Incidental uses*	Incidental use areas shall comply with the provisions of this section.
508.2.1	*Occupancy classification.*	An incidental use area shall be classified in accordance with the occupancy of that portion of the building in which it is located or the building shall be classified as a mixed occupancy and shall comply with section 508.3 ***No incidental uses are anticipated in this analysis.***
508.2.2	*Separation*	Incidental use areas shall be separated or protected, or both in accordance with Table 508.2
508.2	*Table 508.2*	Below is a list of potential incidental uses and their protection requirements per Table 508.2: • Furnace room where any piece of equipment is over 400,000 Btu per hour input: 1 hour or provide automatic fire-extinguishing system. • Rooms with boilers where the largest piece of equipment is over 15 psi and 10 horse power: 1 hour or provide automatic fire-extinguishing system. [a] • Refrigerant machinery rooms: 1 hour or provide automatic fire-extinguishing system. [a] • Parking garage (Section 4.6.2): 2 hours; or 1 hour and provide automatic fire-extinguishing system. • Hydrogen cut-off rooms, not classified as Group H: 1-hour in Group B, F, M, S and U occupancies. 2-hour in Group A, E, I and R occupancies. • Incinerator rooms: 2 hours and automatic sprinkler

SECTION	ITEM	SUMMARY
		system. • Paint shops not classified as Group H, located in occupancies other than Group F. 2 hours; or 1 hour and provide automatic fire-extinguishing system. • Laboratories and vocational shops, not classified as Group H, located in Group I-2 and *I-2.1* occupancies. • *[SFM] Rooms or areas with special hazards such as laboratories, vocational shops and other such areas not classified as Group H, located in Group E occupancies where hazardous materials in exempt amounts are used or stored: 1 hour* • Laundry rooms over 100 square feet: 1 hour or provide automatic fire-extinguishing system.[a] • Storage rooms over 100 square feet: 1 hour or provide automatic fire-extinguishing system.[a] • Group I-2 and *I-2.1* waste and linen collection rooms over 100 square feet: 1 hour or provide automatic fire-extinguishing system.[a] • Stationary storage battery systems having a liquid capacity of more than 100 gallons used for facility standby power, emergency power or uninterrupted power supplies: 1-hour in Group B, F, M, S and U occupancies, 2-hour in Group A, E, I and R occupancies.[a] *a. [SFM] Fire barrier protection and automatic sprinkler protection required throughout the fire area in I-2 and I-2.1 occupancies as indicated.* ***No incidental occupancy uses are anticipated in this analysis.***
508.3.1	*Accessory occupancies*	Accessory occupancies are those occupancies subsidiary to the main occupancies of the building or portion thereof. Aggregate accessory occupancies shall not occupy more than 10 percent of the area of the story in which they are located and shall exceed the tabular values in Table 503, without height and area increases in accordance with Sections 504 and 506 for such accessory occupancies. ***No accessory occupancy types are anticipated in this analysis.***
903.2	*Sprinkler requirements*	Approved automatic sprinkler systems in new buildings and structures shall be provided in the locations described in this section.
[F]903.2.10.3	*Buildings 55 feet or more in height*	***This requirement is met.*** ***Group B occupancies in structures over 6000 s.f. and over 40 feet in height are required to have an automatic sprinkler system. For the purposes of this analysis, it is assumed the building will be non-sprinklered. <u>As an existing building, compliance with this section would be at the discretion of the governing building official.</u>***
601	*Types of Construction*	***Reinforced concrete with wood roof.***
602.1	*Construction Classification*	Buildings and structures erected or to be erected, altered or extended in height or area shall be classified in one of the five construction types defined in Sections 602.2 through 602.5.
602.3		**Type III-B**. Type IIIB construction type of construction in which the exterior walls are of noncombustible materials and the interior building elements are of any material permitted by this code. ***For the purposes of this analysis, the Old Infirmary building is classified as a Type IIIB.*** ***Exterior structural elements walls are made of non-combustible materials. The roof of the Old Infirmary building is made of wood. Per Table 601, the roof requires a 1-hour rating for type IIIA, which is not possible with existing wood sheathing. Type IIIB does not require that any element except the exterior bearing walls have any rating (2 hours in this case).***
503.1	*General Height and Area Limitations*	The height and area for building of different construction types shall be governed by the intended use of the building and shall not exceed the limits in Table 503 except as modified hereafter. Each part of the building included within the exterior walls and fire walls where provided shall be permitted to be a separate building.
Table 503	*Allowable Height and Building Areas*	***See relevant portions of Table 503 below.*** ***Group B/Type IIIB Max. Allowable Stories 4*** ***Max. Allowable Height 55'*** ***Max. Allowable Area 9,500 s.f.*** ***The Old Infirmary building is one story in height. The front of the building is 32' high – the rear is 32' high. The average height is 32.0'.*** ***This requirement is met.*** ***The total square footage of the building (4,612 sq. ft.) is less than the maximum allowable 9,500 sq. ft. (Classification B/Type IIIB).***

SECTION	ITEM	SUMMARY
		This requirement is met.
503.1.2	*Buildings on Same Lot*	Two or more buildings on the same lot shall be regarded as separate buildings or shall be considered as portions of one building if the height of each building and the aggregate area of the buildings are within the limitations of Table 503 a modified by Sections 504 and 506. The provisions of this code applicable to the aggregate building shall be applicable to each building. ***For the purposes of this analysis, the Old Infirmary would be considered as separate building and complies with 503.1.2.***
Per Table 1004	*Occupant Load*	*Total Occupant Load* ***41 persons***
1005.1	*Egress width and distribution*	The means of egress width shall not be less than required by this section. The total width of means of egress in inches shall not be less that the total occupant load served by the means of egress multiplied by the factors in Table 1005.1 and not less than specified elsewhere in the code. Multiple means of egress shall be sized such that the loss of any one means of egress shall not reduce the available capacity to less than 50 percent of the required capacity. The maximum capacity required from any story of a building shall be maintained to the termination of the means of egress.
Per Table 1004	*Occupant Load*	
1005.1	*Egress width and distribution*	The means of egress width shall not be less than required by this section. The total width of means of egress in inches shall not be less that the total occupant load served by the means of egress multiplied by the factors in Table 1005.1 and not less than specified elsewhere in the code. Multiple means of egress shall be sized such that the loss of any one means of egress shall not reduce the available capacity to less than 50 percent of the required capacity. The maximum capacity required from any story of a building shall be maintained to the termination of the means of egress.
Per table 1005.1		*Min. egress widths from building <u>without</u> an approved automatic sprinkler system.* *Stairways:* *Old Infirmary occupancy: 41 x 0.3 inches = 12.3* *Other egress components:* *Old Infirmary occupancy: 41 x 0.2 inches = 8.2"*

SECTION	ITEM	SUMMARY
		For the purposes of this analysis, it is assumed that an automatic sprinkler system would not be installed in the building. ***Currently, three exits are provided from the interior of the Old Infirmary building. The primary entrance/exit is located on the east side of the clinical waiting room provides a net clear opening of 3'-6". Located on west side of the reception room, another exit/entrance provides a net clear opening of 3'-6". An additional exit is located on the south end of the corridor and provides a 3'-2" net clear opening. These exits meet or exceed the minimum required net clear opening of 36.6".*** ***Currently no exit exists at the north end of the corridor. As the corridor is more than 20 feet in length, the result is dead-end corridor. The 2010 CBC would require installation of exit discharge at that location with a net clear opening of no less than 32".***
1007.3	*Exit stairways*	In order to be considered part of an accessible means of egress, an exit stairway shall have a clear width of 48" minimum between handrails and shall have either incorporate an area of refuge with an enlarged floor-level landing or shall be accessed from either an area of refuge complying with section 1007.6 or a horizontal exit. In addition, exit stairways shall comply with Chapter 11A, Sections 1115A and 1123A, or Chapter 11B, Section 1133B.4, as applicable. Exceptions: 1. Unenclosed exit stairways as permitted by Section 1020.1 are permitted to be considered part of an accessible means of egress. 2. The area of refuge is not requires at unenclosed exit stairways as permitted by Section 1020.1 in buildings or facilities that are equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1. 3. The clear width of 48 inches between handrails is not required at exit stairways in buildings or faculties equipped throughout with an automatic sprinkler system installed in accordance with Section 903.1.1 or 903.3.1.2. ***This requirement is met.*** ***Accessible means of egress are not required in alterations to existing buildings. <u>As an existing building, compliance with this section would be at the discretion of the governing building official.</u>***

SECTION	ITEM	SUMMARY
1017.2	*Corridor width*	The minimum corridor width shall be determined in Section 1005.1, but not less than 44". Exceptions: 6. Twenty-four inches - For access to and utilization of electrical, mechanical and plumbing systems or equipment. 7. Thirty-six inches - With a required occupant capacity of less than 50. 8. Thirty-six inches - Within a dwelling unit. 9. Seventy-two inches-In group E with a corridor having a required capacity of 100 or more. 10. Seventy-two inches – In corridors serving surgical Group I, health care centers for ambulatory patients receiving outpatient care, which causes a patient to not be capable of self-preservation. ***This requirement is met.***
1008.1	*Sizes of doors*	The minimum width of each door opening shall be sufficient to for the occupant load thereof and shall provide a clear width of not less than 32 inches. Clear openings of doorways with swinging doors shall be measured between the face of the door and the stop, with the door open 90 degrees. Where this section requires a minimum clear width of 32 inches and a door opening includes two door leaves without a mullion, one leaf shall provide a clear width of 32 inches. The maximum width of a swinging door leaf shall be 48 inches nominal. Means of egress doors in Group I-2 occupancy used for the movement of beds and *litter patients* shall provide a clear width not less than 80 inches. The height of the doors shall not be less than 80 inches. Exceptions: 1. The minimum and maximum width shall not apply to door openings that are not part of the required means of egress in Group R-2 and R-3 occupancies. 2. *Other than those required to be accessible by Chapter 11B,* door openings to resident sleeping units in group I-3 occupancies shall have a clear width of no less than 28 inches. 3. Door openings to storage closets less than 10 square feet in area shall not be limited by the minimum width. 4. Width of door leafs in revolving doors that comply with Section 1008.1.3.1 shall not be limited. 5. Door openings in a dwelling unit or sleeping unit shall not be less than 78 inches in height. 6. Exterior door openings in dwelling units and sleeping units, other than the required exit door, shall not be less than 76 inches in height. 7. In other Group R-1 occupancies, the minimum width widths shall not apply to interior egress doors within a dwelling unit or sleeping unit that is not required to be *adaptable or accessible as specified in Chapter 11A or 11B, as applicable.* 8. Door openings required to be accessible within *dwelling* units shall have a minimum clear width *as specified in Chapter 11A or 11B, as applicable.* ***Currently, three exits are provided from the interior of the Old Infirmary building. The primary entrance/exit is located on the east side of the clinical waiting room provides a net clear opening of 3'-6". Located on west side of the reception room, another exit/entrance provides a net clear opening of 3'-6". An additional exit is located on the south end of the corridor and provides a 3'-2" net clear opening. These exits meet or exceed the minimum required net clear opening of 36.6".*** ***Currently no exit exists at the north end of the corridor. As the corridor is more than 20 feet in length, the result is dead-end corridor. The 2010 CBC would require installation of exit discharge at that location with a net clear opening of no less than 32".***
1006.3	*Emergency Lighting*	The power supply for means of egress illumination shall normally be provided by the premises' electrical supply. In the event of power failure, an emergency electrical system shall automatically illuminate the following areas: 1. Aisles and unenclosed egress stairways in rooms and spaces that require two or more means of egress. 2. Corridors, exit enclosures and exit passageways in buildings required to have two or more exists. 3. Exterior egress components at other than level of exit discharge until the exit discharge is accomplished for buildings required to have two or more exits. 4. Interior exterior discharge elements, as permitted in Section 1024.1 in buildings required to have two or more exists. 5. Exterior landings, as required by Section 1008.1.5 for exit discharge doorways in buildings required to have two or more exists. The emergency power systems shall provide power for a duration of not less than 90 minutes and shall consist or storage batteries, unit equipment or an on-site generator . The installation of the power system shall be in accordance with Section 2702.
1006.4	*Performance of System*	Emergency lighting facilities shall be arranged to provide initial illumination that is at least an average of 1 foot-candle and a minimum at any point of 0.1 foot candle measured along a path

SECTION	ITEM	SUMMARY
		of egress at floor level. Illumination levels shall be permitted to decline to 0.6 foot-candle average and a minimum at any point of 0.06 foot-candle at the end of the emergency lighting time duration. A maximum-to minimum illumination uniformity ratio of 40 to 1 shall not be exceeded. ***The Old Infirmary building <u>does not</u> currently meet this requirement. The 2010 CBC would require installation of an emergency lighting system in order to comply with this code.***
1007.1	*Accessible means of egress*	Accessible means of egress shall comply with this section. Accessible spaces shall be provided with not less than one accessible means of egress. Where more than one means of egress is required by Sections 1015.1 or 1019.1 from any accessible space, each accessible portion of the space shall be served by accessible means of egress in at least the same number as required by Section 1015.1 or 1019.1. In addition to the requirements of this chapter; means of egress which provide access to, or egress from, buildings for persons with disabilities, shall also comply with the requirements of Chapter 11A or 11B, as applicable. **Exceptions:** 3. Accessible means of egress are not required in alterations to existing buildings. ***By code, alterations to existing buildings such as the Old Infirmary building, do not require an accessible means of egress. As an existing structure, those conditions may be allowed to remain <u>at the discretion of the governing building official.</u>***
1008.1	*Doors*	Means of egress doors shall meet the requirements of this section. Doors serving a means of egress system shall meet the requirements of this section and Section 1018.2. Doors provided for egress purposes in numbers greater than required by this code shall meet the requirements of this section. Means of egress doors shall be readily distinguishable from the adjacent construction and finishes such that the doors are easily recognizable as doors. Means of egress doors shall not be concealed by curtains drapes, decorations or similar materials.
1008.1	*Sizes of doors*	The minimum width of each door shall be sufficient for the occupant load thereof and shall provide a clear width of not less than 32". The maximum width of swinging door widths shall be 48" nominal. The height of doors shall not be less than 80".

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		Currently, three exits are provided from the interior of the Old Infirmary building. The primary entrance/exit is located in the clinical waiting room provides a net clear opening of 6'-0". Located in the reception room on the opposite side of the building, another exit/entrance provides a net clear opening of 3'-6". An additional exit is located on the south end of the corridor and provides a 3'-2" net clear opening. These exits meet or exceed the minimum required net clear opening of 36.6". ***An additional exterior door is present in the kitchen area. That door provides a net clear opening of 32". This door cannot currently be considered an exit door as it would require occupants to exit through an intervening space. Although that door can remain in place, it does not currently meet the requirements to be considered an exit door.*** ***Currently no exit exists at the north end of the corridor. As the corridor is more than 20 feet in length, the result is dead-end corridor. The 2010 CBC would require installation of exit discharge at that location with a net clear opening of no less than 32".***
1006	*Means of Egress Illumination*	
1006.1	*Illumination Required*	The means of egress, including the exit discharge, shall be illuminated at all times the building space by the means of egress is occupied.
	Illumination Level	The means of egress illumination level shall not be less than 1-foot candle at the walking surface level. ***This requirement <u>is not</u> met.*** ***The Old Infirmary building does not currently meet this requirement. An egress lighting system would need to be installed in order to comply with this requirement. <u>As an existing building, compliance with this section would be at the discretion of the governing building official.</u>***
1006.3	*Emergency Lighting*	The power supply for means of egress illumination shall normally be provided by the premises' electrical supply. In the event of power failure, an emergency electrical system shall automatically illuminate the following areas: 6. Aisles and unenclosed egress stairways in rooms and spaces that require two or more means of egress. 7. Corridors, exit enclosures and exit passageways in buildings required to have two or more exists.

SECTION	ITEM	SUMMARY
		8. Exterior egress components at other than level of exit discharge until the exit discharge is accomplished for buildings required to have two or more exits. 9. Interior exterior discharge elements, as permitted in Section 1024.1 in buildings required to have two or more exists. 10. Exterior landings, as required by Section 1008.1.5 for exit discharge doorways in buildings required to have two or more exists. The emergency power systems shall provide power for a duration of not less than 90 minutes and shall consist or storage batteries, unit equipment or an on-site generator. The installation of the power system shall be in accordance with Section 2702.
1006.4	*Performance of System*	Emergency lighting facilities shall be arranged to provide initial illumination that is at least an average of 1 foot-candle and a minimum at any point of 0.1 foot candle measured along a path of egress at floor level. Illumination levels shall be permitted to decline to 0.6 foot-candle average and a minimum at any point of 0.06 foot-candle at the end of the emergency lighting time duration. A maximum-to minimum illumination uniformity ratio of 40 to 1 shall not be exceeded. ***This requirement <u>is not</u> met.*** ***The Old Infirmary building does <u>not</u> currently meet this requirement. An emergency lighting system would need to be installed in order to comply with this requirement. <u>As an existing building, compliance with this section would be at the discretion of the governing building official.</u>***
1007.1	*Accessible means of egress*	Accessible means of egress shall comply with this section. Accessible spaces shall be provided with not less than one accessible means of egress. Where more than one means of egress is required by Sections 1015.1 or 1019.1 from any accessible space, each accessible portion of the space shall be served by accessible means of egress in at least the same number as required by Section 1015.1 or 1019.1. In addition to the requirements of this chapter; means of egress which provide access to, or egress from, buildings for persons with disabilities, shall also comply with the requirements of Chapter 11A or 11B, as applicable. **Exceptions:** 4. Accessible means of egress are not required in alterations to existing buildings. ***Accessible means of egress are not required in alterations to existing buildings. Compliance with CBC Section 1007.1 would be at the <u>discretion of the governing building official</u>.***
1008.1	*Doors*	Means of egress doors shall meet the requirements of this section. Doors serving a means of egress system shall meet the requirements of this section and Section 1018.2. Doors provided for egress purposes in numbers greater than required by this code shall meet the requirements of this section. Means of egress doors shall be readily distinguishable from the adjacent construction and finishes such that the doors are easily recognizable as doors. Means of egress doors shall not be concealed by curtains drapes, decorations or similar materials.
1008.1.1	*Sizes of doors*	The minimum width of each door shall be sufficient for the occupant load thereof and shall provide a clear width of not less than 32". The maximum width of swinging door widths shall be 48" nominal. The height of doors shall not be less than 80". ***Currently, three exits are provided from the interior of the Old Infirmary building. The primary entrance/exit is located in the clinical waiting room provides a net clear opening of 6'-0". Located in the reception room on the opposite side of the building, another exit/entrance provides a net clear opening of 3'-6". An additional exit is located on the south end of the corridor and provides a 3'-2" net clear opening. These exits meet or exceed the minimum required net clear opening of 36.6".*** ***An additional exterior door is present in the kitchen area. That door provides a net clear opening of 32". This door cannot currently be considered an exit door as it would require occupants to exit through an intervening space. Although that door can remain in place, it does not currently meet the requirements to be considered an exit door.*** ***Currently no exit exists at the north end of the corridor. As the corridor is more than 20 feet in length, the result is dead-end corridor. The 2010 CBC would require installation of exit discharge at that location with a net clear opening of no less than 32".***
1008.1.2	*Door Swing*	Egress doors shall be side-hinged swinging. Doors shall swing in the direction of egress travel where serving an occupancy load of 50 or more.

SECTION	ITEM	SUMMARY
		This requirement is met.
1008.1.4	*Floor Elevation*	There shall be a floor landing on each side of a door. Such floor or landing shall be at the same elevation on each side of the door. Landings shall be level except at exterior landings, which are permitted to have a slope not to exceed .25 unit vertical in 12 units horizontal (2-percent slope). ***This requirement is met.***
1008.1.5	*Landings at doors*	Landings shall have a clear width of not less than the width of the stairway or the door, whichever is greater. Doors in the fully open position shall not reduce a required dimension by more than 7 inches. When a landing serves an occupant load of 50 or more, doors in any position shall not reduce than landing to less than one-half its required width. Landings shall have a length measured in the direction of travel of not less than 44 inches. ***The widths of the existing landings at the exit doors do not currently meet this requirement. Existing landings would need to be modified/replaced in order to comply with the requirements of this section. As an existing structure, compliance with this section would be at the discretion of the governing building official.***
1008.1.6	*Thresholds*	Thresholds at doorways shall not exceed 0.75 inch in height for sliding doors serving a dwelling units or 0.5 inch for other doors. Raised thresholds and floor level changes greater than .25 inch at doorways shall be beveled with a slope not greater than one unit vertical in two units horizontal (50-percent slope). ***This requirement is not met.*** ***The existing door thresholds do not currently meet this requirement. Existing thresholds would need to be modified/replaced in order to comply with the requirements of this section. As an existing structure, compliance with this section would be at the discretion of the governing building official.***
1008.1.7	*Door Arrangement*	Space between two doors in a series shall be 48 inches minimum plus the width of a door swinging into the space. Doors in a series shall swing in the same direction or away from the space between the doors. ***This requirement is met.***
1008.1.8	*Door Operations*	Except as specifically permitted by this section, egress doors shall be readily openable from the egress side without the use of a key or special knowledge. ***This requirement is not met.*** ***The existing egress doors require the use of a key. The egress doors do not currently meet this requirement. Existing locking devices would need to be modified/replaced in order to meet the requirements of this section. As an existing structure, compliance with this section would be at the discretion of the governing building official.***
1008.1.8.1	*Hardware*	Door handles, pulls, latches, locks and other operating devices on doors required to be accessible by Chapter 11A or 11B shall not require tight grasping, tight inching or twisting of the wrist to operate. ***This requirement is not met.*** ***Much of the existing hardware does not currently meet this requirement. Existing hardware would need to be modified/replaced in order to comply with this section. As an existing structure, compliance with this section would be at the discretion of the governing building official.***
1008.1.8.2	*Hardware Height*	Door handles, pulls, latches, locks and other operating devices shall be installed 34 inches minimum and 48 inches maximum above the finished floor. Locks used only for security purposes and not used for normal operation are permitted at any height. ***This requirement is not met.*** ***Much of the existing hardware does not currently meet this requirement. Existing hardware would need to be modified/replaced in order to comply with the requirements of this section. As an existing structure, compliance with this section would be at the discretion of the governing building official.***
1008.1.8.3	*Locks and Latches*	Locks and latches shall be permitted to prevent operation of doors where any of the following exists: 6. Places of detention 7. In buildings in occupancy Group A having an occupant load of less than 300 or less, Groups, B,F,M, and S, and in places of religious worship, the main exterior door or odors are permitted to be equipped with key-operated locking devices from the egress side:

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		7.1 The locking device is readily distinguishable as locked. 7.2 A readily durable sign is posted on the egress side on or adjacent to the door. 7.3 The use of the key-operated locking device is revocable by the building official for due cause. 8. Where egress doors are used in pairs, approved automatic flush bolts shall be permitted to be used provided that the door leaf having the automatic flush bolt has no doorknob or surface-mounted hardware. 9. Doors in individual dwelling or sleeping units of Group R occupancies having an occupant load of 10 or less permitted to be equipped with a night latch, dead bolt or security chain, provided such devices are openable from the inside without the use of a key or tool. ***This requirement is not met.*** ***Many of the locks and latches do not currently meet this requirement. Existing locks and latches would need to be modified/replaced in order to comply with the requirements of this section. <u>As an existing structure, compliance with this section would be at the discretion of the governing building official.</u>***
1009.3	*Stairway treads and risers*	Stair riser heights shall be 7 inches maximum and 4 inches minimum. Stair tread depths shall be 11 inches minimum. . .
1009.3.2	*Dimensional Uniformity*	Stair treads and risers shall be uniform in size and shape. The tolerance between the largest and the smallest riser height or between the largest and smallest tread depth shall not exceed 0.375 inch in any flight of stairs. ***This requirement is met.***
1011.1	*Exit Signs*	Exits and exit access doors shall be marked with an approved exit sign readily visible form any direction of egress travel. Access to exits shall be marked by readily visible exit signs in cases where the exit or the path of egress travel is not immediately visible to the occupants.
1101.2	*Illumination*	Exit signs shall be internally lit.
1011.3	*Tactile exit signs*	For the purposes of Section 1.11.3 the term "tactile exit signs" shall mean those signs that comply with Section 1117B.5.1, Item 1. tactile exit signs shall be required at locations as specified in Section 1011.3

SECTION	ITEM	SUMMARY
1011.5.3	*Power Source*	Exit signs shall be illuminated at all times. To ensure continued illumination for a duration of not less than 90 minutes, in case of primary poser loss, the design illumination means shall be connected to an emergency power system provided from storage batteries , unit equipment or an on site generator. ***This requirement is not met.*** ***The Old Infirmary building currently does not have illuminated exit signs. New illuminated exit signs would need to be installed in order to comply with this requirement. Tactile exits signs are not currently present and would also need to be installed in order to comply with this section. <u>As an existing building, compliance with this section would be at the discretion of the governing building official.</u>***
1012.1	*Stairway and ramp handrails*	Where required. Handrails for stairways and ramps shall be adequate in strength and attachment in accordance with Section 1607.7. Handrails required for stairways by Section 1009.10 shall comply with Sections 1012.2 through 1012.8. Handrails required for ramps by Section 1010.8 shall comply with Sections 1012.2 through 1012.7.
1012.2	*Handrail Height*	Handrail height, measured above stair tread nosing, or finish surface of ramp slope shall be uniform not less than 34" and not more than 38".
1012.5	*Handrail extensions*	Handrail shall return to a wall, guard, or the walking surface or shall be continuous to the handrail of an adjacent stair flight or ramp run. At stairways where handrails are not continuous between flights, the handrails shall extend horizontally at least 12 inches beyond the top riser and continue to slope for the depth of one tread beyond the bottom riser. ***This requirement <u>is not</u> met.*** ***The existing basement stairway handrail heights do not meet this requirement. No handrail extensions are currently present. Handrails would need to modified/replaced and extensions added in order to comply with this requirement.*** ***As an existing structure, and because the stairs serve a non-public service area, the basement stairs, if left unaltered, may not require modification. <u>As an existing building, compliance with this section would be at the discretion of the governing building official.</u>***

SECTION	ITEM	SUMMARY
1013.1	*Guards*	**Where required.** Guards shall be located along open-sided walking surfaces, mezzanines, industrial equipment platforms, stairways, ramps and landings that are located more than 30" above the floor or grade below. . . Exception: Guards are not required for the following locations. 13. On the loading side of loading docks. 14. On the audience side of stages and raised platforms, including steps leading to the stage and raised platforms. 15. On raised stages and platform floor areas, such as runways, ramps and side stages used for entertainment or presentations. 16. At vertical openings in the performance areas of stages and platforms. 17. At elevated walking surfaces appurtentant to stages and platforms for access to and utilization of special lighting or equipment. 18. In assembly seating where guards in accordance with Section 1025.14 are permitted and provided.
1013.2	*Guard height*	Guards shall form a protective barrier not less than 42" high, measured vertically above the leading edge of the tread, adjacent walking surface or adjacent seatboard.
1013.3	*Opening limitations for guards*	Open guards shall have balusters or ornamental patterns such that a 4-inch-diameter sphere cannot pass through any opening. ***This requirement <u>is not</u> met.*** ***The existing basement stairway guard height does not meet this requirement. The existing guard would need to modified/replaced in order to comply with this requirement.*** ***As an existing structure, and because the stairs serve a non-public service area, the basement stairs, if left unaltered, may not require modification. <u>As an existing building, compliance with this section would be at the discretion of the governing building official.</u>***
1014	*Exit Access*	The exit access arrangement shall comply with Sections 1014 through 1017 and the applicable provision of Sections 1003 through 1013.
1014.2	*Egress through intervening spaces*	Egress from room or space shall not pass through adjoining or intervening rooms or areas, except where such adjoining rooms are accessory to the served, are not a high-hazard occupancy and provide a discernable path of travel to an exit.

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		This requirement is met. ***An exterior door is present in the kitchen area. This door cannot currently be considered an exit door as it would require occupants to exit through an intervening space. Although that door can remain in place, it does not currently meet the requirements to be considered an exit door.*** ***All other existing exit doors as mentioned in Section 1008.1.1 <u>do</u> meet this requirement.***
1014.3	*Common path of egress travel*	In occupancies other than Groups H-1, H-2, and H-3, the common path of egress travel shall not exceed 75 feet. ***This requirement <u>is</u> met.***
1015.1	*Number of exit and exit access doorways*	Two exits or exit access doorways form any space shall be provided where one of the following conditions exits: 7. The occupant load of the space exceeds the values in Table 1015.1 8. The common path of egress travel exceeds the limitations of section 1014.3 9. Where required by Sections 1015.3, 1015.4, and 1015.5 ***This requirement is met.*** ***The maximum load for a single exit in a B-occupancy is 200. The anticipated occupant load for the Old Infirmary is 41 persons. Two exits are required.***
1015.2.1	*Egress separation*	Where two exits or exit access doorways are required from any portion of the exit access, the exit doors or exit access doorways shall be placed a distance apart equal to not less than one-half of the length of the maximum diagonal dimension of the building or area to be serviced measured in a straight line between exit doors or exit access doorways. Exception: 6. Where exit enclosures are provided as a portion of the required exit and are interconnected by a 1-hour fire-resistance-rated corridor, conforming to the requirements of Section 1017, the required exit separation shall be measured along the shortest direct line of travel within a corridor. 7. Where a building is equipped throughout with an automatic sprinkler system in accordance with Section

SECTION	ITEM	SUMMARY
		903.3.1.1 or 903.3.1.2, the separation distance of the exit doors or exit access doorways shall not be less than one-third of the length of the maximum overall diagonal dimension of the area served.
1016.1	*Travel distance limitations*	Exits shall be so located on each story such that the maximum length of exit access travel, measured from the most remote point within a story to the entrance to an exit along the natural and unobstructed path of egress travel, shall not exceed the distance given in Table 1016.1 Where the path of travel exit access includes unenclosed stairways or ramps within the exit access or includes unenclosed ramps or stairways as permitted in Section 1020.1, the distance of travel on such means of egress components shall also be included in the travel distance measurement. The measurement along stairways shall be made on a plane parallel and tangent to the stair tread nosings in the center of the stairway.
Per Table 1016	*Exit Access Travel Distance*	*The maximum exit access travel distance for group B occupancy is 200 feet without an automatic sprinkler system.* *The maximum exit access travel distance for group B occupancy is 300 feet without an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2 for occupancies where automatic sprinkler systems are permitted in accordance with Section 903.3.1.2.* ***This requirement is met.*** ***Currently no exit exists at the north end of the corridor. As the corridor is more than 20 feet in length, the result is dead-end corridor. The 2010 CBC would require installation of exit discharge at that location with a net clear opening of no less than 36.6".***
1017.1	*Corridor construction*	Corridors shall be fire-resistance rated in accordance with Table 1017.1
Table 1017.1		***Non-sprinklered corridors serving more than 30 occupants in Group B occupancy are required to 1 hour fire-rated.*** ***The 2010 CBC does recognize some plaster/lath/wood framed walls and ceilings as being 1-hr compliant. Further evaluation would need to be performed in order to determine that the existing walls and ceilings meet those requirements.*** ***This requirement can also be met with the installation of an approved fire-sprinkler system. For the purposes of this analysis, it is assumed that an automatic sprinkler system would be installed in the building.***
1019.1	*Number of exits*	All rooms and spaces within each story shall be provided with and have access to the minimum number of required independent exits required by Table 1019.1 based on the occupant load of the story. . . The required number of exits from any story, basement or individual space shall be maintained until arrival at grade of the public way.
Table 1019.		***This requirement is met.*** ***Per table 1019.1; Occupancy of 1-500 persons requires a minimum of 2 exits.***
1020.1.1	*Openings and penetrations*	Exit enclosure opening protectives shall be in accordance with the requirements of Section 715. Except as permitted in Section 402.4.6, openings in exit enclosures other than the unprotected exterior openings shall be limited to those necessary for exit access to the enclosure from normally occupied spaces and for egress from the enclosure. Where interior exit enclosures are extended to the exterior of the building by an exit passageway, the door assembly from the exit enclosure to the exit passageway shall be protected by a fire door assembly conforming to the requirements in Section 715.4. Fire Door assemblies in exit enclosures shall comply with Section 715.4.4. ***This requirement is not met.*** ***The existing corridor and discharge doors are not fire-rated. This requirement can be met through the installation fire-rated doors or with the installation of an approved fire-sprinkler system or modifications to the openings and penetrations.***
1021	*Exit Passageways*	Exit passageways serving as an exit component in a means of egress system shall comply with the requirements of the section. An exit passageway shall not be used for any purpose other than as a means of egress.
1021.2	*Width*	The width of exit passageways shall be determined as specified in Section 1005.1 but such width shall not be less than 44 inches. The required width of exit passageways shall be unobstructed.

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		Exception: Doors when fully opened, and handrails, shall not reduce the required width by more than 7 inches. Doors in any position shall not reduce the required width by more than one half. Other nonstructural projections such as trim and similar decorative features are permitted to project into the required width 1.5 inches on each side.
Per Table 1005.1		***This requirement is met.***
1021.3	*Construction*	Exit passageway enclosures shall have walls, floors and ceilings of not less than 1-hour fire-resistance rating, and not less than required for any connecting exit enclosure. ***This requirement <u>is not</u> met.*** ***The 2010 CBC does recognize some plaster/lath/wood framed walls and ceilings as being 1-hr compliant. Further evaluation would need to be performed in order to determine that the existing walls and ceilings meet those requirements.*** ***This requirement can also be met with the installation of an approved fire-sprinkler system. For the purposes of this analysis, it is assumed that an automatic sprinkler system would be installed in the building.***
715	*Opening protectives*	Exit passageways with a required minimum 1-hour fire rating, shall contain doors with a minimum required 20-minute fire rating, and assembly ratings of 1-hour. (per Table 715.4).
1021.4	*Openings and penetrations*	Openings in exit passageways other than unexposed exterior openings shall be limited to those necessary for exit access to the exit passageway from normally occupied spaces and for egress from the exit passageway. ***This requirement <u>is not</u> met.*** ***The existing corridor is not fire-rated. This requirement can be met through the installation fire-rated doors or with the installation of an approved fire-sprinkler system. For the purposes of this analysis, it is assumed that an automatic sprinkler system would be installed in the building.***
1024	*Exit Discharge*	Exits shall discharge directly to the exterior of the building. The exit discharge shall be at grade or shall provide direct access to grade. ***This requirement is met.***

SECTION	ITEM	SUMMARY
		Currently, no exit passageways exist in the Old Infirmary building.
1023	*Exterior exit ramps and stairways.*	Exterior exit ramps and stairways serving as an element of a required means of egress shall comply with this section.
1023.3	*Open side*	Exterior exit ramps and stairways shall serving as an element of required means of egress shall be open on at least one side. An open side shall have a minimum of 35 square feet of aggregate open area adjacent to each floor level and the level of each intermediate landing. The required open area shall be located not less than 42 inches above the adjacent floor or landing level. ***This requirement is met.*** ***The Old Infirmary building does not currently include any exit ramps or stairways as an element of the required means of egress.***
1024	*Exit Discharge*	Exits shall discharge directly to the exterior of the building. The exit discharge shall be at grade or shall provide direct access to grade.
1024.1	*Exit discharge*	Exits shall discharge directly to the exterior of the building. The exit discharge shall be at grade or shall provide direct access to grade. The exit discharge shall not reenter a building. A maximum of 50 percent of the number and capacity of the exit enclosure is permitted to egress through areas on the level of discharge provided all of the following are met: 1.1 Such exit enclosures egress to a free and un-obstructed way to the exterior of the building. . . 1.2 The entire area of the level of discharge is separated form areas below by construction conforming to the fire – resistance rating the exit enclosure. 1.3 The egress path from the exit enclosure on the level of discharge is protected throughout by an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.1.2, or separated from the egress path in accordance with the requirements for the enclosure of exists. ***This requirement is met.*** ***The existing exits discharge directly to the exterior of the building. The exit discharge shall is at grade.***

SECTION	ITEM	SUMMARY
1103B.1	*Accessibility Scope*	Accessibility to buildings or portions of buildings shall be provided for all occupancy classifications. An accessible route of travel complying with Section 1114B.1.2 shall connect all elements and spaces within a building or facility. Multi-story buildings must provide access to each level, including mezzanines, by ramp or passenger elevator. ***This requirement is not met.*** ***In its current state, the Old Infirmary building is not fully accessible throughout. As an existing building, compliance with this section would be at the discretion of the governing building official.*** ***Any future renovations shall be made accessible per this section of the code.***
1115B	*Accessibility restroom Facility requirements*	*This section addresses the minimum requirements for restroom facilities. It should be used in any upgrades of the restrooms.*
1115B.3.1	*Toilet Facilities*	***New, multiple-accommodation toilets facilities shall include the following in accordance with Section 1115B.3.1 – 1115B.4.5;*** ***11. Wheelchair clearance*** ***12. Clear floorspace at fixtures*** ***13. Accessible water closet*** ***14. Accessible water closet compartment*** ***15. Accessible urinals*** ***16. Accessible lavatories*** ***17. Accessible passageways*** ***18. Accessible symbols*** ***19. Accessible grab bars*** ***20. Accessible accessories*** ***The existing restroom facilities possess many deficiencies in regard to accessibility. Compliance with this section would be at the discretion of the governing building official.*** ***If existing restrooms were to be renovated, they would be required to meet accessibility requirements for wheelchair clearance, clear floorspace at fixtures, water closets, water closet compartments, urinals, lavatories, passageways, symbols, grab bars and accessories.*** ***The existing space allocated to toilet facilities most like would not accommodate the accessibility clearances or the number of fixtures required by CPC 2010 Table 4-1.***

SECTION	ITEM	SUMMARY
1115B.4.6	*Accessible Drinking Fountains*	*The installation of new drinking foundations shall comply with the requirements of Section 1115B.4.6.* ***Currently, drinking fountains are not provided. As an existing building, this may not be required. Any future modifications however, shall be in compliance with this section of the code***
1117B	*Other Building Components*	***Modifications to the building shall include the following in accordance with Section 1115B.3.1;*** ***6. Water fountains*** ***7. Telephones*** ***8. Signs and identification*** ***9. Symbols of Accessibility*** ***10. Controls and operating mechanisms*** ***As an existing building, this may not be required. Any future modifications however, shall be in compliance with this section of the code.***
1118B	*Space Allowance and reach ranges*	*Modification of the building shall comply with the requirements of Section 1118B.* ***As an existing structure, replacement of that hardware would be at the discretion of the governing building official. Any future modifications however, shall be in compliance with this section of the code.***
1120B.1	*Floors within each story*	Ground and floor surfaces along accessible routes and in accessible rooms and spaces, including floors, walks, ramps, stairs and curb ramps, shall be stable, firm, slip resistant and shall comply with Sections 1124B.1-1124B.4 ***This requirement is not met.*** ***As an existing building, compliance with this section would be at the discretion of the governing building official. Any modifications of the Old Infirmary building shall comply with the requirements of Section 1120B.1.***
1124B.1	*Floor Surfaces*	Ground and floor surfaces along accessible routes and in accessible rooms and spaces, including floors, walks, ramps, stairs and curb ramps, shall be stable, firm, slip resistant and shall comply with Sections 1124B.1-1124B.4 ***This requirement is not met.*** ***As an existing building, compliance with this section would be at the discretion of the governing building official. Any modifications of the Old Infirmary building shall comply with***

SECTION	ITEM	SUMMARY
		the requirements of Section 1124B.1.
1125B	*Storage*	If fixed storage faculties such as cabinets, shelves, closets or drawers are provided where access is required be Section 109.1, at least one of each type shall comply with this section. ***This requirement <u>is not</u> met.*** ***<u>As an existing building, compliance with this section would be at the discretion of the governing building official</u> Any new storage facilities shall comply with the requirements of this section.***
1127B.1	*Exterior routes of travel*	***Accessible means of egress are not required in alterations to existing buildings. <u>As an existing building, compliance with this section would be at the discretion of the governing building official.</u>***
3403.1	*Existing Buildings – alterations, additions, or repairs*	Additions or alterations to any building or structure shall comply with the requirements of the code for new construction. Additions or alterations shall not be made to an existing building or structure that will cause the existing building or structure to be in violation of any portions of this code. . . Portions of the structure not altered and not affected by the alteration are not required to comply with the code requirements for a new structure. *Rooms and areas that are not upgraded can remain in their existing condition, unless a modification to some other item has an un-intentional impact on an area that was not scheduled to be modified.*
1133B.2.4.3		The width of the level area on the side to which the door swings shall extend 24 inches past the strike edge of the door for exterior doors and 18 inches past the strike edge for interior doors. ***This requirement <u>is not</u> met.*** ***The majority of exiting doors within the Old Infirmary building do not provide the required 18 inches of clear floor space on the strike side of the door. Those doors and/or the obstructions would need to be removed/modified in order to comply with the requirements of this section. <u>As an existing building, compliance with this section would be at the discretion of the governing building official.</u>***
3403.2	*Structural impact to existing buildings*	Additions or alterations to an existing structure shall not increase the force in any structural element by more than 5%. . .
3403.3	*Nonstructural modifications to existing buildings*	Nonstructural alterations or repairs to an existing building or structure are permitted to be made of the same materials of which the building or structure is constructed, provided that they do not adversely affect any structural member or the fire-resistance rating of any part of the building or structure.
3410.2.3	*Alterations and repairs to existing buildings*	An existing building or portion thereof, which does not comply with the requirements of this code for new construction, shall not be altered or repaired in such a manner that results in the building being less safe or sanitary than such building is currently.

TABLE 503 (RELEVANT SECTIONS)

GROUP		TYPE IIIB	SUMMARY
	Height (feet)	55' High max.	*The Old Infirmary is 32' feet high at the back and 32' high at the front. Neither exceeds the allowable height. The code requires an average of the heights based on areas for the height measurement.* *The Old Infirmary meets this requirement.*
	Height (Stories)	4 Stories max.	*The Old Infirmary does not exceed four stories in height*
B	Stories	4 Stories max.	*The Old Infirmary does not exceed four stories in height. This requirement is met.*
	Area	19,000 sq. ft.	*The Old Infirmary is 4,612 gross sq. ft.*

OCCUPANT LOAD (PER TABLE 1004.1.1 CBC)

AREA	AREA	OCCUPANT LOAD FACTOR	TOTAL OCCUPANTS
Clinic Waiting Room	110 s.f	100 gross	1.1 persons
Dentist	180 s.f.	100 gross	1.8 persons
Hall	47 s.f.	100 gross	0.4 persons
Sterilizing Room	123 s.f.	100 gross	1.2 persons
Operating Room	255 s.f.	100 gross	2.5 persons
Doctor's Room	100 s.f.	100 gross	1.0 persons
Reception Room	267 s.f.	100 gross	2.6 persons
Drug Room	80 s.f.	100 gross	0.8 persons
Clothes Room	115 s.f.	100 gross	1.1 persons

Diet Kitchen	127 s.f.	100 gross	1.2 persons
Nurse's Room	83 s.f.	100 gross	0.8 persons
Physicians Room	102 s.f.	100 gross	1.0 persons
Dispensary	135 s.f.	100 gross	1.3 persons
Corridor	493 s.f.	100 gross	4.93 persons
Bath	73 s.f.	100 gross	0 .7 persons
Corridor	347 s.f.	100 gross	3.47 persons
Examination Rooms	1,420 s.f	100 gross	14.2 persons
Total	**4,077 s.f.**		**41 persons**

MINIMUM EGRESS WIDTH OF STAIRS, ASSUMED NON-SPRINKLERED (PER TABLE 1005.1 CBC)

AREA	**OCCUPANCY TYPE**	**OCCUPANTS**	**STAIRWAY WIDTH FACTOR**	**TOTAL WIDTH REQUIRED (INCHES)**
All Areas	B - Business	41	0.3	12.3"

MINIMUM EGRESS WIDTH OF OTHER COMPONENTS (DOOR WAYS, ETC.), ASSUMED NON-SPRINKLERED (PER TABLE 1005.1 CBC)

AREA	**OCCUPANCY TYPE**	**OCCUPANTS**	**COMPONENT FACTOR**	**TOTAL WIDTH REQUIRED (INCHES)**
All Areas	B - Business	41	0.2	8.2"

PLUMBING FIXTURE COUNTS (PER TABLE 4-1,CALIFORNIA PLUMBING CODE)

TYPE OF BUILDING OCCUPANCY	**AREA**	**OCCUPANT LOAD FACTOR**	**OCCUPANTS OF EACH SEX***	**MEN'S LAV.**	**MEN'S URINAL**	**MEN'S W/C**	**WOMEN'S LAV**	**WOMEN'S W/C**	**DRINKING FOUNTAINS**
B-Business	4,077 sq. ft.	100	21	1	See below	1	1	8	1

Urinals may be installed instead of water closets in toilet rooms to be used only be men provided that the number of water closets shall not be less than two thirds of the minimum number of toilet facilities specified.

* per Table A. Occupant Load Factor in CPC, 2010

Assistant Superintendent's Residence Detailed Code Analysis

Applicable Codes:
California Building Code (CBC) – 2010 ed.
California Electrical Code (CEC) – 2010 ed.
California Plumbing Code (CPC)– 2010 ed.
California Mechanical Code (CMC)– 2010 ed.

Proposed Use - Office

California Building Code Analysis

Existing Building:

Total: 1,575 sq. ft.

Building Height:

Height at front of building: 21'
Height at back of building: 21'

SECTION	ITEM	SUMMARY
301	*Use & Occupancy Classification*	
302.1	*Classification*	Structures or portions of structures shall be classified with respect to the occupancy in one more of the groups listed below. A room or space that is intended to be occupied at different times for different purposes shall comply with the requirements that are applicable to each of the purposes for which the room or space will be occupied. Structures with multiple occupancies or uses shall comply with Section 508. Where a structure is proposed for a purpose that is not specifically provided for in this code, such structure shall be classified in the group that the occupancy most nearly resembles, according to the fire safety and relative hazard involved.
310.1	*Residential Group R-3*	Residential Group R , includes among others, the use of a building or structure, or a portion thereof, for sleeping purposes when not classified as an Institutional Group I. Residential occupancies shall include the following:
303.1	*Assembly Group R-3 Occupancy Defined*	Group R-3: Residential occupancies where the occupancies are primarily permanent in nature and are not classified as Group R-1, R-2, *R-3.1*, R-4 or I,…
		The Nelles School Assistant Superintendent's Residence is classified as R-3 occupancy.
508.2	*Incidental uses*	Incidental use areas shall comply with the provisions of this section.
508.2.1	*Occupancy classification.*	An incidental use area shall be classified in accordance with the occupancy of that portion of the building in which it is located or the building shall be classified as a mixed occupancy and shall comply with section 508.3
508.2.2	*Separation*	Incidental use areas shall be separated or protected, or both in accordance with Table 508.2
508.2	*Table 508.2*	Below is a list of potential incidental uses and their protection requirements per Table 508.2: • Furnace room where any piece of equipment is over 400,000 Btu per hour input: 1 hour or provide automatic fire-extinguishing system. • Rooms with boilers where the largest piece of equipment is over 15 psi and 10 horse power: 1 hour or provide automatic fire-extinguishing system. [a] • Refrigerant machinery rooms: 1 hour or provide automatic fire-extinguishing system. [a] • Parking garage (Section 4.6.2): 2 hours; or 1 hour and provide automatic fire-extinguishing system. • Hydrogen cut-off rooms, not classified as Group H: 1-hour in Group B, F, M, S and U occupancies. 2-hour in Group A, E, I and R occupancies. • Incinerator rooms: 2 hours and automatic sprinkler system. • Paint shops not classified as Group H, located in occupancies other than Group F. 2 hours; or 1 hour and provide automatic fire-extinguishing system. • Laboratories and vocational shops, not classified as Group H, located in Group I-2 and *I-2.1* occupancies. • *[SFM] Rooms or areas with special hazards such as laboratories, vocational shops and other such areas not classified as Group H, located in Group E occupancies where hazardous materials in exempt amounts are used or stored: 1 hour* • Laundry rooms over 100 square feet: 1 hour or provide automatic fire-extinguishing system. [a] • Storage rooms over 100 square feet: 1 hour or provide automatic fire-extinguishing system. [a] • Group I-2 and *I-2.1* waste and linen collection rooms over 100 square feet: 1 hour or provide automatic fire-extinguishing system. [a]

SECTION	ITEM	SUMMARY
		• Stationary storage battery systems having a liquid capacity of more than 100 gallons used for facility standby power, emergency power or uninterrupted power supplies: 1-hour in Group B, F, M, S and U occupancies, 2-hour in Group A, E, I and R occupancies. [a] *a. [SFM] Fire barrier protection and automatic sprinkler protection required throughout the fire area in I-2 and I-2.1 occupancies as indicated.* ***These occupancy types do not appear to be present in the Nelles School Assistant Superintendent's Residence. The building complies with this requirement.***
508.3.1	*Accessory occupancies*	Accessory occupancies are those occupancies subsidiary to the main occupancies of the building or portion thereof. Aggregate accessory occupancies shall not occupy more than 10 percent of the area of the story in which they are located and shall exceed the tabular values in Table 503, without height and area increases in accordance with Sections 504 and 506 for such accessory occupancies. ***There are no existing or proposed uses for the Nelles Assistant Superintendent's Residence which meet the definition of accessory occupancies.***
[F] 903.2	*Sprinkler requirements*	Approved automatic sprinkler system installed in accordance with Section 903.3 shall be provided throughout all buildings with a Group R fire area Exceptions: 8. Detached one-and two-family dwellings (townhouses) not more than three stories above grade plane in height and with a separate means of egress, unless specifically required buy other sections of this code… ***This requirement <u>is</u> met.***
[F]903.2.1	*Sprinklers Group A-1*	An automatic sprinkler system shall be provided throughout buildings and portions thereof used as Group A occupancies as provided in this section. For Group A-1 occupancies, the automatic sprinkler system shall be provided throughout the floor area where Group A occupancy is located, and in all floors between the Group A occupancy and the level of exit discharge.
601	*Types of Construction*	Wood frame with plaster and wood roof
602.1	*Construction Classification*	Buildings and structures erected or to be erected, altered or extended in height or area shall be classified in one of the five construction types defined in Sections 602.2 through 602.5.
602.3		**Type II**. Type I and II construction are those types of construction in which the building elements listed in table 601 are of noncombustible materials, except as permitted in Section 603 and elsewhere in this code. ***The Nelles School Assistant Superintendent's Residence should be classified as a Type II.***
503.1	*General Height and Area Limitations*	The height and area for building of different construction types shall be governed by the intended use of the building and shall not exceed the limits in Table 503 except as modified hereafter. Each part of the building included within the exterior walls and fire walls where provided shall be permitted to be a separate building.
Table 503	*Allowable Height and Building Areas*	***See relevant portions of Table 503 below.*** ***Group R-3/Type II Max. Allowable Stories 4*** ***Max. Allowable Area UL*** ***The Nelles School Assistant Superintendent's Residence is one story in height.*** ***The total square footage of the building (1,812 sq. ft.) is less than the "unlimited" allowable square feet. (Classification Type II).*** ***This requirement <u>is</u> met.***
503.1.2	*Buildings on Same Lot*	Two or more buildings on the same lot shall be regarded as separate buildings or shall be considered as portions of one building if the height of each building and the aggregate area of the buildings are within the limitations of Table 503 a modified by Sections 504 and 506. The provisions of this code applicable to the aggregate building shall be applicable to each building. ***The Nelles School Assistant Superintendent's Residence will be considered as separate building and complies with 503.1.2.***
1004.1	*Design Occupant Load*	In determining means of egress requirements, the number of occupants for whom means of egress facilities shall be provided shall be determined in accordance with this section. Where occupants from accessory areas egress through a primary space, the calculated occupant load for the primary space shall include the number of occupants egressing through it from the accessory area.

SECTION	ITEM	SUMMARY
Per Table 1004	*Occupant Load*	*Areas* *Residential 4 (1,812 s.f. / 200 = 4.5)* *Total Occupant Load: 4 persons*
1005.1	*Egress width and distribution*	The means of egress width shall not be less than required by this section. The total width of means of egress in inches shall not be less that the total occupant load served by the means of egress multiplied by the factors in Table 1005.1 and not less than specified elsewhere in the code. Multiple means of egress shall be sized such that the loss of any one means of egress shall not reduce the available capacity to less than 50 percent of the required capacity. The maximum capacity required from any story of a building shall be maintained to the termination of the means of egress.
Per table 1005.1		*Min. egress widths from Residence* *Stairways:* *Residence occupancy: 4 x 0.3 inches = 1.2"* *(minimum not less than 32 inches)* *Other egress components:* *Residence occupancy: 4 x .0.2 inches = .8"* *(minimum not less than 36 inches)* ***The existing primary entrance to the Nelles School Assistant Superintendent's Residence has a clear opening of 44".*** ***This requirement is met.***
1006.1	*Illumination Requirement*	The means of egress shall be illuminated at all times the building space served by the means of egress is occupied. Exceptions: 9. Dwelling units and sleeping rooms in Groups R-1, R-2 and R-3. ***This requirement is met.***
1007.1	*Accessible means of egress*	Accessible means of egress shall comply with this section. Accessible spaces shall be provided with not less that one accessible means of egress. Where more than one means of egress is required by Sections 1015.1 or 1019.1 from any accessible space, each accessible portion of the space shall be served by accessible means of egress in at least the same number as required by Section 1015.1 or 1019.1. In addition to the requirements of this chapter; means of egress which provide access to, or egress from, buildings for persons with disabilities, shall also comply with the requirements of Chapter 11A or 11B, as applicable. **Exceptions:** 5. Accessible means of egress are not required in alterations to existing buildings. ***By code, alterations to existing buildings such as the The Assistant Superintendent's Residence do not require an accessible means of egress.***
1008.1	*Doors*	Means of egress doors shall meet the requirements of this section. Doors serving a means of egress system shall meet the requirements of this section and Section 1018.2. Doors provided for egress purposes in numbers greater than required by this code shall meet the requirements of this section. Means of egress doors shall be readily distinguishable from the adjacent construction and finishes such that the doors are easily recognizable as doors. Means of egress doors shall not be concealed by curtains drapes, decorations or similar materials.
1008.1.1	*Sizes of doors*	The minimum width of each door shall be sufficient for the occupant load thereof and shall provide a clear width of not less than 32 inches. The maximum width of swinging door widths shall be 48" nominal. The height of doors shall not be less than 80". Exceptions: The minimum and maximum width shall not apply to door openings that are not part of the required means of egress in Group R-2 and R-3 occupancies. ***This requirement is met.***
1008.1.2	*Door Swing*	Egress doors shall be side-hinged swinging. Exceptions: 10. Doors within or serving a single dwelling unit in Groups R-2 and R-3. ***This requirement is met.***
1008.1.4	*Floor Elevation*	There shall be a floor landing on each side of a door. Such floor or landing shall be at the same elevation on each side of the door. Landings shall be level except at exterior landings, which are permitted to have a slope not to exceed .25 unit vertical in

SECTION	ITEM	SUMMARY
		12 units horizontal (2-percent slope). Exceptions: 3. In Group R-3 occupancies not required to be adaptable or accessible, the landing at an exterior doorway shall not be more than 7.75 inches below the top of the threshold, provided the door, other than an exterior door or screen door, does not swing over the landing. ***This requirement is met.***
1008.1.5	*Landings at doors*	Landings shall have a clear width of not less than the width of the stairway or the door, whichever is greater. Doors in the fully open position shall not reduce a required dimension by more than 7 inches. When a landing serves an occupant load of 50 or more, doors in any position shall not reduce than landing to less than one-half its required width. Landings shall have a length measured in the direction of travel of not less than 44 inches. Exceptions: Landing length in the direction of travel in Groups R-3 and U and within individual units of group R-2 need not exceed 36 inches. ***This requirement is met.***
1008.1.6	*Thresholds*	Thresholds at doorways shall not exceed 0.75 inch inch in height for sliding doors serving a dwelling units or 0.5 inch for other doors. Raised thresholds and floor level changes greater than .25 inch at doorways shall be beveled with a slope not greater than one unit vertical in two units horizontal (50-percent slope). Exceptions: The threshold height shall be limited to 7.75 inches where the occupancy is group R-2 or R-3; the door is an exterior door that is not a component of the required means of egress; the door, other than an exterior storm or screen door does not swing over the landing or step; the doorway is not an accessible route as required by Chapter 11A or 11B and is not part of an adaptable or accessible dwelling unit. Landing length in the direction of travel in Groups R-3 and U and within individual units of group R-2 need not exceed 36 inches. ***This requirement is met.***
1008.1.7	*Door Arrangement*	Space between two doors in a series shall be 48 inches minimum plus the width of a door swinging into the space.

SECTION	ITEM	SUMMARY
		Doors in a series shall swing in the same direction or away from the space between the doors. Exceptions: 3. Doors within individual dwelling units in Groups R-2 and R-3 occupancies other than adaptable or accessible dwelling units. ***This requirement is met.***
1008.1.8	*Door Operations*	Except as specifically permitted by this section, egress doors shall be readily openable from the egress side without the use of a key or special knowledge. ***This requirement is met.***
1008.1.8.1	*Hardware*	Door handles, pulls, latches, locks and other operating devices on doors required to be accessible by Chapter 11A or 11B shall not require tight grasping, tight inching or twisting of the wrist to operate. *1102A.2 Existing Buildings. The building standards contained in this chapter do not apply to the alteration, repair, rehabilitation or maintenance of Group R occupancies constructed for first occupancy prior to March 13, 1991.* ***This requirement is met.***
1008.1.8.2	*Hardware Height*	Door handles, pulls, latches, locks and other operating devices shall be installed 34 inches minimum and 48 inches maximum above the finished floor. Locks used only for security purposes and not used for normal operation are permited at any height. ***This requirement is met.***
1008.1.8.3	*Locks and Latches*	Locks and latches shall be permitted to prevent operation of doors where any of the following exists: 11. Places of detention 12. In buildings in occupancy Group A having an occupant load of less than 300 or less, Groups, B,F,M, and S, and in places of religious worship, the main exterior doorr or odors are permitted to be equipped with key-operated locking devices from the egress side: 9.1 The locking devise is readily distinguishable as locked. 9.2 A readily durable sign is posted on the egress side on or adjacent to the door. 9.3 The use of the key-operated locking device is revocable by the building official for due cause.

SECTION	ITEM	SUMMARY
		13. Where egress doors are used in pairs, approved automatic flush bolts shall be permitted to be used provided that the door leaf having the automatic flush bolt has no doorknob or surface-mounted hardware. 14. Doors in individual dwelling or sleeping units of Group R occupancies having an occupant load of 10 or less permitted to be equipped with a night latch, dead bolt or security chain, provided such devices are openable from the inside without the use of a key or tool. ***This requirement is met.***
1009.3	*Stairway treads and risers*	Stair riser heights shall be 7 inches maximum and 4 inches minimum. Stair tread depths shall be 11 inches minimum. . . ***The treads and risers of the existing exterior steps of the Nelles School Assistant Superintendent's Residence do not meet this requirement, however no change in use is proposed and it reasonable to assume the existing steps would remain in use.***
1009.3.2	*Dimensional Uniformity*	Stair treads and risers shall be uniform in size and shape. The tolerance between the largest and the smallest riser height or between the largest and smallest tread depth shall not exceed 0.375 inch in any flight of stairs. ***This requirement is met.***
1014	*Exit Access*	The exit access arrangement shall comply with Sections 1014 through 1017 and the applicable provision of Sections 1003 through 1013.
1014.2	*Egress through intervening spaces*	Egress from room or space shall not pass through adjoining or intervening rooms or areas, except where such adjoining rooms are accessory to the served, are not a high-hazard occupancy and provide a discernible path of travel to an exit. Exceptions: 5. [HCD 1] For one- and two- family dwellings and townhouses, means of egress is allowed to pass through rooms and intervening spaces except garages. ***This requirement is met.***
1014.3	*Common path of egress travel*	In occupancies other than Groups H-1, H-2, and H-3, the common path of egress travel shall not exceed 75 feet. ***This requirement is met.***
1015.1	*Number of exit and exit access doorways*	Two exits or exit access doorways form any space shall be provided where one of the following conditions exits: 10. The occupant load of the space exceeds the values in Table 1015.1 11. The common path of egress travel exceeds the limitations of section 1014.3 12. Where required by Sections 1015.3, 1015.4, and 1015.5
1015.2.1	*Egress separation*	Where two exits or exit access doorways are required from any portion of the exit access, the exit doors or exit access doorways shall be placed a distance apart equal to not less than one-half of the length of the maximum diagonal dimension of the building or area to be serviced measured in a straight line between exit doors or exit access doorways. Exception: 8. Where exit enclosures are provided as a portion of the required exit and are interconnected by a 1-hour fire-resistance-rated corridor, conforming to the requirements of Section 1017, the required exit separation shall be measured along the shortest direct line of travel within a corridor. 9. Where a building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2, the separation distance of the exit doors or exit access doorways shall not be less than one-third of the length of the maximum overall diagonal dimension of the area served. ***This requirement is met.***
1016.1	*Travel distance limitations*	Exits shall be so located on each story such that the maximum length of exit access travel, measured from the most remote point within a story to the entrance to an exit along the natural and unobstructed path of egress travel, shall not exceed the distance given in Table 1016.1 Where the path of travel exit access includes unenclosed stairways or ramps within the exit access or includes unenclosed ramps or stairways as permitted in Section 1020.1, the distance of travel on such means of egress components shall also be included in the travel distance measurement. The measurement along stairways shall be made on a plane parallel and tangent to the stair tread nosings in the center of the stairway. ***This requirement is met.***
Per Table	*Exit Access Travel*	*The maximum exit access travel distance for group* R *occupancy is 200 feet*

SECTION	ITEM	SUMMARY
1016	*Distance*	*without an automatic sprinkler system.* *The maximum exit access travel distance for group R occupancy is 250 feet without an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2 for occupancies where automatic sprinkler systems are permitted in accordance with Section 903.3.1.2.* ***This requirement is met***
1028.7	*Travel Distance*	*Exits and aisles shall be located so that the travel distance to an exit door shall be greater than 200 feet measured along the line of travel in non-sprinkled buildings. Travel distance shall not be more than 250 feet in sprinkled buildings. Where aisles are provided for seating, the distance shall be measured along the aisles accessway without travel over or on the seats.* ***This requirement is met***
1017.1	*Corridor construction*	Corridors shall be fire-resistance rated in accordance with Table 1017.1 Exceptions: 2. Fire-resistive rating is not required for corridors contained within a dwelling or sleeping unit in an occupancy in Group R. ***This requirement is met***
Table 1017.1		***2. No rating of the corridors is required in R occupancies when the occupant load served y the corridor is less than 10. This requirement is met***
1019.2	*Number of exits*	Buildings with one exit. Only on exit shall be provided in buildings as described below. 10. Buildings of Group R-3 occupancy. ***This requirement is met.***
1103B.1	*Accessibility Scope*	Accessibility to buildings or portions of buildings shall be provided for all occupancy classifications. An accessible route of travel complying with Section 1114B.1.2 shall connect all elements and spaces within a building or facility. Multi-story buildings must provide access to each level, including mezzanines, by ramp or passenger elevator. . ***Existing, single-family residential units are not required to meet the accessibility requirements of CBC Chapter 11.***
3403.1	*Existing Buildings – alterations, additions, or repairs*	Additions or alterations to any building or structure shall comply with the requirements of the code for new construction. Additions or alterations shall not be made to an existing building or structure that will cause the existing building or structure to be in violation of any portions of this code. . . Portions of the structure not altered and not affected by the alteration are not required to comply wit the code requirements for a new structure. *Rooms and areas that are not upgraded can remain in their existing condition, unless a modification to some other item has an un-intentional impact on an area that was not scheduled to be modified.*
3403.2	*Structural impact to existing buildings*	Additions or alterations to an existing structure shall not increase the force in any structural element by more than 5%. . .
3403.3	*Nonstructural modifications to existing buildings*	Nonstructural alterations or repairs to an existing building or structure are permitted to be made of the same materials of which the building or structure is constructed, provided that they do not adversely affect any structural member or the fire-resistance rating of any part of the building or structure.
3410.2.3	*Alterations and repairs to existing buildings*	An existing building or portion thereof, which does not comply with the requirements of this code for new construction, shall not be altered or repaired in such a manner that results in the building being less safe or sanitary than such building is currently.

TABLE 503 (RELEVANT SECTIONS)

GROUP		TYPE II	SUMMARY
	Height (feet)	55' High max.	*The Nelles School Assistant Supervisor's Residence is 21' feet high at the back and 21' high at the front. Neither exceeds the allowable height. The code requires an average of the heights based on areas for the height measurement.* *The Nelles School Assistant Superintendent's Residence meets this requirement.*
	Height (Stories)	4 Stories max.	*The Nelles School Assistant Superintendent's Residence does not exceed one story in height.*
R-3	Stories	4 Stories max.	*The Nelles School Assistant Superintendent's Residence does not exceed one story in height. This requirement is met.*
	Area	Unlimited	*The Nelles School Auditorium is 1,812 sq. ft.*

OCCUPANT LOAD (PER TABLE 1004.1.1 CBC)

AREA	**AREA**	**OCCUPANT LOAD FACTOR**	**TOTAL OCCUPANTS**
All Areas	1,812 s.f.	200	4 persons
Total			**4 persons**

MINIMUM EGRESS WIDTH OF STAIRS, ASSUMED NON-SPRINKLERED (PER TABLE 1005.1 CBC)

AREA	**OCCUPANCY TYPE**	**OCCUPANTS**	**STAIRWAY WIDTH FACTOR**	**TOTAL WIDTH REQUIRED (INCHES)**
All Areas	Residential	4	0.2	1.2”

MINIMUM EGRESS WIDTH OF OTHER COMPONENTS (DOOR WAYS, ETC.), ASSUMED NON-SPRINKLERED (PER TABLE 1005.1 CBC)

AREA	**OCCUPANCY TYPE**	**OCCUPANTS**	**COMPONENT FACTOR**	**TOTAL WIDTH REQUIRED (INCHES)**
All Areas	Residential	4	0.15	.8”

Admin Building Detailed Code Analysis

Applied Codes:
California Building Code (CBC) – 2010 ed.
California Electrical Code (CEC) – 2010 ed.
California Plumbing Code (CPC)– 2010 ed.
California Mechanical Code (CMC)– 2010 ed.

Proposed Use - Office

Existing Areas:

Building Gross S.F:	7,750 sq. ft.
Total N.S.F:	6,859 sq. ft.

Building Height:

Height at front of building:	40'
Height at back of building:	42'

SECTION	ITEM	SUMMARY
301	*Use & Occupancy Classification*	
302.1	*Classification*	Structures or portions of structures shall be classified with respect to the occupancy in one more of the groups listed below. A room or space that is intended to be occupied at different times for different purposes shall comply with the requirements that are applicable to each of the purposes for which the room or space will be occupied. Structures with multiple occupancies or uses shall comply with Section 508. Where a structure is proposed for a purpose that is not specifically provided for in this code, such structure shall be classified in the group that the occupancy most nearly resembles, according to the fire safety and relative hazard involved.
304.1	*Business Group B*	Business Group B Occupancy includes, among others, the use of a building or structure, or a portion thereof, for office, professional or service-type transactions, including storage of records and accounts. Business occupancies shall include, but not be limited to, the following: Airport traffic control towers Animal hospitals, kennels and pounds Banks Barber and beauty shops Car wash Civic administration Clinic-outpatient *[SFM] (not classified as Group I-2.1)* Dry-cleaning and laundries: pick-up and delivery stations and self-service Educational occupancies for students above the 12th grade Electronic data processing Laboratories: testing and research Motor vehicle showrooms Post office Print shops Professional services (architects, attorney, dentists, physicians, engineers, etc.) Radio and television stations Telephone exchanges Training and skill development not within a school or academic program ***If converted to office use, the Nelles Administration Building would be classified as Group B Occupancy.***
508.2	*Incidental uses*	Incidental use areas shall comply with the provisions of this section.
508.2.1	*Occupancy classification.*	An incidental use area shall be classified in accordance with the occupancy of that potion of the building in which it is located or the building shall be classified as a mixed occupancy and shall comply with section 508.3 ***No incidental uses are anticipated in this analysis.***
508.2.2	*Separation*	Incidental use areas shall be separated or protected, or both in accordance with Table 508.2
508.2	*Table 508.2*	Below is a list of potential incidental uses and their protection requirements per Table 508.2: • Furnace room where any piece of equipment is over 400,000 Btu per hour input: 1 hour or provide automatic fire-extinguishing system. • Rooms with boilers where the largest piece of equipment is over 15 psi and 10 horse power: 1 hour or provide automatic fire-extinguishing system. [a] • Refrigerant machinery rooms: 1 hour or provide automatic fire-extinguishing system. [a] • Parking garage (Section 4.6.2): 2 hours; or 1 hour and provide automatic fire-extinguishing system. • Hydrogen cut-off rooms, not classified as Group H: 1-hour in Group B, F, M, S and U occupancies. 2-hour in

SECTION	ITEM	SUMMARY
		Group A, E, I and R occupancies. • Incinerator rooms: 2 hours and automatic sprinkler system. • Paint shops not classified as Group H, located in occupancies other than Group F. 2 hours; or 1 hour and provide automatic fire-extinguishing system. • Laboratories and vocational shops, not classified as Group H, located in Group I-2 and *I-2.1* occupancies. • *[SFM] Rooms or areas with special hazards such as laboratories, vocational shops and other such areas not classified as Group H, located in Group E occupancies where hazardous materials in exempt amounts are used or stored: 1 hour* • Laundry rooms over 100 square feet: 1 hour or provide automatic fire-extinguishing system.[a] • Storage rooms over 100 square feet: 1 hour or provide automatic fire-extinguishing system.[a] • Group I-2 and *I-2.1* waste and linen collection rooms over 100 square feet: 1 hour or provide automatic fire-extinguishing system.[a] • Stationary storage battery systems having a liquid capacity of more than 100 gallons used for facility standby power, emergency power or uninterrupted power supplies: 1-hour in Group B, F, M, S and U occupancies, 2-hour in Group A, E, I and R occupancies.[a] *a. [SFM] Fire barrier protection and automatic sprinkler protection required throughout the fire area in I-2 and I-2.1 occupancies as indicated.* ***No incidental occupancy uses are anticipated in this analysis.***
508.3.1	*Accessory occupancies*	Accessory occupancies are those occupancies subsidiary to the main occupancies of the building or portion thereof. Aggregate accessory occupancies shall not occupy more than 10 percent of the area of the story in which they are located and shall exceed the tabular values in Table 503, without height and area increases in accordance with Sections 504 and 506 for such accessory occupancies. ***No accessory occupancy types are anticipated in this analysis.***
903.2	*Sprinkler requirements*	Approved automatic sprinkler systems in new buildings and structures shall be provided in the locations described in this section. ***This requirement <u>is not</u> met.***

SECTION	ITEM	SUMMARY
		Group B occupancies in structures over 6000 s.f. and over 40 feet in height are required to have an automatic sprinkler system. <u>As an existing building, compliance with this section would be at the discretion of the governing building official.</u>
601	*Types of Construction*	***Brick masonry with wood roof.***
602.1	*Construction Classification*	Buildings and structures erected or to be erected, altered or extended in height or area shall be classified in one of the five construction types defined in Sections 602.2 through 602.5.
602.3		**Type III-B**. Type IIIB construction type of construction in which the exterior walls are of noncombustible materials and the interior building elements are of any material permitted by this code. ***For the purposes of this analysis, the Nelles School Administration Building is classified as a Type IIIB.*** ***Exterior structural elements walls are made of non-combustible materials. The roof of the Administration Building is made of wood. Per Table 601, the roof requires a 1-hour rating for type IIIA, which is not possible with existing wood roof. Type IIIB does not require that any element except the exterior bearing walls have any rating (2 hours in this case).***
503.1	*General Height and Area Limitations*	The height and area for building of different construction types shall be governed by the intended use of the building and shall not exceed the limits in Table 503 except as modified hereafter. Each part of the building included within the exterior walls and fire walls where provided shall be permitted to be a separate building.
Table 503	*Allowable Height and Building Areas*	***See relevant portions of Table 503 below.*** ***Group B/Type IIIB Max. Allowable Stories 4*** ***Max. Allowable Height 55'*** ***Max. Allowable Area 9,500 s.f.*** ***The Nelles School Administration Building is one story in height. The front of the building is 40' high —the rear is 42' high. The average height is 41.0'.*** ***This requirement is met.*** ***The total square footage of the building (7,750 sq. ft.) is less than the maximum allowable 9,500 sq. ft. (Classification***

SECTION	ITEM	SUMMARY
		B/Type IIIB).
		This requirement is met.
503.1.2	*Buildings on Same Lot*	Two or more buildings on the same lot shall be regarded as separate buildings or shall be considered as portions of one building if the height of each building and the aggregate area of the buildings are within the limitations of Table 503 a modified by Sections 504 and 506. The provisions of this code applicable to the aggregate building shall be applicable to each building. ***For the purposes of this analysis, the Nelles School Administration Building would be considered a separate building and complies with 503.1.2.***
Per Table 1004	*Occupant Load*	*Total Occupant Load* ***74 persons***
1005.1	*Egress width and distribution*	The means of egress width shall not be less than required by this section. The total width of means of egress in inches shall not be less that the total occupant load served by the means of egress multiplied by the factors in Table 1005.1 and not less than specified elsewhere in the code. Multiple means of egress shall be sized such that the loss of any one means of egress shall not reduce the available capacity to less than 50 percent of the required capacity. The maximum capacity required from any story of a building shall be maintained to the termination of the means of egress.
Per table 1005.1		*Min. egress widths from building <u>with</u> an automatic sprinkler system.* *Stairways:* *Administration Building occupancy: 74 x 0.2 inches = 14.8"* *Other egress components:* *Administration Building occupancy: 74 x .0.15 inches = 11.1"* ***For the purposes of this analysis, it is assumed that an automatic sprinkler system would be installed in the building.***
1007.3	*Exit stairways*	In order to be considered part of an accessible means of egress, an exit stairway shall have a clear width of 48 inches minimum between handrails and shall have either incorporate an area of refuge with an enlarged floor-level landing or shall be accessed from either an area of refuge complying with section 1007.6 or a horizontal exit. In addition, exit stairways shall comply with Chapter 11A, Sections 1115A and 1123A, or Chapter 11B, Section 1133B.4, as applicable. Exceptions: 1. Unenclosed exit stairways as permitted by Section 1020.1 are permitted to be considered part of an accessible means of egress. 2. The area of refuge is not requires at unenclosed exit stairways as permitted by Section 1020.1 in buildings or facilities that are equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1. 3. The clear width of 48 inches between handrails is not required at exit stairways in buildings or faculties equipped throughout with an automatic sprinkler system installed in accordance with Section 903.1.1 or 903.3.1.2. ***This requirement is met.*** ***Accessible means of egress are not required in alterations to existing buildings. <u>As an existing building, compliance with this section would be at the discretion of the governing building official.</u>***
1017.2	*Corridor width*	The minimum corridor width shall be determined in Section 1005.1, but not less than 44 inches. Exceptions: 11. Twenty-four inches - For access to and utilization of electrical, mechanical and plumbing systems or equipment. 12. Thirty-six inches - With a required occupant capacity of less than 50. 13. Thirty-six inches - Within a dwelling unit. 14. Seventy-two inches-In group E with a corridor having a required capacity of 100 or more. 15. Seventy-two inches – In corridors serving surgical Group I, health care centers for ambulatory patients receiving outpatient care, which causes a patient to not be capable of self-preservation. ***This requirement is met.***
1008.1	*Sizes of doors*	The minimum width of each door opening shall be sufficient to for the occupant load thereof and shall provide a clear width of not less than 32 inches. Clear openings of doorways with swinging doors shall be measured between the face of the door and the stop, with the door open 90 degrees. Where this section requires a minimum clear width of 32 inches and a door opening includes two door leaves without a mullion, one leaf shall provide a clear width of 32 inches. The maximum width of a swinging door leaf shall be 48 inches nominal. Means of

SECTION	ITEM	SUMMARY
		egress doors in Group I-2 occupancy used for the movement of beds and *litter patients* shall provide a clear width not less than 80 inches. The height of the doors shall not be less than 80 inches. Exceptions: 1. The minimum and maximum width shall not apply to door openings that are not part of the required means of egress in Group R-2 and R-3 occupancies. 2. *Other than those required to be accessible by Chapter 11B,* door openings to resident sleeping units in group I-3 occupancies shall have a clear width of no less than 28 inches. 3. Door openings to storage closets less than 10 square feet in area shall not be limited by the minimum width. 4. Width of door leafs in revolving doors that comply with Section 1008.1.3.1 shall not be limited. 5. Door openings in a dwelling unit or sleeping unit shall not be less than 78 inches in height. 6. Exterior door openings in dwelling units and sleeping units, other than the required exit door, shall not be less than 76 inches in height. 7. In other Group R-1 occupancies, the minimum width widths shall not apply to interior egress doors within a dwelling unit or sleeping unit that is not required to be *adaptable or accessible as specified in Chapter 11A or 11B, as applicable.* 8. Door openings required to be accessible within *dwelling* units shall have a minimum clear width *as specified in Chapter 11A or 11B, as applicable.* ***This requirement is met.*** ***Currently, three exits are provided from the interior of Nelles School Administration Building. The primary entrance/exit is located in the reception room and provides a net clear opening of 3'-2". Two additional exits are located at either end of the central corridor; each with a clear net opening of 3'-2". These exits meet or exceed the minimum required net clear opening of 32".***
1006	*Means of Egress Illumination*	
1006.1	*Illumination Required*	The means of egress, including the exit discharge, shall be illuminated at all times the building space by the means of egress is occupied.
	Illumination Level	The means of egress illumination level shall not be less than 1-foot candle at the walking surface level. ***This requirement <u>is not</u> met.***

SECTION	ITEM	SUMMARY
		The Nelles School Administration Building does not currently meet this requirement. An egress lighting system would need to be installed in order to comply with this requirement. <u>As an existing building, compliance with this section would be at the discretion of the governing building official.</u>
1006.3	*Emergency Lighting*	The power supply for means of egress illumination shall normally be provided by the premises' electrical supply. In the event of power failure, an emergency electrical system shall automatically illuminate the following areas: 11. Aisles and unenclosed egress stairways in rooms and spaces that require two or more means of egress. 12. Corridors, exit enclosures and exit passageways in buildings required to have two or more exits. 13. Exterior egress components at other than level of exit discharge until the exit discharge is accomplished for buildings required to have two or more exits. 14. Interior exterior discharge elements, as permitted in Section 1024.1 in buildings required to have two or more exits. 15. Exterior landings, as required by Section 1008.1.5 for exit discharge doorways in buildings required to have two or more exits. The emergency power systems shall provide power for a duration of not less than 90 minutes and shall consist or storage batteries, unit equipment or an on-site generator. The installation of the power system shall be in accordance with Section 2702.
1006.4	*Performance of System*	Emergency lighting facilities shall be arranged to provide initial illumination that is at least an average of 1 foot-candle and a minimum at any point of 0.1 foot candle measured along a path of egress at floor level. Illumination levels shall be permitted to decline to 0.6 foot-candle average and a minimum at any point of 0.06 foot-candle at the end of the emergency lighting time duration. A maximum-to minimum illumination uniformity ratio of 40 to 1 shall not be exceeded. ***This requirement <u>is not</u> met.*** ***The Nelles School Administration Building does <u>not</u> currently meet this requirement. An emergency lighting system would need to be installed in order to comply with this requirement. <u>As an existing building, compliance with this section would be at the discretion of the governing building official.</u>***

SECTION	ITEM	SUMMARY
1007.1	*Accessible means of egress*	Accessible means of egress shall comply with this section. Accessible spaces shall be provided with not less than one accessible means of egress. Where more than one means of egress is required by Sections 1015.1 or 1019.1 from any accessible space, each accessible portion of the space shall be served by accessible means of egress in at least the same number as required by Section 1015.1 or 1019.1. In addition to the requirements of this chapter; means of egress which provide access to, or egress from, buildings for persons with disabilities, shall also comply with the requirements of Chapter 11A or 11B, as applicable. **Exceptions:** 6. Accessible means of egress are not required in alterations to existing buildings. ***Accessible means of egress are not required in alterations to existing buildings. Compliance with CBC Section 1007.1 would be at the discretion of the governing building official.***
1008.1	*Doors*	Means of egress doors shall meet the requirements of this section. Doors serving a means of egress system shall meet the requirements of this section and Section 1018.2. Doors provided for egress purposes in numbers greater than required by this code shall meet the requirements of this section. Means of egress doors shall be readily distinguishable from the adjacent construction and finishes such that the doors are easily recognizable as doors. Means of egress doors shall not be concealed by curtains drapes, decorations or similar materials.
1008.1.1	*Sizes of doors*	The minimum width of each door shall be sufficient for the occupant load thereof and shall provide a clear width of not less than 32 inches. The maximum width of swinging door widths shall be 48 inches nominal. The height of doors shall not be less than 80 inches. ***This requirement is met.*** ***Currently, three exits are provided from the interior of Nelles School Administration Building. The primary entrance/exit is located in the reception room and provides a net clear opening of 3'-2". Two additional exits are located at either end of the central corridor; each with a clear net opening of 3'-2". These exits meet or exceed the minimum required net clear opening of 32".***
1008.1.2	*Door Swing*	Egress doors shall be side-hinged swinging. Doors shall swing in the direction of egress travel where serving an occupancy load of 50 or more. ***This requirement is not met.*** ***Currently, the egress doors do not swing in the direction of travel. The swing directions of those doors would need to be reversed in order to comply with this code. As an existing building, compliance with this section would be at the discretion of the governing building official.***
1008.1.4	*Floor Elevation*	There shall be a floor landing on each side of a door. Such floor or landing shall be at the same elevation on each side of the door. Landings shall be level except at exterior landings, which are permitted to have a slope not to exceed .25 unit vertical in 12 units horizontal (2-percent slope). ***This requirement is met.***
1008.1.5	*Landings at doors*	Landings shall have a clear width of not less than the width of the stairway or the door, whichever is greater. Doors in the fully open position shall not reduce a required dimension by more than 7 inches. When a landing serves an occupant load of 50 or more, doors in any position shall not reduce than landing to less than one-half its required width. Landings shall have a length measured in the direction of travel of not less than 44 inches. ***This requirement is met.***
1008.1.6	*Thresholds*	Thresholds at doorways shall not exceed 0.75 inch in height for sliding doors serving a dwelling units or 0.5 inch for other doors. Raised thresholds and floor level changes greater than .25 inch at doorways shall be beveled with a slope not greater than one unit vertical in two units horizontal (50-percent slope). ***This requirement is not met.*** ***The existing door thresholds do not currently meet this requirement. Existing thresholds would need to be modified/replaced in order to comply with the requirements prescribed in Section 1008.1.6. As an existing building, compliance with this section would be at the discretion of the governing building official.***
1008.1.7	*Door Arrangement*	Space between two doors in a series shall be 48 inches minimum plus the width of a door swinging into the space. Doors in a series shall swing in the same direction or away from the space between the doors.

SECTION	ITEM	SUMMARY
		This requirement <u>is not</u> met.
		The existing passageway and door between the Superintendent's Office and the Secretary's Office do not provide the necessary clearance. This passageway could easily be converted into two closets, and could then meet the requirements of this section. <u>As an existing building, compliance with this section would be at the discretion of the governing building official.</u>
1008.1.8	*Door Operations*	Except as specifically permitted by this section, egress doors shall be readily openable from the egress side without the use of a key or special knowledge.
		This requirement <u>is not</u> met.
		The existing egress doors require the use of a key. The egress doors do not currently meet this requirement. New locking devices would need to be installed in order to comply with this requirement. <u>As an existing building, compliance with this section would be at the discretion of the governing building official.</u>
1008.1.8.1	*Hardware*	Door handles, pulls, latches, locks, and other operating devices on doors required to be accessible by Chapter 11A or 11B shall not require tight grasping, tight inching or twisting of the wrist to operate.
		Much of the existing hardware does not currently meet this requirement. New hardware would need to be installed in order to comply with this requirement. <u>As an existing building, compliance with this section would be at the discretion of the governing building official.</u>
1008.1.8.2	*Hardware Height*	Door handles, pulls, latches, locks, and other operating devices shall be installed 34 inches minimum and 48 inches maximum above the finished floor. Locks used only for security purposes and not used for normal operation are permitted at any height.
		This requirement <u>is not</u> met.
		Much of the existing hardware does not currently meet this requirement. New hardware would need to be installed in order to comply with this requirement. <u>As an existing building, compliance with this section would be at the discretion of the governing building official.</u>

SECTION	ITEM	SUMMARY
1008.1.8.3	*Locks and Latches*	Locks and latches shall be permitted to prevent operation of doors where any of the following exists: 10. Places of detention 11. In buildings in occupancy Group A having an occupant load of less than 300 or less, Groups, B,F,M, and S, and in places of religious worship, the main exterior door or doors are permitted to be equipped with key-operated locking devices from the egress side: 11.1 The locking device is readily distinguishable as locked. 11.2 A readily durable sign is posted on the egress side on or adjacent to the door. 11.3 The use of the key-operated locking device is revocable by the building official for due cause. 12. Where egress doors are used in pairs, approved automatic flush bolts shall be permitted to be used provided that the door leaf having the automatic flush bolt has no doorknob or surface-mounted hardware. 13. Doors in individual dwelling or sleeping units of Group R occupancies having an occupant load of 10 or less permitted to be equipped with a night latch, dead bolt or security chain, provided such devices are openable from the inside without the use of a key or tool.
		This requirement <u>is not</u> met.
		The existing latches and locks do not currently meet this requirement. New latches and locks would need to be installed in order to comply with this requirement. <u>As an existing building, compliance with this section would be at the discretion of the governing building official.</u>
1009.3	*Stairway treads and risers*	Stair riser heights shall be 7 inches maximum and 4 inches minimum. Stair tread depths shall be 11 inches minimum. . .
1009.3.2	*Dimensional Uniformity*	Stair treads and risers shall be uniform in size and shape. The tolerance between the largest and the smallest riser height or between the largest and smallest tread depth shall not exceed 0.375 inch in any flight of stairs.
		This requirement is met.
1011.1	*Exit Signs*	Exits and exit access doors shall be marked with an approved exit sign readily visible from any direction of egress travel. Access to exits shall be marked by readily visible exit signs in cases where the exit or the path of egress travel is not

SECTION	ITEM	SUMMARY
		immediately visible to the occupants.
1101.2	*Illumination*	Exit signs shall be internally lit.
1011.3	*Tactile exit signs*	For the purposes of Section 1.11.3 the term "tactile exit signs" shall mean those signs that comply with Section 1117B.5.1, Item 1. tactile exit signs shall be required at locations as specified in Section 1011.3
1011.5.3	*Power Source*	Exit signs shall be illuminated at all times. To ensure continued illumination for a duration of not less than 90 minutes, in case of primary poser loss, the design illumination means shall be connected to an emergency power system provided from storage batteries , unit equipment or an on site generator. ***This requirement is not met.*** ***The Nelles School Administration Building currently does not have illuminated exit signs. New illuminated exit signs would need to be installed in order to comply with this requirement. Tactile exits signs are not currently present and would also need to be installed in order to comply with this section. As an existing building, compliance with this section would be at the discretion of the governing building official.***
1012.1	*Stairway and ramp handrails*	Where required. Handrails for stairways and ramps shall be adequate in strength and attachment in accordance with Section 1607.7. Handrails required for stairways by Section 1009.10 shall comply with Sections 1012.2 through 1012.8. Handrails required for ramps by Section 1010.8 shall comply with Sections 1012.2 through 1012.7.
1012.2	*Handrail Height*	Handrail height, measured above stair tread nosing, or finish surface of ramp slope shall be uniform not less than 34 inches and not more than 38 inches.
1012.5	*Handrail extensions*	Handrail shall return to a wall, guard, or the walking surface or shall be continuous to the handrail of an adjacent stair flight or ramp run. At stairways where handrails are not continuous between flights, the handrails shall extend horizontally at least 12 inches beyond the top riser and continue to slope for the depth of one tread beyond the bottom riser. ***This requirement is not met.*** ***The existing basement stairway handrail heights do not meet this requirement. No handrail extensions are currently present. Handrails would need to modified/replaced and extensions added in order to comply with this requirement.*** ***As an existing structure, and because the stairs serve a non-public service area, the basement stairs, if left unaltered, may not require modification. As an existing building, compliance with this section would be at the discretion of the governing building official.***
1013.1	*Guards*	**Where required.** Guards shall be located along open-sided walking surfaces, mezzanines, industrial equipment platforms, stairways, ramps and landings that are located more than 30 inches above the floor or grade below. . . Exception: Guards are not required for the following locations. 19. On the loading side of loading docks. 20. On the audience side of stages and raised platforms, including steps leading to the stage and raised platforms. 21. On raised stages and platform floor areas, such as runways, ramps and side stages used for entertainment or presentations. 22. At vertical openings in the performance areas of stages and platforms. 23. At elevated walking surfaces appurtenant to stages and platforms for access to and utilization of special lighting or equipment. 24. In assembly seating where guards in accordance with Section 1025.14 are permitted and provided.
1013.2	*Guard height*	Guards shall form a protective barrier not less than 42 inches high, measured vertically above the leading edge of the tread, adjacent walking surface or adjacent seatboard.
1013.3	*Opening limitations for guards*	Open guards shall have balusters or ornamental patterns such that a 4-inch-diameter sphere cannot pass through any opening. ***This requirement is not met.*** ***The existing basement stairway guard height does not meet this requirement. The existing guard would need to modified/replaced in order to comply with this requirement.*** ***As an existing structure, and because the stairs serve a non-public service area, the basement stairs, if left unaltered, may not require modification. As an existing building, compliance with this section would be at the discretion of the governing building official.***
1014	*Exit Access*	The exit access arrangement shall comply with Sections 1014

SECTION	ITEM	SUMMARY
		through 1017 and the applicable provision of Sections 1003 through 1013.
1014.2	*Egress through intervening spaces*	Egress from room or space shall not pass through adjoining or intervening rooms or areas, except where such adjoining rooms are accessory to the served, are not a high-hazard occupancy and provide a discernible path of travel to an exit. ***All existing exit doors as mentioned in Section 1008.1.1 meet this requirement.***
1014.3	*Common path of egress travel*	In occupancies other than Groups H-1, H-2, and H-3, the common path of egress travel shall not exceed 75 feet. ***This requirement is met.***
1015.1	*Number of exit and exit access doorways*	Two exits or exit access doorways form any space shall be provided where one of the following conditions exists: 13. The occupant load of the space exceeds the values in Table 1015.1 14. The common path of egress travel exceeds the limitations of section 1014.3 15. Where required by Sections 1015.3, 1015.4, and 1015.5 ***This requirement is met.*** ***The maximum load for a single exit in a B-occupancy is 200. The anticipated occupant load for The Administration Office is 74 persons. Two exits are required.***
1015.2.1	*Egress separation*	Where two exits or exit access doorways are required from any portion of the exit access, the exit doors or exit access doorways shall be placed a distance apart equal to not less than one-half of the length of the maximum diagonal dimension of the building or area to be serviced measured in a straight line between exit doors or exit access doorways. Exception: 11. Where exit enclosures are provided as a portion of the required exit and are interconnected by a 1-hour fire-resistance-rated corridor, conforming to the requirements of Section 1017, the required exit separation shall be measured along the shortest direct line of travel within a corridor. 12. Where a building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2, the separation distance of the exit doors or exit access doorways shall not be less than one-third of the length of the maximum overall diagonal dimension of the area served.
1016.1	*Travel distance limitations*	Exits shall be so located on each story such that the maximum length of exit access travel, measured from the most remote point within a story to the entrance to an exit along the natural and unobstructed path of egress travel, shall not exceed the distance given in Table 1016.1 Where the path of travel exit access includes unenclosed stairways or ramps within the exit access or includes unenclosed ramps or stairways as permitted in Section 1020.1, the distance of travel on such means of egress components shall also be included in the travel distance measurement. The measurement along stairways shall be made on a plane parallel and tangent to the stair tread nosings in the center of the stairway.
Per Table 1016	*Exit Access Travel Distance*	*The maximum exit access travel distance for group B occupancy is 200 feet without an automatic sprinkler system.* *The maximum exit access travel distance for group B occupancy is 300 feet without an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2 for occupancies where automatic sprinkler systems are permitted in accordance with Section 903.3.1.2.* ***This requirement is met.***
1017.1 Table 1017.1	*Corridor construction*	Corridors shall be fire-resistance rated in accordance with Table 1017.1 ***Non-sprinklered corridors serving more than 30 occupants in Group B occupancy are required to be 1-hour fire-rated.*** ***The 2010 CBC does recognize some plaster/lath/wood framed walls and ceilings as being 1-hr compliant. Further evaluation would need to be performed in order to determine that the existing walls and ceilings meet those requirements.*** ***This requirement can also be met with the installation of an approved fire-sprinkler system. For the purposes of this analysis, it is assumed that an automatic sprinkler system would be installed in the building.***
1019.1	*Number of exits*	All rooms and spaces within each story shall be provided with and have access to the minimum number of required independent exits required by Table 1019.1 based on the occupant load of the story. . . The required number of exits

SECTION	ITEM	SUMMARY
		from any story, basement or individual space shall be maintained until arrival at grade of the public way.
Table 1019.		***This requirement is met.***
		Per table 1019.1; Occupancy of 1-500 persons requires a minimum of 2 exits.
1020.1.1	*Openings and penetrations*	Exit enclosure opening protectives shall be in accordance with the requirements of Section 715. Except as permitted in Section 402.4.6, openings in exit enclosures other than the unprotected exterior openings shall be limited to those necessary for exit access to the enclosure from normally occupied spaces and for egress from the enclosure. Where interior exit enclosures are extended to the exterior of the building by an exit passageway, the door assembly from the exit enclosure to the exit passageway shall be protected by a fire door assembly conforming to the requirements in Section 715.4. Fire Door assemblies in exit enclosures shall comply with Section 715.4.4. ***This requirement <u>is not</u> met.*** ***The existing corridor and discharge doors are not fire-rated. This requirement can be met through the installation of fire-rated doors or with the installation of an approved fire-sprinkler system or modifications to the openings and penetrations.***
1021	*Exit Passageways*	Exit passageways serving as an exit component in a means of egress system shall comply with the requirements of the section. An exit passageway shall not be used for any purpose other than as a means of egress.
1021.2	*Width*	The width of exit passageways shall be determined as specified in Section 1005.1 but such width shall not be less than 44 inches. The required width of exit passageways shall be unobstructed. Exception: Doors when fully opened, and handrails, shall not reduce the required width by more than 7 inches. Doors in any position shall not reduce the required width by more than one half. Other nonstructural projections such as trim and similar decorative features are permitted to project into the required width 1.5 inches on each side.
Per Table 1005.1		***This requirement is met.***
1021.3	*Construction*	Exit passageway enclosures shall have walls, floors and ceilings of not less than 1-hour fire-resistance rating, and not less than required for any connecting exit enclosure. ***This requirement <u>is not</u> met.*** ***The 2010 CBC does recognize some plaster/lath/wood framed walls and ceilings as being 1-hour compliant. Further evaluation would need to be performed in order to determine that the existing walls and ceilings meet those requirements.*** ***This requirement can also be met with the installation of an approved fire-sprinkler system. For the purposes of this analysis, it is assumed that an automatic sprinkler system would be installed in the building.***
715	*Opening protectives*	Exit passageways with a required minimum 1-hour fire rating, shall contain doors with a minimum required 20-minute fire rating, and assembly ratings of 1-hour. (per Table 715.4). ***This requirement <u>is not</u> met.*** ***The existing corridor is not fire-rated. This requirement can be met through the installation of fire-rated doors or with the installation of an approved fire-sprinkler system. For the purposes of this analysis, it is assumed that an automatic sprinkler system would be installed in the building.***
1021.4	*Openings and penetrations*	Openings in exit passageways other than unexposed exterior openings shall be limited to those necessary for exit access to the exit passageway from normally occupied spaces and for egress from the exit passageway. ***This requirement is met.***
1024	*Exit Discharge*	Exits shall discharge directly to the exterior of the building. The exit discharge shall be at grade or shall provide direct access to grade. ***This requirement is met.***
1023	*Exterior exit ramps and stairways.*	Exterior exit ramps and stairways serving as an element of a required means of egress shall comply with this section.

SECTION	ITEM	SUMMARY
1023.3	*Open side*	Exterior exit ramps and stairways serving as an element of required means of egress shall be open on at least one side. An open side shall have a minimum of 35 square feet of aggregate open area adjacent to each floor level and the level of each intermediate landing. The required open area shall be located not less than 42 inches above the adjacent floor or landing level. ***This requirement is met.***
1024	*Exit Discharge*	Exits shall discharge directly to the exterior of the building. The exit discharge shall be at grade or shall provide direct access to grade.
1024.1	*Exit discharge*	Exits shall discharge directly to the exterior of the building. The exit discharge shall be at grade or shall provide direct access to grade. The exit discharge shall not reenter a building. A maximum of 50 percent of the number and capacity of the exit enclosure is permitted to egress through areas on the level of discharge provided all of the following are met: 1.1 Such exit enclosures egress to a free and un-obstructed way to the exterior of the building. . . 1.2 The entire area of the level of discharge is separated form areas below by construction conforming to the fire – resistance rating the exit enclosure. 1.3 The egress path from the exit enclosure on the level of discharge is protected throughout by an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.1.2, or separated from the egress path in accordance with the requirements for the enclosure of exists. ***This requirement is met.*** ***The existing exits discharge directly to the exterior of the building. The exit discharge is at grade.***
1103B.1	*Accessibility Scope*	Accessibility to buildings or portions of buildings shall be provided for all occupancy classifications. An accessible route of travel complying with Section 1114B.1.2 shall connect all elements and spaces within a building or facility. Multi-story buildings must provide access to each level, including mezzanines, by ramp or passenger elevator. ***This requirement <u>is not</u> met.*** ***In its current state, the Nelles School Administration Building <u>is not</u> fully accessible throughout. <u>As an existing building,</u> <u>compliance with this section would be at the discretion of the governing building official.</u>*** ***Any future renovations shall be made accessible per this section of the code.***
1115B	*Accessibility restroom Facility requirements*	*This section addresses the minimum requirements for restroom facilities. It should be used in any upgrades of the restrooms.*
1115B.3.1	*Toilet Facilities*	***New, multiple-accommodation toilets facilities shall include the following in accordance with Section 1115B.3.1 – 1115B.4.5;*** ***21. Wheelchair clearance*** ***22. Clear floor space at fixtures*** ***23. Accessible water closet*** ***24. Accessible water closet compartment*** ***25. Accessible urinals*** ***26. Accessible lavatories*** ***27. Accessible passageways*** ***28. Accessible symbols*** ***29. Accessible grab bars*** ***30. Accessible accessories*** ***The existing restroom facilities possess many deficiencies in regard to accessibility. <u>As an existing building, compliance with this section would be at the discretion of the governing building official.</u>*** ***If existing restrooms were to be renovated, they would be required to meet accessibility requirements for wheelchair clearance, clear floor space at fixtures, water closets, water closet compartments, urinals, lavatories, passageways, symbols, grab bars and accessories.*** ***The existing space allocated to toilet facilities most like would not accommodate the accessibility clearances or the number of fixtures required by CPC 2010 Table 4-1.***
1115B.4.6	*Accessible Drinking Fountains*	*The installation of new drinking foundations shall comply with the requirements of Section 1115B.4.6.* ***Currently, drinking fountains are not provided. As an existing building, this may not be required. Any future modifications however, shall be in compliance with this section of the code***
1117B	*Other Building Components*	***Modifications to the building shall include the following in accordance with Section 1115B.3.1;*** ***11. Water fountains***

SECTION	ITEM	SUMMARY
		12. Telephones ***13. Signs and identification*** ***14. Symbols of Accessibility*** ***15. Controls and operating mechanisms*** ***Any future modifications however, shall be in compliance with this section of the code.***
1118B	*Space Allowance and reach ranges*	*Modification of the building shall comply with the requirements of Section 1118B.* ***As an existing building, compliance with this section would be at the discretion of the governing building official.***
1120B.1	*Floors within each story*	Ground and floor surfaces along accessible routes and in accessible rooms and spaces, including floors, walks, ramps, stairs and curb ramps, shall be stable, firm, slip resistant and shall comply with Sections 1124B.1-1124B.4 ***This requirement is not met.*** ***As an existing building, compliance with this section would be at the discretion of the governing building official. Any modifications of the Administration Building shall comply with the requirements of Section 1120B.1.***
1124B.1	*Floor Surfaces*	Ground and floor surfaces along accessible routes and in accessible rooms and spaces, including floors, walks, ramps, stairs and curb ramps, shall be stable, firm, slip resistant and shall comply with Sections 1124B.1-1124B.4 ***As an existing building, compliance with this section would be at the discretion of the governing building official. Any modifications of the Old Infirmary Building shall comply with the requirements of Section 1124B.1.***
1125B	*Storage*	If fixed storage faculties such as cabinets, shelves, closets or drawers are provided where access is required be Section 109.1, at least one of each type shall comply with this section. ***This requirement is not met.*** ***As an existing building, compliance with this section would be at the discretion of the governing building official Any new storage facilities shall comply with the requirements of this section.***
1127B.1	*Exterior routes of travel*	***Accessible means of egress are not required in alterations to existing buildings. As an existing building, compliance with this section would be at the discretion of the governing building official.***
1133B.2.4.3		The width of the level area on the side to which the door swings shall extend 24 inches past the strike edge of the door for exterior doors and 18 inches past the strike edge for interior doors. ***This requirement is not met.*** ***The existing doorway between the central corridor and clinic corridor does not provide the required 18 inches of clear floor space on the strike side of the door. This door could be removed in order to comply with the requirements of this section. As an existing building, compliance with this section would be at the discretion of the governing building official.***
1133B.2.4.4.2		The space between two consecutive door openings in a vestibule, serving other than a required exit stairway, shall provide a minimum of 48 inches of clear space from any door opening into such vestibule when the door is positioned at an angle of 90 degrees from its closed position. Doors in a series shall swing in the same direction or away from the space between the doors. ***This requirement is not met.*** ***The existing passageway and door between the Superintendent's Office and the Secretary's Office do not provide the necessary clearance. This passageway could easily be converted into two closets, and could then meet the requirements of this section. As an existing building, compliance with this section would be at the discretion of the governing building official.***
3403.1	*Existing Buildings – alterations, additions, or repairs*	Additions or alterations to any building or structure shall comply with the requirements of the code for new construction. Additions or alterations shall not be made to an existing building or structure that will cause the existing building or structure to be in violation of any portions of this code. . . Portions of the structure not altered and not affected by the alteration are not required to comply wit the code requirements for a new structure. *Rooms and areas that are not upgraded can remain in their existing condition, unless a modification to some other item has an un-intentional impact on an area that was not scheduled to be modified.*

SECTION	ITEM	SUMMARY
3403.2	*Structural impact to existing buildings*	Additions or alterations to an existing structure shall not increase the force in any structural element by more than 5%. . .
3403.3	*Nonstructural modifications to existing buildings*	Nonstructural alterations or repairs to an existing building or structure are permitted to be made of the same materials of which the building or structure is constructed, provided that they do not adversely affect any structural member or the fire-resistance rating of any part of the building or structure.
3410.2.3	*Alterations and repairs to existing buildings*	An existing building or portion thereof, which does not comply with the requirements of this code for new construction, shall not be altered or repaired in such a manner that results in the building being less safe or sanitary than such building is currently.

TABLE 503 (RELEVANT SECTIONS)

		TYPE IIIB	SUMMARY
GROUP B	Height (feet)	55' High max.	*The Nelles School Administration Building is 40' high at the back and 42' high at the front. Neither exceeds the allowable height. The code requires an average of the heights based on areas for the height measurement.* *The Nelles School Administration Building meets this requirement.*
B	Stories	2 Stories max.	*The Nelles School Administration Building does not exceed four stories in height.*
	Area	19,000 sq. ft.	*The Nelles School Administration Building is 7,750 sq. ft. (gross).*

OCCUPANT LOAD (PER TABLE 1004.1.1 CBC)

AREA	AREA	OCCUPANT LOAD FACTOR	TOTAL OCCUPANTS
Library	340 sq. ft.	100 gross	3.4
Clerks	170 sq. ft.	100 gross	1.7
Director of Research	221 sq. ft.	100 gross	2.21
File Room	280 sq. ft.	100 gross	2.8
Secretary	342 sq. ft.	100 gross	3.42
Pass	26 sq. ft.	100 gross	0.26
Superintendent's Office	505 sq. ft.	100 gross	5.05
Toilet	30 sq. ft.	0	0
Assistant Superintendent	295 sq. ft.	100 gross	2.95
Business Manager (including waiting)	517 sq. ft.	100 gross	5.17
Chaplin	240 sq. ft.	100 gross	2.4
Entry #1	100 sq. ft.	100 gross	1
Reception	690 sq. ft.	100 gross	6.9
Corridors	874 sq. ft.	100 gross	8.74
Entry #2	36 sq. ft.	100 gross	3.6
Entry #3	36 sq. ft.	100 gross	3.6
Room #3	54 sq. ft.	100 gross	5.4
Room #2	55 sq. ft.	100 gross	5.5
Room #1	51 sq. ft.	100 gross	5.1
Clinic and Closets	81 sq. ft.	100 gross	8.1
Office	221 sq. ft.	100 gross	2.21
Placement	451 sq. ft.	100 gross	4.51
Janitor	38 sq. ft.	100 gross	3.8
Chief Supervisor	266 sq. ft.	100 gross	2.66
Men's Toilet	137 sq. ft.	0	
Women's toilet	130 sq. ft.	0	
Restroom	133 sq. ft.	0	
School Supt.	269 sq. ft.	100 gross	2.69
Vocational Advisor	261 sq. ft.	100 gross	2.61
Total	**7389 sq. ft.**		**74 persons**

MINIMUM EGRESS WIDTH OF STAIRS, ASSUMED SPRINKLERED (PER TABLE 1005.1 CBC)

AREA	OCCUPANCY TYPE	OCCUPANTS	STAIRWAY WIDTH FACTOR	TOTAL WIDTH REQUIRED (INCHES)
All Areas	B - Business	74	0.2	7.4"

MINIMUM EGRESS WIDTH OF OTHER COMPONENTS (DOOR WAYS, ETC.), ASSUMED SPRINKLERED (PER TABLE 1005.1 CBC)

AREA	OCCUPANCY TYPE	OCCUPANTS	COMPONENT FACTOR	TOTAL WIDTH REQUIRED (INCHES)
All Areas	B - Business	74	0.15	5.55"

PLUMBING FIXTURE COUNTS (PER TABLE 4-1, CALIFORNIA PLUMBING CODE)

TYPE OF BUILDING OCCUPANCY	AREA	OCCUPANT LOAD FACTOR	OCCUPANTS OF EACH SEX*	MEN'S LAV.	MEN'S URINAL	MEN'S W/C	WOMEN'S LAV	WOMEN'S W/C	DRINKING FOUNTAINS
B-Business	6,859 sq. ft.	100	37	3	See below	3	3	3	-

Urinals may be installed instead of water closets in toilet rooms to be used only be men provided that the number of water closets shall not be less than two thirds of the minimum number of toilet facilities specified.

* per Table A. Occupant Load Factor in CPC, 2010

Chapel Detailed Code Analysis

Applied Codes:
California Building Code (CBC) – 2010 ed.
California Electrical Code (CEC) – 2010 ed.
California Plumbing Code (CPC)– 2010 ed.
California Mechanical Code (CMC)– 2010 ed.

Proposed Use: Community Center

Building Spaces:
Gross S.F: 11,991 sq. ft.
Total N.S.F: 8,380 sq. ft.

Building Height:
Height at front of building: 44'
Height at back of building: 44'

SECTION	ITEM	SUMMARY
301	*Use & Occupancy Classification*	
302.1	*Classification*	Structures or portions of structures shall be classified with respect to the occupancy in one more of the groups listed below. A room or space that is intended to be occupied at different times for different purposes shall comply with the requirements that are applicable to each of the purposes for which the room or space will be occupied. Structures with multiple occupancies or uses shall comply with Section 508. Where a structure is proposed for a purpose that is not specifically provided for in this code, such structure shall be classified in the group that the occupancy most nearly resembles, according to the fire safety and relative hazard involved.
310.1	*Assembly Group A*	Assembly Group A occupancy includes, among others, the use of a building or structure, or a portion thereof, for the gathering of persons for purposes such as civic, social or religious functions; recreation, food or drink consumption; or awaiting transportation or motion picture and television production studio sound stages, approved production facilities and production locations. **Exceptions:** 1. A building or tenant space used for assembly purposes with an occupant load of less than 50 persons shall be classified as a Group B occupancy. 2. A room or space used for assembly purposes with an occupant load of less than 50 persons and accessory to another occupancy shall be classified as a Group B occupancy or as part of that occupancy. 3. A room or space used for assembly purposes that is less than 750 square feet in area and is accessory to another occupancy shall be classified as a Group B occupancy or as part of that occupancy. 4. Assembly areas that are accessory to Group E occupancies are not considered separate occupancies except applying the assembly occupancy requirements of Chapter 11B. 5. Accessory religious educational rooms and religious auditorium with occupant loads less than 100 are not considered separate occupancies. Assembly occupancies include the following:
303.1	*Assembly Group A-3 Occupancy Defined*	A-3 Assembly uses intended for worship, recreation or amusement and other assembly uses not classified elsewhere in Group A including, but not limited to: Amusement arcades Art galleries Bowling alleys Places of religious worship Community halls Courtrooms Dance halls (not including food or drink consumption) Exhibition halls Funeral parlors Gymnasium (without spectator seating) Indoor swimming pools (without spectator seating) Indoor tennis courts (without spectator seating) Lecture halls Libraries Museums Waiting areas in transportation terminals Pool and billiard parlors ***If converted to a Community Center, the Chapel would be classified as an A-3 occupancy.***
508.2	*Incidental uses*	Incidental use areas shall comply with the provisions of this section.
508.2.1	*Occupancy classification.*	An incidental use area shall be classified in accordance with the occupancy of that potion of the building in which it is located or the building shall be classified as a mixed occupancy and shall comply with section 508.3 ***No incidental uses are anticipated in this analysis.***

SECTION	ITEM	SUMMARY
508.2.2	*Separation*	Incidental use areas shall be separated or protected, or both in accordance with Table 508.2
508.2	*Table 508.2*	Below is a list of potential incidental uses and their protection requirements per Table 508.2: • Furnace room where any piece of equipment is over 400,000 Btu per hour input: 1 hour or provide automatic fire-extinguishing system. • Rooms with boilers where the largest piece of equipment is over 15 psi and 10 horse power: 1 hour or provide automatic fire-extinguishing system. [a] • Refrigerant machinery rooms: 1 hour or provide automatic fire-extinguishing system. [a] • Parking garage (Section 4.6.2): 2 hours; or 1 hour and provide automatic fire-extinguishing system. • Hydrogen cut-off rooms, not classified as Group H: 1-hour in Group B, F, M, S and U occupancies. 2-hour in Group A, E, I and R occupancies. • Incinerator rooms: 2 hours and automatic sprinkler system. • Paint shops not classified as Group H, located in occupancies other than Group F. 2 hours; or 1 hour and provide automatic fire-extinguishing system. • Laboratories and vocational shops, not classified as Group H, located in Group I-2 and *I-2.1* occupancies. • *[SFM] Rooms or areas with special hazards such as laboratories, vocational shops and other such areas not classified as Group H, located in Group E occupancies where hazardous materials in exempt amounts are used or stored: 1 hour* • Laundry rooms over 100 square feet: 1 hour or provide automatic fire-extinguishing system. [a] • Storage rooms over 100 square feet: 1 hour or provide automatic fire-extinguishing system. [a] • Group I-2 and *I-2.1* waste and linen collection rooms over 100 square feet: 1 hour or provide automatic fire-extinguishing system. [a] • Stationary storage battery systems having a liquid capacity of more than 100 gallons used for facility standby power, emergency power or uninterrupted power supplies: 1-hour in Group B, F, M, S and U occupancies, 2-hour in Group A, E, I and R occupancies. [a] *a. [SFM] Fire barrier protection and automatic sprinkler protection required throughout the fire area in I-2 and I-2.1 occupancies as indicated.*

SECTION	ITEM	SUMMARY
		No incidental occupancy uses are anticipated in this analysis.
508.3.1	*Accessory occupancies*	Accessory occupancies are those occupancies subsidiary to the main occupancies of the building or portion thereof. Aggregate accessory occupancies shall not occupy more than 10 percent of the area of the story in which they are located and shall exceed the tabular values in Table 503, without height and area increases in accordance with Sections 504 and 506 for such accessory occupancies. ***No accessory occupancy types are anticipated in this analysis.***
903.2	*Sprinkler requirements*	Approved automatic sprinkler systems in new buildings and structures shall be provided in the locations described in this section.
[F]903.2.1.3	*Sprinklers Group A-3*	An automatic sprinkler system shall be provided for Group A-3 occupancies where on of the following conditions exists: 1. The fire area exceeds 12,000 square feet. 2. The fire area has an occupant load of 300 or more. 3. The fire area is located on a floor other than the exit discharge. ***Per CBC, because the fire area occupancy exceeds 300 persons, the building and exit discharges <u>would</u> require the installation of automatic fire sprinklers.***
601	*Types of Construction*	***Brick masonry with wood roof.***
602.1	*Construction Classification*	Buildings and structures erected or to be erected, altered or extended in height or area shall be classified in one of the five construction types defined in Sections 602.2 through 602.5.
602.3		**Type III**. Type III construction type of construction in which the exterior walls are of noncombustible materials and the interior building elements are of any material permitted by this code. ***Bearing walls are made of non-combustible materials (brick masonry) and the roof is made of wood.*** *Per Table 601, the roof requires a 1-hour rating for type IIIA, with the following conditions applying:*

SECTION	ITEM	SUMMARY
		(b2), For Groups A occupancies, high-rise buildings and other applications listed in Section 1.11 regulated by the Office of the State Fire Marshal, fire protection of members other than the structural frame shall not be required, including protection of roof framing and decking where every part of the roof construction is 20 feet or more above any floor immediately below. Fire-retardant-treated wood members shall be allowed to be used for such unprotected members.
		(c), In all occupancies, heavy timber shall be allowed where 1-hour or less fire-resistance rating is required.
		(d), An approved automatic sprinkler system in accordance with Section 903.3.1.1 shall be allowed to be substituted for 1-hour fire-resistance-rated construction, provided such system is not otherwise required by other provisions of the code or used for an allowable area increase in accordance with Section 506.3 for an allowable height increase in accordance with Section 504.2. The 1-hour substitution for the fire resistance of exterior walls shall not be permitted.
		The Community Center is classified as a Type IIIB.
		All structural elements and bearing walls are made of non-combustible materials. The roof of the gymnasium space is made of wood over steel. Per Table 601, the roof requires a 1-hour rating for type IIIA, which is not possible with existing wood sheathing. Type IIIB does not require that any element except the exterior bearing walls have any rating (2 hours in this case).
503.1	*General Height and Area Limitations*	The height and area for building of different construction types shall be governed by the intended use of the building and shall not exceed the limits in Table 503 except as modified hereafter. Each part of the building included within the exterior walls and fire walls where provided shall be permitted to be a separate building.
Table 503	*Allowable Height and Building Areas*	***See relevant portions of Table 503 below.***
		Group A-3/Type IIIB Max. Allowable Stories 2 ***Max. Allowable Height 55'*** ***Max. Allowable Area 9,500 s.f.***
		The Community Center is one story in height. The front of the building is 47' high —the rear is 59' high. The average height is 53.0'. This requirement is met.
		The building does exceed the maximum allowable area of 9,500. (Classification A-3/Type IIIB). Increases to allowable building size can be achieved through the installation of an automatic fire sprinkler system <u>at the discretion of the governing building official.</u>
503.1.2	*Buildings on Same Lot*	Two or more buildings on the same lot shall be regarded as separate buildings or shall be considered as portions of one building if the height of each building and the aggregate area of the buildings are within the limitations of Table 503 a modified by Sections 504 and 506. The provisions of this code applicable to the aggregate building shall be applicable to each building. ***The Chapel would be considered as separate building and complies with 503.1.2.***
1004.1	*Design Occupant Load*	In determining means of egress requirements, the number of occupants for whom means of egress facilities shall be provided shall be determined in accordance with this section. Where occupants from accessory areas egress through a primary space, the calculated occupant load for the primary space shall include the number of occupants egressing through it from the accessory area.
1004.1.1	*Areas without fixed seating*	*The number of occupants shall be computed at the rate of one occupant per unit of area as prescribed in Table 1004.1.1. For areas without fixed seating, the occupant load shall not be less than that number determined by dividing the floor area under consideration by the occupant per unit of area factor assigned to the occupancy as set forth in Table 1004.1.1.*
Per Table 1004	*Occupant Load*	***Total assumed occupant load 1,106 persons***
1004.3	*Posting of Occupant Load*	Every room or space that is an assembly occupancy shall have the occupant load of the room or space posted in a conspicuous place, near a main exit or exit access doorway from the room or space. Posted signs shall be of an approved legible permanent design and shall be maintained by the owner or authorized agent. ***The areas of the building used for assembly purposes chapel will require posting of maximum occupancy load.***
1005.1	*Egress width and distribution*	The means of egress width shall not be less than required by this section. The total width of means of egress in inches shall not be less that the total occupant load served by the means of egress multiplied by the factors in Table 1005.1 and not less than specified elsewhere in the code. Multiple

SECTION	ITEM	SUMMARY
		means of egress shall be sized such that the loss of any one means of egress shall not reduce the available capacity to less than 50 percent of the required capacity. The maximum capacity required from any story of a building shall be maintained to the termination of the means of egress.
Per table 1005.1		*Min. egress widths from Gymnasium Building* *Stairways:* *Building occupancy: 1,106 x 0.3 inches = 331.8"* *Other egress components:* *Building occupancy: 1,106 x 0.2 inches = 221.2"*
1007.3	*Exit stairways*	In order to be considered part of an accessible means of egress, an exit stairway shall have a clear width of 48" minimum between handrails and shall have either incorporate an area of refuge with an enlarged floor-level landing or shall be accessed from either an area of refuge complying with section 1007.6 or a horizontal exit. In addition, exit stairways shall comply with Chapter 11A, Sections 1115A and 1123A, or Chapter 11B, Section 1133B.4, as applicable. Exceptions: 1. Unenclosed exit stairways as permitted by Section 1020.1 are permitted to be considered part of an accessible means of egress. 2. The area of refuge is not requires at unenclosed exit stairways as permitted by Section 1020.1 in buildings or facilities that are equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1. 3. The clear width of 48 inches between handrails is not required at exit stairways in buildings or faculties equipped throughout with an automatic sprinkler system installed in accordance with Section 903.1.1 or 903.3.1.2. ***This requirement <u>is not</u> met.*** ***Based upon the anticipated occupancy of 1,106 persons, the minimum required net clear width of stairways is 331.8". Many of the existing exit stairs do not meet this requirement. Existing stairway widths will need to be widened in order to comply with this requirement. <u>As an existing building, compliance with this section would be at the discretion of the governing building official.</u>***
1017.2	*Corridor width*	The minimum corridor width shall be determined in Section 1005.1, but not less than 44".

SECTION	ITEM	SUMMARY
		Exceptions: 16. Twenty-four inches - For access to and utilization of electrical, mechanical and plumbing systems or equipment. 17. Thirty-six inches - With a required occupant capacity of less than 50. 18. Thirty-six inches - Within a dwelling unit. 19. Seventy-two inches-In group E with a corridor having a required capacity of 100 or more. 20. Seventy-two inches – In corridors serving surgical Group I, health care centers for ambulatory patients receiving outpatient care, which causes a patient to not be capable of self-preservation. ***This requirement <u>is not</u> met.*** ***Based upon the anticipated occupancy of 1,106 persons, the minimum required net clear width at corridors is 221.2". Many of the existing corridors do not provide the minimum required clearance. Existing corridors will need to be widened in order to comply with this requirement. If equipped with an automatic sprinkler system, the egress passageway must be a minimum of 44" inches wide. <u>As an existing building, compliance with this section would be at the discretion of the governing building official.</u>***
1008.1	*Sizes of doors*	The minimum width of each door opening shall be sufficient to for the occupant load thereof and shall provide a clear width of not less than 32 inches. Clear openings of doorways with swinging doors shall be measured between the face of the door and the stop, with the door open 90 degrees. Where this section requires a minimum clear width of 32 inches and a door opening includes two door leaves without a mullion, one leaf shall provide a clear width of 32 inches. The maximum width of a swinging door leaf shall be 48 inches nominal. Means of egress doors in Group I-2 occupancy used for the movement of beds and *litter patients* shall provide a clear width not less than 80 inches. The height of the doors shall not be less than 80 inches. Exceptions: 1. The minimum and maximum width shall not apply to door openings that are not part of the required means of egress in Group R-2 and R-3 occupancies. 2. *Other than those required to be accessible by Chapter 11B,* door openings to resident sleeping units in group I-3 occupancies shall have a clear width of no less than 28 inches. 3. Door openings to storage closets less than 10 square feet in area shall not be limited by the minimum width.

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		4. Width of door leafs in revolving doors that comply with Section 1008.1.3.1 shall not be limited. 5. Door openings in a dwelling unit or sleeping unit shall not be less than 78 inches in height. 6. Exterior door openings in dwelling units and sleeping units, other than the required exit door, shall not be less than 76 inches in height. 7. In other Group R-1 occupancies, the minimum width widths shall not apply to interior egress doors within a dwelling unit or sleeping unit that is not required to be *adaptable or accessible as specified in Chapter 11A or 11B, as applicable.* 8. Door openings required to be accessible within *dwelling* units shall have a minimum clear width *as specified in Chapter 11A or 11B, as applicable.* ***This requirement <u>is not</u> met.*** ***The existing main exit door (north entrance to Main Lobby) of the Community Center School Chapel has a clear opening of 38". This does not meet the required minimum net clear width of 110.5". This door width would need to be modified to provide a minimum net clear width of 110.5" <u>As an existing building, compliance with this section would be at the discretion of the governing building official.</u>*** ***Additional exits provided are as follows:*** ***South side of the main Lobby 38"*** ***West side of Performance Space 38"*** ***West side of Rear Lobby 38"*** ***South side of Main Lobby 38"*** ***Two doors located at the south side of the Classroom/Event Space 76"***
1006	*Means of Egress Illumination*	
1006.1	*Illumination Required*	The means of egress, including the exit discharge, shall be illuminated at all times the building space by the means of egress is occupied.
	Illumination Level	The means of egress illumination level shall not be less than 1-foot candle at the walking surface level. ***This requirement <u>is not</u> met.*** ***The Community Center does not currently meet this requirement. An egress lighting system would need to be installed in order to comply with this requirement. <u>As an existing building, compliance with this section would be at the discretion of the governing building official.</u>***
1006.3	*Emergency Lighting*	The power supply for means of egress illumination shall normally be provided by the premises' electrical supply. In the event of power failure, an emergency electrical system shall automatically illuminate the following areas: 16. Aisles and unenclosed egress stairways in rooms and spaces that require two or more means of egress. 17. Corridors, exit enclosures and exit passageways in buildings required to have two or more exists. 18. Exterior egress components at other than level of exit discharge until the exit discharge is accomplished for buildings required to have two or more exits. 19. Interior exterior discharge elements, as permitted in Section 1024.1 in buildings required to have two or more exists. 20. Exterior landings, as required by Section 1008.1.5 for exit discharge doorways in buildings required to have two or more exists. The emergency power systems shall provide power for a duration of not less than 90 minutes and shall consist or storage batteries, unit equipment or an on-site generator. The installation of the power system shall be in accordance with Section 2702.
1006.4	*Performance of System*	Emergency lighting facilities shall be arranged to provide initial illumination that is at least an average of 1 foot-candle and a minimum at any point of 0.1 foot candle measured along a path of egress at floor level. Illumination levels shall be permitted to decline to 0.6 foot-candle average and a minimum at any point of 0.06 foot-candle at the end of the emergency lighting time duration. A maximum-to minimum illumination uniformity ratio of 40 to 1 shall not be exceeded. ***This requirement <u>is not</u> met.*** ***The Community Center does <u>not</u> currently meet this requirement. An emergency lighting system would need to be installed in order to comply with this requirement. <u>As an existing building, compliance with this section would be at the discretion of the governing building official.</u>***
1007.1	*Accessible means of egress*	Accessible means of egress shall comply with this section. Accessible spaces shall be provided with not less that one accessible means of egress. Where more than one means of

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		egress is required by Sections 1015.1 or 1019.1 from any accessible space, each accessible portion of the space shall be served by accessible means of egress in at least the same number as required by Section 1015.1 or 1019.1. In addition to the requirements of this chapter; means of egress which provide access to, or egress from, buildings for persons with disabilities, shall also comply with the requirements of Chapter 11A or 11B, as applicable. **Exceptions:** 7. Accessible means of egress are not required in alterations to existing buildings. ***Accessible means of egress are not required in alterations to existing buildings. Compliance with CBC Section 1007.1 would be at the <u>discretion of the governing building official</u>.***
1008.1	*Doors*	Means of egress doors shall meet the requirements of this section. Doors serving a means of egress system shall meet the requirements of this section and Section 1018.2. Doors provided for egress purposes in numbers greater than required by this code shall meet the requirements of this section. Means of egress doors shall be readily distinguishable from the adjacent construction and finishes such that the doors are easily recognizable as doors. Means of egress doors shall not be concealed by curtains drapes, decorations or similar materials.
1008.1.1	*Sizes of doors*	The minimum width of each door shall be sufficient for the occupant load thereof and shall provide a clear width of not less than 32". The maximum width of swinging door widths shall be 48" nominal. The height of doors shall not be less than 80". ***This requirement <u>is not</u> met.*** ***The existing main exit door (north entrance to Main Lobby) of the Community Center School Chapel has a clear opening of 38". This does not meet the required minimum net clear width of 110.5". This door width would need to be modified to provide a minimum net clear width of 110.5" <u>As an existing building, compliance with this section would be at the discretion of the governing building official.</u>*** ***Additional exits provided are as follows:*** ***South side of the main Lobby 38"*** ***West side of Performance Space 38"*** ***West side of Rear Lobby 38"*** ***South side of Main Lobby 38"*** ***Two doors located at the south side of the Classroom/Event Space 76"***
1008.1.2	*Door Swing*	Egress doors shall be side-hinged swinging. Doors shall swing in the direction of egress travel where serving an occupancy load of 50 or more. ***This requirement is met.***
1008.1.4	*Floor Elevation*	There shall be a floor landing on each side of a door. Such floor or landing shall be at the same elevation on each side of the door. Landings shall be level except at exterior landings, which are permitted to have a slope not to exceed .25 unit vertical in 12 units horizontal (2-percent slope).
1008.1.5	*Landings at doors*	Landings shall have a clear width of not less than the width of the stairway or the door, whichever is greater. Doors in the fully open position shall not reduce a required dimension by more than 7 inches. When a landing serves an occupant load of 50 or more, doors in any position shall not reduce than landing to less than one-half its required width. Landings shall have a length measured in the direction of travel of not less than 44 inches. ***The landings located at the exterior doors from the existing Catholic Chapel and the existing Protestant Chancel <u>do not</u> provide 44" inch landings. Those landings would need to be made larger if these doors serve the building as exits. Remaining exits meet this requirement. <u>As an existing building, compliance with this section would be at the discretion of the governing building official.</u>***
1008.1.6	*Thresholds*	Thresholds at doorways shall not exceed 0.75 inch inch in height for sliding doors serving a dwelling units or 0.5 inch for other doors. Raised thresholds and floor level changes greater than .25 inch at doorways shall be beveled with a slope not greater than one unit vertical in two units horizontal (50-percent slope). ***The existing door thresholds <u>do not</u> currently meet this requirement. Existing thresholds would need to be modified/replaced to comply with the requirements prescribed in Section 1008.1.6.***

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1008.1.7	*Door Arrangement*	Space between two doors in a series shall be 48 inches minimum plus the width of a door swinging into the space. Doors in a series shall swing in the same direction or away from the space between the doors. ***This requirement is met.***
1008.1.8	*Door Operations*	Except as specifically permitted by this section, egress doors shall be readily openable from the egress side without the use of a key or special knowledge. ***This requirement <u>is not</u> met.*** ***Many of the existing egress doors require the use of a key. The egress doors do not currently meet this requirement. New locking devices would need to be installed in order to comply with this requirement. <u>As an existing building, compliance with this section would be at the discretion of the governing building official.</u>***
1008.1.8.1	*Hardware*	Door handles, pulls, latches, locks and other operating devices on doors required to be accessible by Chapter 11A or 11B shall not require tight grasping, tight inching or twisting of the wrist to operate. ***Much of the existing hardware does not currently meet this requirement. Hardware would need to be modified/replace din order to comply with this requirement. <u>As an existing building, compliance with this section would be at the discretion of the governing building official.</u>***
1008.1.8.2	*Hardware Height*	Door handles, pulls, latches, locks and other operating devices shall be installed 34 inches minimum and 48 inches maximum above the finished floor. Locks used only for security purposes and not used for normal operation are permitted at any height. ***Much of the existing hardware does not currently meet this requirement. Hardware would need to be modified/replace din order to comply with this requirement. <u>As an existing building, compliance with this section would be at the discretion of the governing building official.</u>***
1008.1.8.3	*Locks and Latches*	Locks and latches shall be permitted to prevent operation of doors where any of the following exists: 14. Places of detention 15. In buildings in occupancy Group A having an occupant load of less than 300 or less, Groups B,F,M, and S, and in places of religious worship, the main exterior doorr or odors are permitted to be equipped with key-operated locking devices from the egress side: 15.1 The locking device is readily distinguishable as locked. 15.2 A readily durable sign is posted on the egress side on or adjacent to the door. 15.3 The use of the key-operated locking device is revocable by the building official for due cause. 16. Where egress doors are used in pairs, approved automatic flush bolts shall be permitted to be used provided that the door leaf having the automatic flush bolt has no doorknob or surface-mounted hardware. 17. Doors in individual dwelling or sleeping units of Group R occupancies having an occupant load of 10 or less permitted to be equipped with a night latch, dead bolt or security chain, provided such devices are openable from the inside without the use of a key or tool. ***Many of the existing locks and latches do not meet this requirement. Hardware would need to be modified/replace din order to comply with this requirement. <u>As an existing building, compliance with this section would be at the discretion of the governing building official.</u>***
1009.3	*Stairway treads and risers*	Stair riser heights shall be 7 inches maximum and 4 inches minimum. Stair tread depths shall be 11 inches minimum. . . ***This requirement <u>is not</u> met.*** ***The existing interior and exterior steps do not meet this requirement. <u>As an existing building, compliance with this section would be at the discretion of the governing building official.</u>***
1009.3.2	*Dimensional Uniformity*	Stair treads and risers shall be uniform in size and shape. The tolerance between the largest and the smallest riser height or between the largest and smallest tread depth shall not exceed 0.375 inch in any flight of stairs. ***This requirement is met.***
1011.1	*Exit Signs*	Exits and exit access doors shall be marked with an approved exit sign readily visible form any direction of egress travel. Access to exits shall be marked by readily visible exit signs in cases where the exit or the path of egress

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		travel is not immediately visible to the occupants.
1101.2	*Illumination*	Exit signs shall be internally lit.
1011.3	*Tactile exit signs*	For the purposes of Section 1.11.3 the term "tactile exit signs" shall mean those signs that comply with Section 1117B.5.1, Item 1. tactile exit signs shall be required at locations as specified in Section 1011.3
1011.5.3	*Power Source*	Exit signs shall be illuminated at all times. To ensure continued illumination for a duration of not less than 90 minutes, in case of primary poser loss, the design illumination means shall be connected to an emergency power system provided from storage batteries , unit equipment or an on site generator. ***The Community Center does not have illuminated exit signs and will require those so as to comply with these requirements. Tactile exits signs are not currently present and would also need to be installed.***
1012.1	*Stairway and ramp handrails*	Where required. Handrails for stairways and ramps shall be adequate in strength and attachment in accordance with Section 1607.7. Handrails required for stairways by Section 1009.10 shall comply with Sections 1012.2 through 1012.8. Handrails required for ramps by Section 1010.8 shall comply with Sections 1012.2 through 1012.7. ***The existing exterior entry ramps do not meet this requirement, and would need to be modified/replaced in order to comply with this section. As an existing building, this would be at the discretion of the governing building official.***
1012.2	*Handrail Height*	Handrail height, measured above stair tread nosing, or finish surface of ramp slope shall be uniform not less than 34" and not more than 38". ***Existing stairway handrail heights do not meet this requirement. New handrails will need to be provided at the all interior and exterior stairs.*** ***By code, alterations to existing buildings such as the Chapel do not require an accessible means of egress. Replacement of the handrails would be at the discretion of the governing building official***
1012.5	*Handrail extensions*	Handrail shall return to a wall, guard, or the walking surface or shall be continuous to the handrail of an adjacent stair flight or ramp run. At stairways where handrails are not continuous between flights, the handrails shall extend horizontally at least 12 inches beyond the top riser and continue to slope for the depth of one tread beyond the bottom riser. ***As there are currently no handrail extensions, the existing handrails do not meet this requirement. New handrails with extension will need to be provided at the basement stairs.*** ***By code, alterations to existing buildings such as the Chapel do not require an accessible means of egress. Replacement of the handrails would be at the discretion of the governing building official***
1013.1	*Guards*	**Where required.** Guards shall be located along open-sided walking surfaces, mezzanines, industrial equipment platforms, stairways, ramps and landings that are located more than 30" above the floor or grade below. . . Exception: Guards are not required for the following locations. 25. On the loading side of loading docks. 26. On the audience side of stages and raised platforms, including steps leading to the stage and raised platforms. 27. On raised stages and platform floor areas, such as runways, ramps and side stages used for entertainment or presentations. 28. At vertical openings in the performance areas of stages and platforms. 29. At elevated walking surfaces appurtentant to stages and platforms for access to and utilization of special lighting or equipment. 30. In assembly seating where guards in accordance with Section 1025.14 are permitted and provided.
1013.2	*Guard height*	Guards shall form a protective barrier not less than 42" high, measured vertically above the leading edge of the tread, adjacent walking surface or adjacent seatboard.
1013.3	*Opening limitations for guards*	Open guards shall have balusters or ornamental patterns such that a 4-inch-diameter sphere cannot pass through any opening. ***The existing guard heights at the exterior entry steps, interior stairs and balcony area do not meet this requirement. The openings present in the existing guards***

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		also do not meet this requirement.
		This requirement is not met. New guards which meet the requirements of sections 1013.1-1013.3 will need to be provided at the basement stairs.
		Replacement of the guards would be at the discretion of the governing building official.
1014	*Exit Access*	The exit access arrangement shall comply with Sections 1014 through 1017 and the applicable provision of Sections 1003 through 1013.
1014.2	*Egress through intervening spaces*	Egress from room or space shall not pass through adjoining or intervening rooms or areas, except where such adjoining rooms are accessory to the served, are not a high-hazard occupancy and provide a discernible path of travel to an exit.
		This requirement is met.
1014.3	*Common path of egress travel*	In occupancies other than Groups H-1, H-2, and H-3, the common path of egress travel shall not exceed 75 feet.
		This requirement is met.
1025.8	*Common path of egress travel for Group A Occupancies.*	The common path of egress travel shall not exceed 30 feet from any seat to a point where an occupant has a choice of two paths of egress.
		This requirement is met.
1014.4	*Aisles*	Aisles serving as a portion of the exit access and the means of egress system shall comply other the requirements of this sections. Aisles shall be provided from all occupied portions of the exit access which contains seats, tables, furnishings, displays and similar fixtures or equipment. Aisles serving assembly areas, other than seating at tables, shall comply with Section 1025.
		The required width of aisles shall be unobstructed.
		The existing fixed seating in the chapel areas not meet this requirement. Replacement of the pews would be at the discretion of the governing building official. If new pews are proposed as a part of the modification of this structure, the layout of those seats must comply with Section 1014.4

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		The allowable occupancy may also change based upon the capacity of those seats. No pews have been considered as a part of this analysis.
1015.1	*Number of exit and exit access doorways*	Two exits or exit access doorways form any space shall be provided where one of the following conditions exits: 16. The occupant load of the space exceeds the values in Table 1015.1 17. The common path of egress travel exceeds the limitations of section 1014.3 18. Where required by Sections 1015.3, 1015.4, and 1015.5
		The maximum load for a single exit in an A occupancy is 49. The Community Center requires 4 exits. (Occupancies greater than 1000 / 4)
		This requirement is met.
1015.2.1	*Egress separation*	Where two exits or exit access doorways are required from any portion of the exit access, the exit doors or exit access doorways shall be placed a distance apart equal to not less than one-half of the length of the maximum diagonal dimension of the building or area to be serviced measured in a straight line between exit doors or exit access doorways. Exception: 13. Where exit enclosures are provided as a portion of the required exit and are interconnected by a 1-hour fire-resistance-rated corridor, conforming to the requirements of Section 1017, the required exit separation shall be measured along the shortest direct line of travel within a corridor. 14. Where a building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2, the separation distance of the exit doors or exit access doorways shall not be less than one-third of the length of the maximum overall diagonal dimension of the area served.
1016.1	*Travel distance limitations*	Exits shall be so located on each story such that the maximum length of exit access travel, measured from the most remote point within a story to the entrance to an exit along the natural and unobstructed path of egress travel, shall not exceed the distance given in Table 1016.1 Where the path of travel exit access includes unenclosed stairways or ramps within the exit access or includes

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		unenclosed ramps or stairways as permitted in Section 1020.1, the distance of travel on such means of egress components shall also be included in the travel distance measurement. The measurement along stairways shall be made on a plane parallel and tangent to the stair tread nosings in the center of the stairway.
Per Table 1016	*Exit Access Travel Distance*	*The maximum exit access travel distance for group A occupancy is 200 feet without an automatic sprinkler system.* *The maximum exit access travel distance for group A occupancy is 250 feet without an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2 for occupancies where automatic sprinkler systems are permitted in accordance with Section 903.3.1.2.* ***This requirement is met***
1028.7	*Travel Distance*	*Exits and aisles shall be located so that the travel distance to an exit door shall be greater than 200 feet measured along the line of travel in non-sprinkled buildings. Travel distance shall not be more than 250 feet in sprinkled buildings. Where aisles are provided for seating, the distance shall be measured along the aisles accessway without travel over or on the seats.* ***This requirement is met***
1017.1	*Corridor construction*	Corridors shall be fire-resistance rated in accordance with Table 1017.1
Table 1017.1		***No rating of the corridors is required in A occupancies with sprinkled corridors for occupant loads greater than 30 persons. (1-hour rating is required in A occupancies with non-sprinkled corridors for occupant loads greater than 30 persons.)*** ***This requirement can be met with the installation of an approved fire-sprinkler system.***
1019.1	*Number of exits*	All rooms and spaces within each story shall be provided with and have access to the minimum number of required independent exits required by Table 1019.1 based on the occupant load of the story. . . The required number of exits from any story, basement or individual space shall be maintained until arrival at grade of the public way.
Table 1019.		***The maximum load for a single exit in an A occupancy is 49. The Community Center requires 4 exits. (Occupancies greater than 1000 / 4)***

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		This requirement is met.
1020.1.1	*Openings and penetrations*	Exit enclosure opening protectives shall be in accordance with the requirements of Section 715. Except as permitted in Section 402.4.6, openings in exit enclosures other than the unprotected exterior openings shall be limited to those necessary for exit access to the enclosure from normally occupied spaces and for egress from the enclosure. Where interior exit enclosures are extended to the exterior of the building by an exit passageway, the door assembly from the exit enclosure to the exit passageway shall be protected by a fire door assembly conforming to the requirements in Section 715.4. Fire Door assemblies in exit enclosures shall comply with Section 715.4.4. ***The existing discharge doors are not labeled as fire-rated. This requirement <u>is not</u> met. Further evaluation would be required to determine if the existing doors meet this requirement, or new fire-rated doors would need to be installed.***
1021	*Exit Passageways*	Exit passageways serving as an exit component in a means of egress system shall comply with the requirements of the section. An exit passageway shall not be used for any purpose other than as a means of egress.
1021.2	*Width*	The width of exit passageways shall be determined as specified in Section 1005.1 but such width shall not be less than 44 inches. The required width of exit passageways shall be unobstructed. Exception: Doors when fully opened, and handrails, shall not reduce the required width by more than 7 inches. Doors in any position shall not reduce the required width by more than one half. Other nonstructural projections such as trim and similar decorative features are permitted to project into the required width 1.5 inches on each side.
Per Table 1005.1		***If equipped with an automatic sprinkler system, the egress passageway must be a minimum of 44 inches wide.*** ***This requirement is <u>not</u> met.***

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1021.3	*Construction*	Exit passageway enclosures shall have w1alls, floors and ceilings of not less than 1-hour fire-resistance rating, and not less than required for any connecting exit enclosure.
715	*Opening protectives*	Exit passageways with a required minimum 1-hour fire rating, shall contain doors with a minimum required 20-minute fire rating, and assembly ratings of 1-hour. (per Table 715.4).
1021.4	*Openings and penetrations*	Openings in exit passageways other than unexposed exterior openings shall be limited to those necessary for exit access to the exit passageway from normally occupied spaces and for egress from the exit passageway.
1024	*Exit Discharge*	Exits shall discharge directly to the exterior of the building. The exit discharge shall be at grade or shall provide direct access to grade. ***The exit passageways are required to be of 1-hour construction. Doors located in the passageway must be 20-minute fire-rated, and assemblies must be identified as having 1-hour ratings. The existing passageway does not meet this requirement (1-hour rating), and rating identifications are not apparent on all of the existing doors or assemblies. Further evaluation would be required to determine if the existing doors meet this requirement, or new fire-rated doors would need to be installed.***
1023	*Exterior exit ramps and stairways.*	Exterior exit ramps and stairways serving as an element of a required means of egress shall comply with this section.
1023.3	*Open side*	Exterior exit ramps and stairways shall serving as an element of required means of egress shall be open on at least one side. An open side shall have a minimum of 35 square feet of aggregate open area adjacent to each floor level and the level of each intermediate landing. The required open area shall be located not less than 42 inches above the adjacent floor or landing level. ***The existing entry/exit ramps to do meet this requirement and would need to be modified/replaced in order to comply with this section. Any new exit ramps would need to meet current code requirements. <u>As an existing building, compliance with this section would be at the discretion of the governing building official.</u>***
1024	*Exit Discharge*	Exits shall discharge directly to the exterior of the building. The exit discharge shall be at grade or shall provide direct access to grade.
1024.1	*Exit discharge*	Exits shall discharge directly to the exterior of the building. The exit discharge shall be at grade or shall provide direct access to grade. The exit discharge shall not reenter a building. A maximum of 50 percent of the number and capacity of the exit enclosure is permitted to egress through areas on the level of discharge provided all of the following are met: 1.1 Such exit enclosures egress to a free and un-obstructed way to the exterior of the building. . . 1.2 The entire area of the level of discharge is separated form areas below by construction conforming to the fire – resistance rating the exit enclosure. 1.3 The egress path from the exit enclosure on the level of discharge is protected throughout by an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.1.2, or separated from the egress path in accordance with the requirements for the enclosure of exists. ***The egress path from the exit enclosure on the level of discharge is not currently protected throughout by an approved automatic sprinkler system. This requirement is not currently met, but would be met with the installation of an approved automatic fire sprinkler system.***
1025.2	*Egress for assembly occupancies*	Assembly main exit. Group A occupancies that have an occupant load of greater than 300 shall be provided with a main exit. The main exit shall be of sufficient width to accommodate not less than one-half of the occupant load,... Where the building is classified as Group A occupancy, the main exit shall front on at least one street or an unoccupied space of not less than 20 feet in width that adjoins a street or public way. Group A occupancies that have an occupant load greater than 300 shall be provide with at least 0.20-inch total exit width for each occupant served. *Min. total exit width:* *Community Center occupancy: 1,106 / 2 exits x 0.2 inches = 110.6"*

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		The existing main exit from the Chapel has a clear opening of 38".
		This requirement <u>is not</u> met. The exit discharge openings would to be increased in width or additional exits would need to be created to accommodate the anticipated occupancy.
1025.3	Assembly other exits	In addition to having access to a main exit, each level in a Group A occupancy having an occupant load greater than 300 shall be provided with additional means of egress that shall provide an egress capacity of at least one-half of the total occupant load. . .
		This requirement <u>is not</u> met.
		The existing main exit door (north entrance to Main Lobby) of the Community Center School Chapel has a clear opening of 38". This does not meet the required minimum net clear width of 110.5". This door width would need to be modified to provide a minimum net clear width of 110.5" <u>As an existing building, compliance with this section would be at the discretion of the governing building official.</u>
		Additional exits provided are as follows:
		South side of the main Lobby 38" ***West side of Performance Space 38"*** ***West side of Rear Lobby 38"*** ***South side of Main Lobby 38"*** ***Two doors located at the south side of the Classroom/Event Space 76"***
1025.4	Foyers and lobbies	In Group A-1 occupancies, where persons are admitted to the building at times when seats are not available and are allowed to wait in a lobby or similar space, such use of a lobby or similar space shall not encroach upon the required clear width of the means of egress by substantial permanent partitions of by fixed rigid railings not less than 42" high. Such foyer if not directly connect to a public street by all the main entrances or exits, shall have a straight and unobstructed corridor or path of travel to every such main entrance or exit.
		The Community Center meets this requirement.
1103B.1	*Accessibility Scope*	Accessibility to buildings or portions of buildings shall be provided for all occupancy classifications. An accessible route of travel complying with Section 1114B.1.2 shall connect all elements and spaces within a building or facility. Multi-story buildings must provide access to each level, including mezzanines, by ramp or passenger elevator.
		In its current state, the Chapel building <u>is not</u> fully accessible throughout. However, as an existing building, this may not be required upon discretion of the governing building official.
		Any future renovations shall be made accessible per this section of the code.
1104B	*Accessibility for Group A occupancies*	All Group A occupancies shall be accessible as provided in this chapter. See also the general requirements in the section.
1104B.2	*Assistive-listening systems in assembly areas.*	Assembly area, conference and meeting rooms shall provide assistive listening systems for persons with hearing impairments as provided in this section. 2. Number of personal receivers required. The minimum number of receivers to be provided shall be equal to 4 percent of the total number of seats but in no case less than two.
		This requirement <u>is not</u> met.
		Receivers would be required in the assembly areas at a rate of .04 per occupant load of each space.
		This requirement is not currently met, however as an existing building, this may not be required. Future renovations shall provide accommodation per this section of the code.
1115B	*Accessibility restroom Facility requirements*	*This section addresses the minimum requirements for restroom facilities. It should be used in the proposed upgrade of the restrooms.*
1115B.3.1	*Toilet Facilities*	***New, multiple-accommodation toilets facilities shall include the following in accordance with Section 1115B.3.1 – 1115B.4.5;***
		31. Wheelchair clearance ***32. Clear floorspace at fixtures*** ***33. Accessible water closet*** ***34. Accessible water closet compartment*** ***35. Accessible urinals*** ***36. Accessible lavatories***

SECTION	ITEM	SUMMARY
		37. Accessible passageways ***38. Accessible symbols*** ***39. Accessible grab bars*** ***40. Accessible accessories*** ***The existing restroom facilities possess many deficiencies in regard to accessibility. Compliance with this section would be at the <u>discretion of the governing building official.</u>*** ***If existing restrooms were to be renovated, they would be required to meet accessibility requirements for wheelchair clearance, clear floorspace at fixtures, water closets, water closet compartments, urinals, lavatories, passageways, symbols, grab bars and accessories.*** ***The existing space allocated to toilet facilities most like would not accommodate the accessibility clearances or the number of fixtures required by CPC 2010 Table 4-1.***
1115B.4.6	*Accessible Drinking Fountains*	*The installation of new drinking foundations shall comply with the requirements of Section 1115B.4.6.* ***Currently, drinking fountains are not provided. As an existing building, this may not be required. Any future modifications however, shall be in compliance with this section of the code***
1117B	*Other Building Components*	***Any future modifications to the gymnasium shall include the following in accordance with Section 1115B.3.1;*** ***16. Water fountains*** ***17. Telephones*** ***18. Signs and identification*** ***19. Symbols of Accessibility*** ***20. Controls and operating mechanisms*** ***As an existing building, this may not be required. Any future modifications however, shall be in compliance with this section of the code***
1118B	*Space Allowance and reach ranges*	*Modification of the auditorium shall comply with the requirements of Section 1118B.* ***As an existing building, this may not be required. Any future modifications however, shall be in compliance with this section of the code***
11120B.1	*Floor and levels*	In buildings and facilities, floors of a given story shall be a common level throughout, shall be connected by pedestrian ramps, passenger elevators or special access lifts. ***Currently, no accessible means (i.e. ramp of lift) are provided within the building. As an existing building, this may not be required.*** ***By code, alterations to existing buildings such as the Chapel <u>do not</u> require an accessible means of egress. Replacement of the guards would be <u>at the discretion of the governing building official.</u>***
1124B.1	*Floor Surfaces*	Ground and floor surfaces along accessible routes and in accessible rooms and spaces, including floors, walks, ramps, stairs and curb ramps, shall be stable, firm, slip resistant and shall comply with Sections 1124B.1-1124B.4 ***As an existing building, this may not be required. Any modifications of the Community Center shall comply with the requirements of floor surfaces, change in level, carpet and grating as specified in Section 1124B.1.***
1125B	*Storage*	If fixed storage faculties such as cabinets, shelves, closets or drawers are provided where access is required be Section 109.1, at least one of each type shall comply with this section. ***As an existing building, this may not be required. Any new storage facilities shall comply with the requirements for clear space, height and hardware as specified ins section 1125B.***
1127B.1	*Exterior routes of travel*	***By code, alterations to existing buildings such as the Chapel, do not require an accessible means of egress.***
3403.1	*Existing Buildings – alterations, additions, or repairs*	Additions or alterations to any building or structure shall comply with the requirements of the code for new construction. Additions or alterations shall not be made to an existing building or structure that will cause the existing building or structure to be in violation of any portions of this code. . . Portions of the structure not altered and not affected by the alteration are not required to comply wit the code requirements for a new structure. *Rooms and areas that are not upgraded can remain in their existing condition, unless a modification to some other item has an un-intentional impact on an area that was not scheduled to be modified.*
3403.2	*Structural impact to*	Additions or alterations to an existing structure shall not

SECTION	ITEM	SUMMARY
	existing buildings	increase the force in any structural element by more than 5%. . .
3403.3	*Nonstructural modifications to existing buildings*	Nonstructural alterations or repairs to an existing building or structure are permitted to be made of the same materials of which the building or structure is constructed, provided that they do not adversely affect any structural member or the fire-resistance rating of any part of the building or structure.
3410.2.3	*Alterations and repairs to existing buildings*	An existing building or portion thereof, which does not comply with the requirements of this code for new construction, shall not be altered or repaired in such a manner that results in the building being less safe or sanitary than such building is currently.

TABLE 503 (RELEVANT SECTIONS)

GROUP		TYPE IIIB	SUMMARY
	Height (feet)	44' High max.	*The Community Center is 44' feet high at the back and 44' high at the front. Neither exceeds the allowable height. The code requires an average of the heights based on areas for the height measurement.* *The Community Center meets this requirement.*
	Height (Stories)	2 Stories max.	*The Community Center does not exceed two stories in height*
	Area	9,500 sq.ft.	*The community Center is 10,633 sq. ft.*

OCCUPANT LOAD (PER TABLE 1004.1.1 CBC)

AREA	FUNCTION OF SPACE	AREA	OCCUPANT LOAD FACTOR	TOTAL OCCUPANTS
Multi-Propose Room	Assembly	1,975 sq. ft.	7	282.14
Performance Area	Assembly	1,320 sq. ft.	7	188.57
Main Lobby	Assembly	725 sq. ft.	7	103.57
Office		160 sq. ft.	100	1.60
Kitchen		540 sq. ft.	200	2.70
Office		160 sq. ft.	100	1.60
Rear Lobby		930 sq. ft.	7	132.85
Meeting Room	Assembly	275 sq. ft.	15	18.33
Meeting Room	Assembly	275 sq. ft.	15	18.33
Meeting Room	Assembly	275 sq. ft.	15	18.33
Study Room	Assembly	160 sq. ft.	15	10.66
Classroom/ Event space	Assembly	2,285 sq. ft.	7	326.42
Toilet	-	-	-	-
Circulation	-	-	-	-
Total		8,380 s. f.		**1106 persons**

MINIMUM EGRESS WIDTH OF STAIRS, ASSUMED SPRINKLERED (PER TABLE 1005.1 CBC)

AREA	OCCUPANCY TYPE	OCCUPANTS	STAIRWAY WIDTH FACTOR	TOTAL WIDTH REQUIRED (INCHES)
All	Assembly	1,106	0.2	221.2"

MINIMUM EGRESS WIDTH OF OTHER COMPONENTS (DOOR WAYS, ETC.), ASSUMED SPRINKLERED (PER TABLE 1005.1 CBC)

AREA	OCCUPANCY TYPE	OCCUPANTS	COMPONENT FACTOR	TOTAL WIDTH REQUIRED (INCHES)
All	Assembly	1,106	0.3	331.8"

PLUMBING FIXTURE COUNTS (PER TABLE 4-1, CALIFORNIA PLUMBING CODE)

TYPE OF BUILDING OCCUPANCY	AREA	OCCUPANT LOAD FACTOR	OCCUPANTS OF EACH SEX*	MEN'S LAV.	MEN'S URINAL	MEN'S W/C	WOMEN'S LAV	WOMEN'S W/C	DRINKING FOUNTAIN
Assembly Places	8,380 sq.ft.	1,106	553	14	See Below	16	14	17	-

Urinals may be installed instead of water closets in toilet rooms to be used only be men provided that the number of water closets shall not be less than two thirds of the minimum number of toilet facilities specified.

* per Table A. Occupant Load Factor in CPC, 2010

Maintenance Building Detailed Code Analysis

Applied Codes:
California Building Code (CBC) – 2010 ed.
California Electrical Code (CEC) – 2010 ed.
California Plumbing Code (CPC)– 2010 ed.
California Mechanical Code (CMC)– 2010 ed.

Proposed Use: Mercantile (Grocery)

Existing Areas:

Building Gross S.F: 11,288 sq. ft.
Total N.S.F: 10,679 sq. ft.

Building Height:

Height at front of building: 43'
Height at back of building: 46'

SECTION	ITEM	SUMMARY
301	*Use & Occupancy Classification*	
302.1	*Classification*	Structures or portions of structures shall be classified with respect to the occupancy in one more of the groups listed below. A room or space that is intended to be occupied at different times for different purposes shall comply with the requirements that are applicable to each of the purposes for which the room or space will be occupied. Structures with multiple occupancies or uses shall comply with Section 508. Where a structure is proposed for a purpose that is not specifically provided for in this code, such structure shall be classified in the group that the occupancy most nearly resembles, according to the fire safety and relative hazard involved.
309.1	*Assembly Group M Mercantile*	Assembly Group M occupancy includes, among others, the use of a building or structure, or a portion thereof, for the display and sale of merchandise, and involves stocks of goods, wares and merchandise incidental to such purposes and accessible to the public. Mercantile occupancies shall include but not be limited to, the following: Department stores Drug stores Markets Motor fuel-dispensing facilities Retail and wholesale stores Sales rooms

SECTION	ITEM	SUMMARY
		If converted to retail (grocery) use, the The Nelles School Maintenance would be classified as group M occupancy.
508.2	*Incidental uses*	Incidental use areas shall comply with the provisions of this section.
508.2.1	*Occupancy classification.*	An incidental use area shall be classified in accordance with the occupancy of that portion of the building in which it is located or the building shall be classified as a mixed occupancy and shall comply with section 508.3 ***No incidental uses are anticipated in this analysis.***
508.2.2	*Separation*	Incidental use areas shall be separated or protected, or both, in accordance with Table 508.2.
508.2.2.1	*Construction*	Where Table 508.2 requires a fire resistance-rated separation, the incidental use area shall be separated from the remainder of the building by a fire barrier constructed in accordance with Section 706 or a horizontal assembly constructed in a accordance with Section 711, or both. Where Table 508.2 requires a fire-resistance-rated separation, the incidental use area shall be separated from the remainder of the building by a fire barrier, the incidental use area shall be separated from the remainder of the building by construction capable of resisting the passage of smoke. The partitions shall extend from the floor to the underside of the fire-resistive-rated floor/ceiling assembly or fire-resistance-rated roof/ceiling assembly above or to the underside of the floor or roof sheathing, or sub deck above. Doors shall be self- or roof sheathing, or sub deck above. Doors shall be self- or automatic closing upon detection of smoke in accordance with Section 715.4.37.3. Doors shall not have air transfer openings and shall not be undercut in excess of the clearance permitted in accordance with NFPA 80.
508.2.3	*Protection*	When an automatic fire-extinguishing system or an automatic sprinkler system is provided in accordance with Table 508.2 only the incidental use areas need be equipped with such a system.
508.2	*Table 508.2*	Below is a list of potential incidental uses and their protection requirements per Table 508.2: • Furnace room where any piece of equipment is over 400,000 Btu per hour input: 1 hour or provide automatic fire-extinguishing system.

SECTION	ITEM	SUMMARY
		• Rooms with boilers where the largest piece of equipment is over 15 psi and 10 horse power: 1 hour or provide automatic fire-extinguishing system.[a] • Refrigerant machinery rooms: 1 hour or provide automatic fire-extinguishing system.[a] • Parking Maintenance (Section 4.6.2): 2 hours; or 1 hour and provide automatic fire-extinguishing system. • Hydrogen cut-off rooms, not classified as Group H: 1-hour in Group B, F, M, S and U occupancies. 2-hour in Group A, E, I and R occupancies. • Incinerator rooms: 2 hours and automatic sprinkler system. • Paint shops not classified as Group H, located in occupancies other than Group F. 2 hours; or 1 hour and provide automatic fire-extinguishing system. • Laboratories and vocational shops, not classified as Group H, located in Group I-2 and *I-2.1* occupancies. • *[SFM] Rooms or areas with special hazards such as laboratories, vocational shops and other such areas not classified as Group H, located in Group E occupancies where hazardous materials in exempt amounts are used or stored: 1 hour* • Laundry rooms over 100 square feet: 1 hour or provide automatic fire-extinguishing system.[a] • Storage rooms over 100 square feet: 1 hour or provide automatic fire-extinguishing system.[a] • Group I-2 and *I-2.1* waste and linen collection rooms over 100 square feet: 1 hour or provide automatic fire-extinguishing system.[a] • Stationary storage battery systems having a liquid capacity of more than 100 gallons used for facility standby power, emergency power or uninterrupted power supplies: 1-hour in Group B, F, M, S and U occupancies, 2-hour in Group A, E, I and R occupancies.[a] *a. [SFM] Fire barrier protection and automatic sprinkler protection required throughout the fire area in I-2 and I-2.1 occupancies as indicated.* ***If converted to mercantile (grocery) use, most likely the use would include an incidental use of a storage room of over 100 square feet, and thus may require separation as specified in Table 508.2 (automatic fire-extinguishing system) for that portion.***
508.3.1	*Accessory occupancies*	Accessory occupancies are those occupancies subsidiary to the main occupancies of the building or portion thereof. Aggregate accessory occupancies shall not occupy more than 10 percent of the area of the story in which they are located and shall exceed the tabular values in Table 503, without height and area increases in accordance with Sections 504 and 506 for such accessory occupancies. ***<u>No</u> accessory occupancy types are anticipated in this analysis.***
903.2	*Sprinkler requirements*	Approved automatic sprinkler systems in new buildings and structures shall be provided in the locations described in this section.
[F]903.2.6	*Sprinklers Group M*	An automatic sprinkler system shall be provided throughout building containing Group M occupancy were one of the following conditions exists: 4. The fire area exceeds 12,000 square feet. 5. Where the Group M fire area is located more than three stories above grade. 6. Where the combined area of all Group M fire areas on all floors, including mezzanines, exceeds 24,000 square feet. ***Per CBC, the occupancy level of the sales floor would not require installation of an automatic sprinkler system, however a stockroom over 100 square feet may require separation as specified in Table 508.2 (automatic fire-extinguishing system) for that portion.***
601	*Types of Construction*	***Brick masonry and concrete with wood over steel roof trusses.***
602.1	*Construction Classification*	Buildings and structures erected or to be erected, altered or extended in height or area shall be classified in one of the five construction types defined in Sections 602.2 through 602.5.
602.3		**Type III**. Type III construction type of construction in which the exterior walls are of noncombustible materials and the interior building elements are of any material permitted by this code. ***The Nelles School Maintenance should be classified as a Type III-B.*** ***All structural elements and bearing walls are made of non-combustible materials. The roof of the Maintenance space however, is made of wood decking over steel. Per Table 601, the roof requires a 1-hour rating for type III-A, which is not possible with existing wood sheathing. Type III-B does not require that any element except the exterior bearing walls have any rating (2 hours in this case).***

SECTION	ITEM	SUMMARY
503.1	*General Height and Area Limitations*	The height and area for building of different construction types shall be governed by the intended use of the building and shall not exceed the limits in Table 503 except as modified hereafter. Each part of the building included within the exterior walls and fire walls where provided shall be permitted to be a separate building.
Table 503	*Allowable Height and Building Areas*	*See relevant portions of Table 503 below.* *Group M/Type IIIB Max. Allowable Stories 4* *Max. Allowable Height 55'* *Max. Allowable Area 12,500 s.f.* *The Nelles School Maintenance is one story in height. The front of the building is 23' high – the rear is 23' high. The average height is 23.0'.* ***This requirement is met.*** *The total square footage of the building (10,679 sq. ft.) is less than the maximum allowable 12,500 sq. ft. (Classification M/Type IIIB).* ***This requirement is met.***
503.1.2	*Buildings on Same Lot*	Two or more buildings on the same lot shall be regarded as separate buildings or shall be considered as portions of one building if the height of each building and the aggregate area of the buildings are within the limitations of Table 503 a modified by Sections 504 and 506. The provisions of this code applicable to the aggregate building shall be applicable to each building. ***For the purposes of this analysis, the Nelles School Maintenance would be considered as separate building and complies with 503.1.2.***
1004.1	*Design Occupant Load*	In determining means of egress requirements, the number of occupants for whom means of egress facilities shall be provided shall be determined in accordance with this section. Where occupants from accessory areas egress through a primary space, the calculated occupant load for the primary space shall include the number of occupants egressing through it from the accessory area.
Per Table 1004	*Occupant Load*	*Total Occupant Load* ***156 persons***
1005.1	*Egress width and distribution*	The means of egress width shall not be less than required by this section. The total width of means of egress in inches shall not be less that the total occupant load served by the means of egress multiplied by the factors in Table 1005.1 and not less than specified elsewhere in the code. Multiple means of egress shall be sized such that the loss of any one means of egress shall not reduce the available capacity to less than 50 percent of the required capacity. The maximum capacity required from any story of a building shall be maintained to the termination of the means of egress.
Per table 1005.1		*Min. egress widths from Maintenance Building* *Min. egress widths from building <u>without</u> an automatic sprinkler system.* *Stairways:* *Building occupancy: 164 x .0.3 inches = 49.2"* *Other egress components:* *Building occupancy: 164 x .0.2 inches = 32.8"* *For the purposes of this analysis, it is assumed that an automatic sprinkler system would not be installed in the salesfloor area of the building.*
1007.3	*Exit stairways*	In order to be considered part of an accessible means of egress, an exit stairway shall have a clear width of 48" minimum between handrails and shall have either incorporate an area of refuge with an enlarged floor-level landing or shall be accessed from either an area of refuge complying with section 1007.6 or a horizontal exit. In addition, exit stairways shall comply with Chapter 11A, Sections 1115A and 1123A, or Chapter 11B, Section 1133B.4, as applicable. Exceptions: 1. Unenclosed exit stairways as permitted by Section 1020.1 are permitted to be considered part of an accessible means of egress. 2. The area of refuge is not requires at unenclosed exit stairways as permitted by Section 1020.1 in buildings or facilities that are equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1. 3. The clear width of 48 inches between handrails is not required at exit stairways in buildings or faculties equipped throughout with an automatic sprinkler system installed in accordance with Section 903.1.1 or 903.3.1.2. ***This requirement is met.*** ***Accessible means of egress are not required in alterations to existing buildings. <u>As an existing building, compliance with this section would be at the discretion of the governing building</u>***

SECTION	ITEM	SUMMARY
		official.
1017.2	*Corridor width*	The minimum corridor width shall be determined in Section 1005.1, but not less than 44". Exceptions: 21. Twenty-four inches - For access to and utilization of electrical, mechanical and plumbing systems or equipment. 22. Thirty-six inches - With a required occupant capacity of less than 50. 23. Thirty-six inches - Within a dwelling unit. 24. Seventy-two inches-In group E with a corridor having a required capacity of 100 or more. 25. Seventy-two inches – In corridors serving surgical Group I, health care centers for ambulatory patients receiving outpatient care, which causes a patient to not be capable of self-preservation. ***This requirement is met.***
1008.1	*Sizes of doors*	The minimum width of each door opening shall be sufficient to for the occupant load thereof and shall provide a clear width of not less than 32 inches. Clear openings of doorways with swinging doors shall be measured between the face of the door and the stop, with the door open 90 degrees. Where this section requires a minimum clear width of 32 inches and a door opening includes two door leaves without a mullion, one leaf shall provide a clear width of 32 inches. The maximum width of a swinging door leaf shall be 48 inches nominal. Means of egress doors in Group I-2 occupancy used for the movement of beds and *litter patients* shall provide a clear width not less than 80 inches. The height of the doors shall not be less than 80 inches. Exceptions: 1. The minimum and maximum width shall not apply to door openings that are not part of the required means of egress in Group R-2 and R-3 occupancies. 2. *Other than those required to be accessible by Chapter 11B,* door openings to resident sleeping units in group I-3 occupancies shall have a clear width of no less than 28 inches. 3. Door openings to storage closets less than 10 square feet in area shall not be limited by the minimum width. 4. Width of door leafs in revolving doors that comply with Section 1008.1.3.1 shall not be limited. 5. Door openings in a dwelling unit or sleeping unit shall not be less than 78 inches in height. 6. Exterior door openings in dwelling units and sleeping units, other than the required exit door, shall not be less than 76 inches in height. 7. In other Group R-1 occupancies, the minimum width widths shall not apply to interior egress doors within a dwelling unit or sleeping unit that is not required to be *adaptable or accessible as specified in Chapter 11A or 11B, as applicable.* 8. Door openings required to be accessible within *dwelling* units shall have a minimum clear width *as specified in Chapter 11A or 11B, as applicable.* ***This requirement <u>is not</u> currently met.*** ***Although the building currently has two exit doors, they are both located on the south side of the building, and do not provide the separation of exits as required by the 2010 CBC (1/2 the building diagonal or 78'). A number of existing openings are present that conform to the separation requirements and would provide the necessary separation. The existing sliding or folding doors would however, have to be modified to side hinged, swinging doors in order to meet egress requirements.***
1006	*Means of Egress Illumination*	
1006.1	*Illumination Required*	The means of egress, including the exit discharge, shall be illuminated at all times the building space by the means of egress is occupied.
	Illumination Level	The means of egress illumination level shall not be less than 1-foot candle at the walking surface level. ***This requirement <u>is not</u> met.*** ***The Nelles School Maintenance Building does not currently meet this requirement. An egress lighting system would need to be installed in order to comply with this requirement. <u>As an existing building, compliance with this section would be at the discretion of the governing building official.</u>***
1006.3	*Emergency Lighting*	The power supply for means of egress illumination shall normally be provided by the premises' electrical supply. In the event of power failure, an emergency electrical system shall automatically illuminate the following areas: 21. Aisles and unenclosed egress stairways in rooms and spaces that require two or more means of egress. 22. Corridors, exit enclosures and exit passageways in buildings required to have two or more exists. 23. Exterior egress components at other than level of exit discharge until the exit discharge is accomplished for

SECTION	ITEM	SUMMARY
		buildings required to have two or more exits. 24. Interior exterior discharge elements, as permitted in Section 1024.1 in buildings required to have two or more exists. 25. Exterior landings, as required by Section 1008.1.5 for exit discharge doorways in buildings required to have two or more exists. The emergency power systems shall provide power for a duration of not less than 90 minutes and shall consist or storage batteries, unit equipment or an on-site generator . The installation of the power system shall be in accordance with Section 2702.
1006.4	*Performance of System*	Emergency lighting facilities shall be arranged to provide initial illumination that is at least an average of 1 foot-candle and a minimum at any point of 0.1 foot candle measured along a path of egress at floor level. Illumination levels shall be permitted to decline to 0.6 foot-candle average and a minimum at any point of 0.06 foot-candle at the end of the emergency lighting time duration. A maximum-to minimum illumination uniformity ratio of 40 to 1 shall not be exceeded. ***This requirement is not met.*** ***The Nelles School Maintenance does not currently meet this requirement. An emergency lighting system would need to be installed in order to comply with this requirement. As an existing building, compliance with this section would be at the discretion of the governing building official.***
1007.1	*Accessible means of egress*	Accessible means of egress shall comply with this section. Accessible spaces shall be provided with not less than one accessible means of egress. Where more than one means of egress is required by Sections 1015.1 or 1019.1 from any accessible space, each accessible portion of the space shall be served by accessible means of egress in at least the same number as required by Section 1015.1 or 1019.1. In addition to the requirements of this chapter; means of egress which provide access to, or egress from, buildings for persons with disabilities, shall also comply with the requirements of Chapter 11A or 11B, as applicable. **Exceptions:** 8. Accessible means of egress are not required in alterations to existing buildings. ***None of the existing exits are currently accessible.***

SECTION	ITEM	SUMMARY
		Accessible means of egress are not required in alterations to existing buildings. Compliance with CBC Section 1007.1 would be at the discretion of the governing building official.
1008.1	*Doors*	Means of egress doors shall meet the requirements of this section. Doors serving a means of egress system shall meet the requirements of this section and Section 1018.2. Doors provided for egress purposes in numbers greater than required by this code shall meet the requirements of this section. Means of egress doors shall be readily distinguishable from the adjacent construction and finishes such that the doors are easily recognizable as doors. Means of egress doors shall not be concealed by curtains drapes, decorations or similar materials.
1008.1.1	*Sizes of doors*	The minimum width of each door shall be sufficient for the occupant load thereof and shall provide a clear width of not less than 32". The maximum width of swinging door widths shall be 48" nominal. The height of doors shall not be less than 80". ***This requirement is met.*** ***The current exit doors meet this requirement. Both existing exit doors provide a net clear opening of 38".***
1008.1.2	*Door Swing*	Egress doors shall be side-hinged swinging. Doors shall swing in the direction of egress travel where serving an occupancy load of 50 or more. ***This requirement is not met.*** ***Although the building currently has two exit doors, both swing inward. The swing pattern of those doors would need to be reversed in order to comply with this requirement.***
1008.1.4	*Floor Elevation*	There shall be a floor landing on each side of a door. Such floor or landing shall be at the same elevation on each side of the door. Landings shall be level except at exterior landings, which are permitted to have a slope not to exceed .25 unit vertical in 12 units horizontal (2-percent slope). ***This requirement is met.***
1008.1.5	*Landings at doors*	Landings shall have a clear width of not less than the width of the stairway or the door, whichever is greater. Doors in the fully open position shall not reduce a required dimension by more than 7 inches. When a landing serves an occupant load of 50 or more, doors in any position shall not reduce than landing to less

SECTION	ITEM	SUMMARY
		than one-half its required width. Landings shall have a length measured in the direction of travel of not less than 44 inches. ***This requirement is met.***
1008.1.6	*Thresholds*	Thresholds at doorways shall not exceed 0.75 inch in height for sliding doors serving a dwelling units or 0.5 inch for other doors. Raised thresholds and floor level changes greater than .25 inch at doorways shall be beveled with a slope not greater than one unit vertical in two units horizontal (50-percent slope). ***This requirement is not met.*** ***The existing door thresholds do not currently meet this requirement. Existing thresholds would need to be modified/replaced in order to comply with the requirements prescribed in Section 1008.1.6. As an existing building, compliance with this section would be at the discretion of the governing building official.***
1008.1.7	*Door Arrangement*	Space between two doors in a series shall be 48 inches minimum plus the width of a door swinging into the space. Doors in a series shall swing in the same direction or away from the space between the doors. ***This requirement is met.***
1008.1.8	*Door Operations*	Except as specifically permitted by this section, egress doors shall be readily openable from the egress side without the use of a key or special knowledge. ***This requirement is not met.*** ***The existing egress doors require the use of a key. The egress doors do not currently meet this requirement. New locking devices would need to be installed in order to comply with this requirement. As an existing building, compliance with this section would be at the discretion of the governing building official.***
1008.1.8.1	*Hardware*	Door handles, pulls, latches, locks and other operating devices on doors required to be accessible by Chapter 11A or 11B shall not require tight grasping, tight inching or twisting of the wrist to operate. ***Much of the existing hardware does not currently meet this requirement. New hardware would need to be installed in order to comply with this requirement. As an existing building, compliance with this section would be at the discretion of the governing building official.***
1008.1.8.2	*Hardware Height*	Door handles, pulls, latches, locks and other operating devices shall be installed 34 inches minimum and 48 inches maximum above the finished floor. Locks used only for security purposes and not used for normal operation are permitted at any height. ***This requirement is not met.*** ***Much of the existing hardware does not currently meet this requirement. New hardware would need to be installed in order to comply with this requirement. As an existing building, compliance with this section would be at the discretion of the governing building official.***
1008.1.8.3	*Locks and Latches*	Locks and latches shall be permitted to prevent operation of doors where any of the following exists: 18. Places of detention 19. In buildings in occupancy Group A having an occupant load of less than 300 or less, Groups, B,F,M, and S, and in places of religious worship, the main exterior door or odors are permitted to be equipped with key-operated locking devices from the egress side: 19.1 The locking device is readily distinguishable as locked. 19.2 A readily durable sign is posted on the egress side on or adjacent to the door. 19.3 The use of the key-operated locking device is revocable by the building official for due cause. 20. Where egress doors are used in pairs, approved automatic flush bolts shall be permitted to be used provided that the door leaf having the automatic flush bolt has no doorknob or surface-mounted hardware. 21. Doors in individual dwelling or sleeping units of Group R occupancies having an occupant load of 10 or less permitted to be equipped with a night latch, dead bolt or security chain, provided such devices are openable from the inside without the use of a key or tool. ***This requirement is not met.*** ***The existing latches and locks do not currently meet this requirement. New latches and locks would need to be installed in order to comply with this requirement. As an existing building, compliance with this section would be at the discretion of the governing building official.***

SECTION	ITEM	SUMMARY
1009.3	*Stairway treads and risers*	Stair riser heights shall be 7 inches maximum and 4 inches minimum. Stair tread depths shall be 11 inches minimum. . . ***Although the Nelles School Maintenance is a one-story structure, it does contain an elevated observation platform served by a set of stairs. The existing stairway treads and risers do not currently meet this requirement. If the observation platform is retained, the existing stairs would need to be modified/replaced in order to meet this requirement. As an existing structure, those conditions may be allowed to remain at the discretion of the governing building official.***
1009.3.2	*Dimensional Uniformity*	Stair treads and risers shall be uniform in size and shape. The tolerance between the largest and the smallest riser height or between the largest and smallest tread depth shall not exceed 0.375 inch in any flight of stairs. ***This requirement is met.***
1011.1	*Exit Signs*	Exits and exit access doors shall be marked with an approved exit sign readily visible form any direction of egress travel. Access to exits shall be marked by readily visible exit signs in cases where the exit or the path of egress travel is not immediately visible to the occupants.
1101.2	*Illumination*	Exit signs shall be internally lit.
1011.3	*Tactile exit signs*	For the purposes of Section 1.11.3 the term "tactile exit signs" shall mean those signs that comply with Section 1117B.5.1, Item 1. tactile exit signs shall be required at locations as specified in Section 1011.3
1011.5.3	*Power Source*	Exit signs shall be illuminated at all times. To ensure continued illumination for a duration of not less than 90 minutes, in case of primary poser loss, the design illumination means shall be connected to an emergency power system provided from storage batteries , unit equipment or an on site generator. ***This requirement is not met.*** ***The Nelles School Maintenance Building currently does not have illuminated exit signs. New illuminated exit signs would need to be installed in order to comply with this requirement. Tactile exits signs are not currently present and would also need to be installed in order to comply with this section. As an existing building, compliance with this section would be at the discretion of the governing building official.***
1012.1	*Stairway and ramp handrails*	Where required. Handrails for stairways and ramps shall be adequate in strength and attachment in accordance with Section 1607.7. Handrails required for stairways by Section 1009.10 shall comply with Sections 1012.2 through 1012.8. Handrails required for ramps by Section 1010.8 shall comply with Sections 1012.2 through 1012.7.
1012.2	*Handrail Height*	Handrail height, measured above stair tread nosing, or finish surface of ramp slope shall be uniform not less than 34" and not more than 38". ***This requirement is not met.*** ***Although the Nelles School Maintenance is a one-story structure, it does contain an elevated observation platform served by a set of stairs. The existing stairway handrails do not currently meet this requirement. If the observation platform and stairs are retained, the handrails would need to be modified/replaced in order to meet this requirement. As an existing structure, those conditions may be allowed to remain at the discretion of the governing building official.***
1012.5	*Handrail extensions*	Handrail shall return to a wall, guard, or the walking surface or shall be continuous to the handrail of an adjacent stair flight or ramp run. At stairways where handrails are not continuous between flights, the handrails shall extend horizontally at least 12 inches beyond the top riser and continue to slope for the depth of one tread beyond the bottom riser. ***This requirement is not met.*** ***Although the Nelles School Maintenance is a one-story structure, it does contain an elevated observation platform served by a set of stairs. The existing stairway handrail is absent of extensions. This requirement is not met. If the observation platform and stairs are retained, handrail extensions would need to be provided in order to comply with this requirement. As an existing structure, those conditions may be allowed to remain at the discretion of the governing building official.***
1013.1	*Guards*	**Where required.** Guards shall be located along open-sided walking surfaces, mezzanines, industrial equipment platforms, stairways, ramps and landings that are located more than 30" above the floor or grade below. . . Exception: Guards are not required for the following locations.

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		31. On the loading side of loading docks. 32. On the audience side of stages and raised platforms, including steps leading to the stage and raised platforms. 33. On raised stages and platform floor areas, such as runways, ramps and side stages used for entertainment or presentations. 34. At vertical openings in the performance areas of stages and platforms. 35. At elevated walking surfaces appurtentant to stages and platforms for access to and utilization of special lighting or equipment. 36. In assembly seating where guards in accordance with Section 1025.14 are permitted and provided.
1013.2	*Guard height*	Guards shall form a protective barrier not less than 42" high, measured vertically above the leading edge of the tread, adjacent walking surface or adjacent seatboard.
1013.3	*Opening limitations for guards*	Open guards shall have balusters or ornamental patterns such that a 4-inch-diameter sphere cannot pass through any opening. ***This requirement <u>is not</u> met.*** ***Although the Nelles School Maintenance is a one-story structure, it does contain an elevated observation platform served by a set of stairs. The existing guard heights <u>do not</u> meet this requirement. The openings present in the existing guards also <u>do not</u> meet this requirement.*** ***New guards will need to be provided at the observation platform stairs in order to meet this requirement. <u>As an existing structure, those conditions may be allowed to remain at the discretion of the governing building official.</u>***
1014	*Exit Access*	The exit access arrangement shall comply with Sections 1014 through 1017 and the applicable provision of Sections 1003 through 1013.
1014.2	*Egress through intervening es*	Egress from room or space shall not pass through adjoining or intervening rooms or areas, except where such adjoining rooms are accessory to the served, are not a high-hazard occupancy and provide a discernable path of travel to an exit. ***Any future build-out of the interior of this building would be required to meet this requirement.***
1014.3	*Common path of egress travel*	In occupancies other than Groups H-1, H-2, and H-3, the common path of egress travel shall not exceed 75 feet. ***This requirement <u>is not</u> currently met.*** ***Although the building currently has two exit doors, they are both located on the south side of the building, and do not provide the separation of exits as required by the 2010 CBC (1/2 the building diagonal or 78'). A number of existing openings are present that conform to the separation requirements and would provide the necessary separation. The existing sliding or folding doors would however, have to be modified to side hinged, swinging doors in order to meet egress requirements.***
1015.1	*Number of exit and exit access doorways*	Two exits or exit access doorways form any space shall be provided where one of the following conditions exits: 19. The occupant load of the space exceeds the values in Table 1015.1 20. The common path of egress travel exceeds the limitations of section 1014.3 21. Where required by Sections 1015.3, 1015.4, and 1015.5 ***The maximum load for a single exit in an M occupancy is 49. The egress requirement for the assumed future occupancy load of 164 can be served with two exits (Table 1019.1) This requirement <u>is met</u>.*** ***Although the building currently has two exit doors, they are both located on the south side of the building, and do not provide the separation of exits as required by the 2010 CBC (1/2 the building diagonal or 78'). A number of existing openings are present that conform to the separation requirements and would provide the necessary separation. The existing sliding or folding doors would however, have to be modified to side hinged, swinging doors in order to meet egress requirements.***
1015.2.1	*Egress separation*	Where two exits or exit access doorways are required from any portion of the exit access, the exit doors or exit access doorways shall be placed a distance apart equal to not less than one-half of the length of the maximum diagonal dimension of the building or area to be serviced measured in a straight line between exit doors or exit access doorways. Exception: 15. Where exit enclosures are provided as a portion of the required exit and are interconnected by a 1-hour fire-resistance-rated corridor, conforming to the

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		requirements of Section 1017, the required exit separation shall be measured along the shortest direct line of travel within a corridor. 16. Where a building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2, the separation distance of the exit doors or exit access doorways shall not be less than one-third of the length of the maximum overall diagonal dimension of the area served.
1016.1	*Travel distance limitations*	Exits shall be so located on each story such that the maximum length of exit access travel, measured from the most remote point within a story to the entrance to an exit along the natural and unobstructed path of egress travel, shall not exceed the distance given in Table 1016.1 Where the path of travel exit access includes unenclosed stairways or ramps within the exit access or includes unenclosed ramps or stairways as permitted in Section 1020.1, the distance of travel on such means of egress components shall also be included in the travel distance measurement. The measurement along stairways shall be made on a plane parallel and tangent to the stair tread nosings in the center of the stairway.
Per Table 1016	*Exit Access Travel Distance*	*The maximum exit access travel distance for group M occupancy is 200 feet with an automatic sprinkler system. The maximum exit access travel distance for group M occupancy is 250 feet without an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2 for occupancies where automatic sprinkler systems are permitted in accordance with Section 903.3.1.2.* ***Although the building currently has two exit doors, they are both located on the south side of the building, and do not provide the separation of exits as required by the 2010 CBC (1/2 the building diagonal or 78). This requirement <u>is not</u> met.*** ***A number of existing openings are present that conform to the separation requirements and would provide the necessary separation. The existing sliding or folding doors would however, have to be modified to side hinged, swinging doors in order to meet egress requirements.***
1028.7	*Travel Distance*	*Exits and aisles shall be located so that the travel distance to an exit door shall be greater than 200 feet measured along the line of travel in non-sprinkled buildings. Travel distance shall not be more than 250 feet in sprinkled buildings. Where aisles are provided for seating, the distance shall be measured along the aisles accessway without travel over or on the seats.* ***Although the building currently has two exit doors, they are both located on the south side of the building, and do not provide the separation of exits as required by the 2010 CBC (1/2 the building diagonal or 78). This requirement <u>is not</u> met.*** ***A number of existing openings are present that conform to the separation requirements and would provide the necessary separation. The existing sliding or folding doors would however, have to be modified to side hinged, swinging doors in order to meet egress requirements.***
1017.1	*Corridor construction*	Corridors shall be fire-resistance rated in accordance with Table 1017.1
Table 1017.1		***The Nellis School Maintenance does not currently contain corridors. Any future corridors would need to meet current code requirements.***
1019.1	*Number of exits*	All rooms and spaces within each story shall be provided with and have access to the minimum number of required independent exits required by Table 1019.1 based on the occupant load of the story. . . The required number of exits from any story, basement or individual space shall be maintained until arrival at grade of the public way.
Table 1019.		***Although the building currently has two exit doors, they are both located on the south side of the building, and do not provide the separation of exits as required by the 2010 CBC (1/2 the building diagonal or 78). This requirement <u>is not</u> met.*** ***A number of existing openings are present that conform to the separation requirements and would provide the necessary separation. The existing sliding or folding doors would however, have to be modified to side hinged, swinging doors in order to meet egress requirements.***
1020.1.1	*Openings and penetrations*	Exit enclosure opening protectives shall be in accordance with the requirements of Section 715. Except as permitted in Section 402.4.6, openings in exit enclosures other than the unprotected exterior openings shall be limited to those necessary for exit access to the enclosure from normally occupied spaces and for egress from the enclosure.

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		Where interior exit enclosures are extended to the exterior of the building by an exit passageway, the door assembly from the exit enclosure to the exit passageway shall be protected by a fire door assembly conforming to the requirements in Section 715.4. Fire Door assemblies in exit enclosures shall comply with Section 715.4.4. ***The Nellis School Maintenance does not currently contain exit enclosures. Any future exit enclosures would need to meet current code requirements.***
1021	*Exit Passageways*	Exit passageways serving as an exit component in a means of egress system shall comply with the requirements of the section. An exit passageway shall not be used for any purpose other than as a means of egress.
1021.2	*Width*	The width of exit passageways shall be determined as specified in Section 1005.1 but such width shall not be less than 44 inches. The required width of exit passageways shall be unobstructed. Exception: Doors when fully opened, and handrails, shall not reduce the required width by more than 7 inches. Doors in any position shall not reduce the required width by more than one half. Other nonstructural projections such as trim and similar decorative features are permitted to project into the required width 1.5 inches on each side.
Per Table 1005.1		***The Nellis School Maintenance does not currently contain exit enclosures. Any future exit enclosures would need to meet current code requirements.***
1021.3	*Construction*	Exit passageway enclosures shall have walls, floors and ceilings of not less than 1-hour fire-resistance rating, and not less that required for any connecting exit enclosure.
715	*Opening protectives*	Exit passageways with a required minimum 1-hour fire rating, shall contain doors with a minimum required 20-minute fire rating, and assembly ratings of 1-hour. (per Table 715.4).
1021.4	*Openings and penetrations*	Openings in exit passageways other than unexposed exterior openings shall be limited to those necessary for exit access to the exit passageway from normally occupied spaces and for egress from the exit passageway. ***The Nellis School Maintenance does not currently contain exit enclosures. Any future exit enclosures would need to meet current code requirements.***
1024	*Exit Discharge*	Exits shall discharge directly to the exterior of the building. The exit discharge shall be at grade or shall provide direct access to grade. ***This requirement is met.***
1023	*Exterior exit ramps and stairways.*	Exterior exit ramps and stairways serving as an element of a required means of egress shall comply with this section.
1023.3	*Open side*	Exterior exit ramps and stairways shall serving as an element of required means of egress shall be open on at least one side. An open side shall have a minimum of 35 square feet of aggregate open area adjacent to each floor level and the level of each intermediate landing. The required open area shall be located not less than 42 inches above the adjacent floor or landing level. ***The Nelles School Maintenance <u>does not</u> currently include any exit ramps. Any new exit ramps would need to meet current code requirements.*** ***By code, alterations to existing buildings such as the The Nelles School Maintenance <u>do not</u> require an accessible means of egress and would be <u>at the discretion of the governing building official</u>***
1024	*Exit Discharge*	Exits shall discharge directly to the exterior of the building. The exit discharge shall be at grade or shall provide direct access to grade.
1024.1	*Exit discharge*	Exits shall discharge directly to the exterior of the building. The exit discharge shall be at grade or shall provide direct access to grade. The exit discharge shall not reenter a building. A maximum of 50 percent of the number and capacity of the exit enclosure is permitted to egress through areas on the level of discharge provided all of the following are met: 1.1 Such exit enclosures egress to a free and un-obstructed way to the exterior of the building. . . 1.2 The entire area of the level of discharge is separated form areas below by construction conforming to the fire – resistance rating the exit enclosure. 1.3 The egress path from the exit enclosure on the level of discharge is protected throughout by an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.1.2, or separated from the egress

SECTION	ITEM	SUMMARY
		path in accordance with the requirements for the enclosure of exists. ***The current exit discharges exit directly to the exterior of the building and are at grade. This requirement is met.*** ***The Nellis School Maintenance does not currently contain exit enclosures. Any future exit enclosures would need to meet current code requirements.***
1103B.1	*Accessibility Scope*	Accessibility to buildings or portions of buildings shall be provided for all occupancy classifications. An accessible route of travel complying with Section 1114B.1.2 shall connect all elements and spaces within a building or facility. Multi-story buildings must provide access to each level, including mezzanines, by ramp or passenger elevator. ***This requirement <u>is not</u> met.*** ***In its current state, the Nelles School Maintenance Building <u>is not fully accessible throughout. As an existing building, compliance with this section would be at the discretion of the governing building official.</u>*** ***Any future renovations shall be made accessible per this section of the code.***
1115B	*Accessibility restroom Facility requirements*	*This section addresses the minimum requirements for restroom facilities. It should be used in the proposed upgrade of the restrooms.*
1115B.3.1	*Toilet Facilities*	***New, multiple-accommodation toilets facilities shall include the following in accordance with Section 1115B.3.1 – 1115B.4.5;*** ***41. Wheelchair clearance*** ***42. Clear floorspace at fixtures*** ***43. Accessible water closet*** ***44. Accessible water closet compartment*** ***45. Accessible urinals*** ***46. Accessible lavatories*** ***47. Accessible passageways*** ***48. Accessible symbols*** ***49. Accessible grab bars*** ***50. Accessible accessories*** ***Assuming restrooms would be added as part of the adaptation of the this building, those spaces would be required to meet accessibility requirements for wheelchair clearance, clear floorspace at fixtures, water closets, water closet compartments, urinals, lavatories, passageways, symbols, grab bars and accessories.*** ***New restroom spaces would also be required to accommodate the number of fixtures required by CPC 2010 Table 4-1.***
1115B.4.6	*Accessible Drinking Fountains*	*The installation of new drinking foundations shall comply with the requirements of Section 1115B.4.6.* ***Currently, drinking fountains are not provided. Any future modifications however, shall comply with Section 1115B.4.6.***
1117B	*Other Building Components*	***Any future modifications to the Maintenance shall include the following in accordance with Section 1115B.3.1;*** ***21. Water fountains*** ***22. Telephones*** ***23. Signs and identification*** ***24. Symbols of Accessibility*** ***25. Controls and operating mechanisms***
1118B	*Space Allowance and reach ranges*	*Modification of the Maintenance shall comply with the requirements of Section 1118B.* ***<u>As an existing building, compliance with this section would be at the discretion of the governing building official.</u>***
11120B.1	*Floor and levels*	In buildings and facilities, floors of a given story shall be a common level throughout, shall be connected by pedestrian ramps, passenger elevators or special access lifts. ***Currently, the building and facilities are on a common level throughout. Should modifications to the building create more than one level throughout, accessible connections of ramps, passenger elevators or special lifts shall be provided in accordance with Section 11120B.1.***
1124B.1	*Floor Surfaces*	Ground and floor surfaces along accessible routes and in accessible rooms and spaces, including floors, walks, ramps, stairs and curb ramps, shall be stable, firm, slip resistant and shall comply with Sections 1124B.1-1124B.4 ***As an existing building, this may not be required. However, any modifications of the building shall comply with the requirements of floor surfaces, change in level, carpet and grating as specified in Section 1124B.1.***
1125B	*Storage*	If fixed storage faculties such as cabinets, shelves, closets or drawers are provided where access is required be Section 109.1, at least one of each type shall comply with this section.

SECTION	ITEM	SUMMARY
		As an existing building, this may not be required. Any new storage facilities shall comply with the requirements for clear space, height and hardware as specified ins section 1125B.
1127B.1	*Exterior routes of travel*	***Accessible means of egress are not required in alterations to existing buildings. <u>As an existing building, compliance with this section would be at the discretion of the governing building official.</u>***
3403.1	*Existing Buildings – alterations, additions, or repairs*	Additions or alterations to any building or structure shall comply with the requirements of the code for new construction. Additions or alterations shall not be made to an existing building or structure that will cause the existing building or structure to be in violation of any portions of this code. . . Portions of the structure not altered and not affected by the alteration are not required to comply wit the code requirements for a new structure. *Rooms and areas that are not upgraded can remain in their existing condition, unless a modification to some other item has an un-intentional impact on an area that was not scheduled to be modified.*
3403.2	*Structural impact to existing buildings*	Additions or alterations to an existing structure shall not increase the force in any structural element by more than 5%. . .
3403.3	*Nonstructural modifications to existing buildings*	Nonstructural alterations or repairs to an existing building or structure are permitted to be made of the same materials of which the building or structure is constructed, provided that they do not adversely affect any structural member or the fire-resistance rating of any part of the building or structure.
3410.2.3	*Alterations and repairs to existing buildings*	An existing building or portion thereof, which does not comply with the requirements of this code for new construction, shall not be altered or repaired in such a manner that results in the building being less safe or sanitary than such building is currently.

TABLE 503 (RELEVANT SECTIONS)

		TYPE IIIB	SUMMARY
GROUP M	Height (feet)	55' High max.	*The Nelles School Maintenance is 23' feet high at the back and 23' high at the front. Neither exceeds the allowable height. The code requires an average of the heights based on areas for the height measurement.*
	Height (Stories)	4 Stories max.	*The Nelles School Maintenance does not exceed two stories in height*
	Area	12,500 sq.ft.	*The Nelles School Maintenance is 10,679 sq. ft.*

OCCUPANT LOAD (PER TABLE 1004.1.1 CBC)

AREA	FUNCTION OF SPACE	AREA	OCCUPANT LOAD FACTOR	TOTAL OCCUPANTS
	Sales floor	Assumed 90% 9,611	60 gross	160.1
	Stockroom	Assumed 15% 1,068	300 gross	3.56
Total		10,679		**164 persons**

MINIMUM EGRESS WIDTH OF STAIRS, ASSUMED NON-SPRINKLERED (PER TABLE 1005.1 CBC)

AREA	OCCUPANCY TYPE	OCCUPANTS	STAIRWAY WIDTH FACTOR	TOTAL WIDTH REQUIRED (INCHES)
Sales Floor	Mercantile	160.1	0.2	32.02"
Stockroom	Mercantile	3.56	0.2	0.712"

MINIMUM EGRESS WIDTH OF OTHER COMPONENTS (DOOR WAYS, ETC.), ASSUMED NON-SPRINKLERED (PER TABLE 1005.1 CBC)

AREA	OCCUPANCY TYPE	OCCUPANTS	COMPONENT FACTOR	TOTAL WIDTH REQUIRED (INCHES)
Sales Floor	Mercantile	160.1	0.15	24.01"
Stockroom	Mercantile	3.56	0.15	0.51"

PLUMBING FIXTURE COUNTS (PER TABLE 4-1, CALIFORNIA PLUMBING CODE)

TYPE OF BUILDING OCCUPANCY	AREA	OCCUPANT LOAD FACTOR	OCCUPANTS OF EACH SEX*	MEN'S LAV.	MEN'S URINAL	MEN'S W/C	WOMEN'S LAV	WOMEN'S W/C	DRINKING FOUNTAINS
Assembly Places	10,679 sq.ft.	164	78	2	See Below	2	2	4	-

Urinals may be installed instead of water closets in toilet rooms to be used only be men provided that the number of water closets shall not be less than two thirds of the minimum number of toilet facilities specified.

* per Table A. Occupant Load Factor in CPC, 2010

Gymnasium Detailed Code Analysis

Applied Codes:
California Building Code (CBC) – 2010 ed.
California Electrical Code (CEC) – 2010 ed.
California Plumbing Code (CPC)– 2010 ed.
California Mechanical Code (CMC)– 2010 ed.

Proposed Use – Church

Existing Areas:

Building Gross S.F: 9,230 sq. ft.
Total N.S.F: 8,219 sq. ft.

Building Height:

Height at front of building: 43'
Height at back of building: 46'

SECTION	ITEM	SUMMARY
301	*Use & Occupancy Classification*	
302.1	*Classification*	Structures or portions of structures shall be classified with respect to the occupancy in one more of the groups listed below. A room or space that is intended to be occupied at different times for different purposes shall comply with the requirements that are applicable to each of the purposes for which the room or space will be occupied. Structures with multiple occupancies or uses shall comply with Section 508. Where a structure is proposed for a purpose that is not specifically provided for in this code, such structure shall be classified in the group that the occupancy most nearly resembles, according to the fire safety and relative hazard involved.
310.1	*Assembly Group A*	Assembly Group A occupancy includes, among others, the use of a building or structure, or a portion thereof, for the gathering of persons for purposes such as civic, social or religious functions; recreation, food or drink consumption; or awaiting transportation or motion picture and television production studio sound stages, approved production facilities and production locations. **Exceptions:** 1. A building or tenant space used for assembly purposes with an occupant load of less than 50 persons shall be classified as a Group B occupancy. 2. A room or space used for assembly purposes with an occupant load of less than 50 persons and accessory to another occupancy shall be classified as a Group B occupancy or as part of that occupancy. 3. A room or space used for assembly purposes that is less than 750 square feet in area and is accessory to another occupancy shall be classified as a Group B occupancy or as part of that occupancy. 4. Assembly areas that are accessory to Group E occupancies are not considered separate occupancies except applying the assembly occupancy requirements of Chapter 11B. 5. Accessory religious educational rooms and religious gymnasium with occupant loads less than 100 are not considered separate occupancies.
303.1	*Assembly Group A-3 Occupancy Defined*	Assembly occupancies include the following: A-1 Assembly uses intended for worship, recreation or amusement and other assembly uses not classified elsewhere in Group A including, but not limited to: Amusement arcades Art galleries Bowling alleys Places of religious worship Community halls Courtrooms Dance halls (not including food or drink consumption) Exhibition halls Funeral parlors Gymnasium (without spectator seating) Indoor swimming pools (without spectator seating) Indoor tennis courts (without spectator seating) Lecture halls Libraries Museums Waiting areas in transportation terminals Pool and billiard parlors ***If converted to religious use, the Gymnasium would be classified as an A-3 occupancy.***
508.2	*Incidental uses*	Incidental use areas shall comply with the provisions of this section.
508.2.1	*Occupancy classification.*	An incidental use area shall be classified in accordance with the occupancy of that potion of the building in which it is located or the building shall be classified as a mixed occupancy and

SECTION	ITEM	SUMMARY
		shall comply with section 508.3 ***No incidental uses are anticipated in this analysis.***
508.2.2	*Separation*	Incidental use areas shall be separated or protected, or both in accordance with Table 508.2
508.2	*Table 508.2*	Below is a list of potential incidental uses and their protection requirements per Table 508.2: • Furnace room where any piece of equipment is over 400,000 Btu per hour input: 1 hour or provide automatic fire-extinguishing system. • Rooms with boilers where the largest piece of equipment is over 15 psi and 10 horse power: 1 hour or provide automatic fire-extinguishing system. [a] • Refrigerant machinery rooms: 1 hour or provide automatic fire-extinguishing system. [a] • Parking garage (Section 4.6.2): 2 hours; or 1 hour and provide automatic fire-extinguishing system. • Hydrogen cut-off rooms, not classified as Group H: 1-hour in Group B, F, M, S and U occupancies. 2-hour in Group A, E, I and R occupancies. • Incinerator rooms: 2 hours and automatic sprinkler system. • Paint shops not classified as Group H, located in occupancies other than Group F. 2 hours; or 1 hour and provide automatic fire-extinguishing system. • Laboratories and vocational shops, not classified as Group H, located in Group I-2 and *I-2.1* occupancies. • *[SFM] Rooms or areas with special hazards such as laboratories, vocational shops and other such areas not classified as Group H, located in Group E occupancies where hazardous materials in exempt amounts are used or stored: 1 hour* • Laundry rooms over 100 square feet: 1 hour or provide automatic fire-extinguishing system. [a] • Storage rooms over 100 square feet: 1 hour or provide automatic fire-extinguishing system. [a] • Group I-2 and *I-2.1* waste and linen collection rooms over 100 square feet: 1 hour or provide automatic fire-extinguishing system. [a] • Stationary storage battery systems having a liquid capacity of more than 100 gallons used for facility standby power, emergency power or uninterrupted power supplies: 1-hour in Group B, F, M, S and U occupancies, 2-hour in Group A, E, I and R occupancies. [a] *a. [SFM] Fire barrier protection and automatic sprinkler protection required throughout the fire area in I-2 and I-2.1 occupancies as indicated.* ***No incidental occupancy uses are anticipated in this analysis.***
508.3.1	*Accessory occupancies*	Accessory occupancies are those occupancies subsidiary to the main occupancies of the building or portion thereof. Aggregate accessory occupancies shall not occupy more than 10 percent of the area of the story in which they are located and shall exceed the tabular values in Table 503, without height and area increases in accordance with Sections 504 and 506 for such accessory occupancies. ***There are no existing or proposed uses for the Gymnasium which meets the definition of accessory occupancies.***
903.2	*Sprinkler requirements*	Approved automatic sprinkler systems in new buildings and structures shall be provided in the locations described in this section.
[F]903.2.1.3	*Sprinklers Group A-3*	An automatic sprinkler system shall be provided for Group A-3 occupancies where on of the following conditions exists: 7. The fire area exceeds 12,000 square feet. 8. The fire area has an occupant load of 300 or more. 9. The fire area is located on a floor other than the exit discharge. ***Per CBC, because the fire area occupancy exceeds 300 persons, the building and exit discharges <u>would</u> require the installation of automatic fire sprinklers.***
601	*Types of Construction*	***Reinforced concrete with wood over steel roof trusses.***
602.1	*Construction Classification*	Buildings and structures erected or to be erected, altered or extended in height or area shall be classified in one of the five construction types defined in Sections 602.2 through 602.5.
602.3		**Type III**. Type III construction type of construction in which the exterior walls are of noncombustible materials and the interior building elements are of any material permitted by this code. ***Bearing walls are made of non-combustible materials (reinforced concrete) and the roof is made of wood sheathing over steel frame.***

SECTION	ITEM	SUMMARY
		Per Table 601, the roof requires a 1-hour rating for type IIIA, with the following conditions applying; *(b2), For Groups A occupancies, high-rise buildings and other applications listed in Section 1.11 regulated by the Office of the State Fire Marshal, fire protection of members other than the structural frame shall not be required, including protection of roof framing and decking where every part of the roof construction is 20 feet or more above any floor immediately below. Fire-retardant-treated wood members shall be allowed to be used for such unprotected members.* *(c), In all occupancies, heavy timber shall be allowed where 1-hour or less fire-resistance rating is required.* *(d) An approved automatic sprinkler system in accordance with Section 903.3.1.1 shall be allowed to be substituted for 1-hour fire-resistance-rated construction, provided such system is not otherwise required by other provisions of the code or used for an allowable area increase in accordance with Section 506.3 for an allowable height increase in accordance with Section 504.2. The 1-hour substitution for the fire resistance of exterior walls shall not be permitted.* ***The Gymnasium is classified as a Type IIIB.*** ***All structural elements and bearing walls are made of non-combustible materials. The roof of the gymnasium space is made of wood over steel. Per Table 601, the roof requires a 1-hour rating for type IIIA, which is not possible with existing wood sheathing. Type IIIB does not require that any element except the exterior bearing walls have any rating (2 hours in this case).***
503.1	*General Height and Area Limitations*	The height and area for building of different construction types shall be governed by the intended use of the building and shall not exceed the limits in Table 503 except as modified hereafter. Each part of the building included within the exterior walls and fire walls where provided shall be permitted to be a separate building.
Table 503	*Allowable Height and Building Areas*	***See relevant portions of Table 503 below.*** ***Group A-3/Type IIIB Max. Allowable Stories 2*** ***Max. Allowable Height 55'*** ***Max. Allowable Area 9,500 s.f.*** ***The Gymnasium is one story in height. The front of the building is 43' high – the rear is 46' high. The average height is 44.5'. This requirement is met.***

SECTION	ITEM	SUMMARY
		The total square footage of the building (9,230 sq. ft.) is less than the maximum allowable 9,500 sq. ft. (Classification A-3/Type IIIB). ***This requirement is met.***
503.1.2	*Buildings on Same Lot*	Two or more buildings on the same lot shall be regarded as separate buildings or shall be considered as portions of one building if the height of each building and the aggregate area of the buildings are within the limitations of Table 503 a modified by Sections 504 and 506. The provisions of this code applicable to the aggregate building shall be applicable to each building. ***The Gymnasium would be considered as separate building and complies with 503.1.2.***
1004.1	*Design Occupant Load*	In determining means of egress requirements, the number of occupants for whom means of egress facilities shall be provided shall be determined in accordance with this section. Where occupants from accessory areas egress through a primary space, the calculated occupant load for the primary space shall include the number of occupants egressing through it from the accessory area.
1004.1.1	*Areas without fixed seating*	*The number of occupants shall be computed at the rate of one occupant per unit of area as prescribed in Table 1004.1.1. For areas without fixed seating, the occupant load shall not be less than that number determined by dividing the floor area under consideration by the occupant per unit of area factor assigned to the occupancy as set forth in Table 1004.1.1.*
Per Table 1004	*Occupant Load*	***Total Gymnasium Occupant Load*** **1,019 persons**
1004.3	*Posting of Occupant Load*	Every room or space that is an assembly occupancy shall have the occupant load of the room or space posted in a conspicuous place, near a main exit or exit access doorway from the room or space. Posted signs shall be of an approved legible permanent design and shall be maintained by the owner or authorized agent. ***The areas of the building used for assembly purposes gymnasium will require posting of maximum occupancy load.***
1005.1	*Egress width and distribution*	The means of egress width shall not be less than required by this section. The total width of means of egress in inches shall not be less that the total occupant load served by the means of egress multiplied by the factors in Table 1005.1 and not less than specified elsewhere in the code. Multiple means of egress

SECTION	ITEM	SUMMARY
		shall be sized such that the loss of any one means of egress shall not reduce the available capacity to less than 50 percent of the required capacity. The maximum capacity required from any story of a building shall be maintained to the termination of the means of egress.
Per table 1005.1		*Min. egress widths from Gymnasium with an automatic sprinkler system.* *Stairways:* *Building occupancy: 1,019 x 0.3 inches = 305.7"* *Other egress components:* *Building occupancy: 1,019 x 0.2 inches = 203.7"* *For the purposes of this analysis, it is assumed that an automatic sprinkler system would be installed in the building.*
1007.3	*Exit stairways*	In order to be considered part of an accessible means of egress, an exit stairway shall have a clear width of 48" minimum between handrails and shall have either incorporate an area of refuge with an enlarged floor-level landing or shall be accessed from either an area of refuge complying with section 1007.6 or a horizontal exit. In addition, exit stairways shall comply with Chapter 11A, Sections 1115A and 1123A, or Chapter 11B, Section 1133B.4, as applicable. Exceptions: 1. Unenclosed exit stairways as permitted by Section 1020.1 are permitted to be considered part of an accessible means of egress. 2. The area of refuge is not requires at unenclosed exit stairways as permitted by Section 1020.1 in buildings or facilities that are equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1. 3. The clear width of 48 inches between handrails is not required at exit stairways in buildings or faculties equipped throughout with an automatic sprinkler system installed in accordance with Section 903.1.1 or 903.3.1.2. ***This requirement is met.*** ***The existing exit stairs located at the main entry doors provide a net clear width of 200", and meets the minimum (305.7/2) 152.85".*** ***The other existing exit stairs located at the western exits provide net clear widths of 96", which meets the minimum required widths of 44".***

SECTION	ITEM	SUMMARY
		Accessible means of egress are not required in alterations to existing buildings. As an existing building, compliance with this section would be at the discretion of the governing building official.
1017.2	*Corridor width*	The minimum corridor width shall be determined in Section 1005.1, but not less than 44". Exceptions: 26. Twenty-four inches - For access to and utilization of electrical, mechanical and plumbing systems or equipment. 27. Thirty-six inches - With a required occupant capacity of less than 50. 28. Thirty-six inches - Within a dwelling unit. 29. Seventy-two inches-In group E with a corridor having a required capacity of 100 or more. 30. Seventy-two inches – In corridors serving surgical Group I, health care centers for ambulatory patients receiving outpatient care, which causes a patient to not be capable of self-preservation. ***This requirement is met.*** ***The existing exit corridor that serves the western exit doors provides a net clear width of 96" and meets the minimum required width of 44".***
1008.1	*Sizes of doors*	The minimum width of each door opening shall be sufficient to for the occupant load thereof and shall provide a clear width of not less than 32 inches. Clear openings of doorways with swinging doors shall be measured between the face of the door and the stop, with the door open 90 degrees. Where this section requires a minimum clear width of 32 inches and a door opening includes two door leaves without a mullion, one leaf shall provide a clear width of 32 inches. The maximum width of a swinging door leaf shall be 48 inches nominal. Means of egress doors in Group I-2 occupancy used for the movement of beds and *litter patients* shall provide a clear width not less than 80 inches. The height of the doors shall not be less than 80 inches. Exceptions: 1. The minimum and maximum width shall not apply to door openings that are not part of the required means of egress in Group R-2 and R-3 occupancies. 2. *Other than those required to be accessible by Chapter 11B,* door openings to resident sleeping units in group I-3 occupancies shall have a clear width of no less than 28 inches.

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		3. Door openings to storage closets less than 10 square feet in area shall not be limited by the minimum width. 4. Width of door leafs in revolving doors that comply with Section 1008.1.3.1 shall not be limited. 5. Door openings in a dwelling unit or sleeping unit shall not be less than 78 inches in height. 6. Exterior door openings in dwelling units and sleeping units, other than the required exit door, shall not be less than 76 inches in height. 7. In other Group R-1 occupancies, the minimum width widths shall not apply to interior egress doors within a dwelling unit or sleeping unit that is not required to be *adaptable or accessible as specified in Chapter 11A or 11B, as applicable.* 8. Door openings required to be accessible within *dwelling* units shall have a minimum clear width *as specified in Chapter 11A or 11B, as applicable.* ***The current exit doors <u>do not</u> meet this requirement.*** ***The existing main exit from the Nelles School Gymnasium (one pair) has a clear opening of 68". As main exit doors, these doors do not meet the minimum required width of 102". These doors would have to enlarged or additional doors would have be installed at this location in order to provide the minimum required width.*** ***An additional pair of exit doors is located along the western wall of the gymnasium space and exit directly to the exterior of the building. Those doors provide a net clear opening of 68". Combined with the main exit doors, the minimum required exit door width of 203.7" is met.*** ***An additional set of exit doors (exiting on the north side of the building) provide a net clear width of 56". Those doors provide a net clear opening of 68". Combined with the main exit doors, the minimum required exit door width of 203.7" is met. These doors however open directly to stairs and do not provide the min. required landing area. The doors also do not currently swing the direction of travel. The swing of those doors would need to be reversed.*** ***An additional set of exit doors (exiting to the south off the rear hall) provide a net clear with of 68". Combined with the main exit doors, the minimum required exit door width of 203.7" is met. These doors however share a combined path of egress with the doors set of doors located along the western wall of the building. This shared path of travel may require fire sprinklers per the discretion of the governing building official.*** ***Another door (single) to the exterior, located on the south side of the entry lobby has a clear opening width of 36". Although this door meets the minimum required width of 32", it does not meet the minimum separation requirement from the main exit doors.***
1006	*Means of Egress Illumination*	
1006.1	*Illumination Required*	The means of egress, including the exit discharge, shall be illuminated at all times the building space by the means of egress is occupied.
	Illumination Level	The means of egress illumination level shall not be less than 1-foot candle at the walking surface level.
1006.3	*Emergency Lighting*	The power supply for means of egress illumination shall normally be provided by the premises' electrical supply. In the event of power failure, an emergency electrical system shall automatically illuminate the following areas: 26. Aisles and unenclosed egress stairways in rooms and spaces that require two or more means of egress. 27. Corridors, exit enclosures and exit passageways in buildings required to have two or more exists. 28. Exterior egress components at other than level of exit discharge until the exit discharge is accomplished for buildings required to have two or more exits. 29. Interior exterior discharge elements, as permitted in Section 1024.1 in buildings required to have two or more exists. 30. Exterior landings, as required by Section 1008.1.5 for exit discharge doorways in buildings required to have two or more exists. The emergency power systems shall provide power for a duration of not less than 90 minutes and shall consist or storage batteries, unit equipment or an on-site generator . The installation of the power system shall be in accordance with Section 2702.
1006.4	*Performance of System*	Emergency lighting facilities shall be arranged to provide initial illumination that is at least an average of 1 foot-candle and a minimum at any point of 0.1 foot candle measured along a path of egress at floor level. Illumination levels shall be permitted to decline to 0.6 foot-candle average and a minimum at any point of 0.06 foot-candle at the end of the emergency lighting time duration. A maximum-to minimum illumination uniformity ratio of 40 to 1 shall not be exceeded.

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		This requirement is not met.
		The Gymnasium Building does not currently meet this requirement. An emergency lighting system would need to be installed in order to comply with this requirement. As an existing building, compliance with this section would be at the discretion of the governing building official.
1007.1	*Accessible means of egress*	Accessible means of egress shall comply with this section. Accessible spaces shall be provided with not less than one accessible means of egress. Where more than one means of egress is required by Sections 1015.1 or 1019.1 from any accessible space, each accessible portion of the space shall be served by accessible means of egress in at least the same number as required by Section 1015.1 or 1019.1. In addition to the requirements of this chapter; means of egress which provide access to, or egress from, buildings for persons with disabilities, shall also comply with the requirements of Chapter 11A or 11B, as applicable. **Exceptions:** 9. Accessible means of egress are not required in alterations to existing buildings.
		None of the existing exits are currently accessible.
		Accessible means of egress are not required in alterations to existing buildings. Compliance with CBC Section 1007.1 would be at the discretion of the governing building official.
1008.1	*Doors*	Means of egress doors shall meet the requirements of this section. Doors serving a means of egress system shall meet the requirements of this section and Section 1018.2. Doors provided for egress purposes in numbers greater than required by this code shall meet the requirements of this section. Means of egress doors shall be readily distinguishable from the adjacent construction and finishes such that the doors are easily recognizable as doors. Means of egress doors shall not be concealed by curtains drapes, decorations or similar materials.
1008.1.1	*Sizes of doors*	The minimum width of each door shall be sufficient for the occupant load thereof and shall provide a clear width of not less than 32". The maximum width of swinging door widths shall be 48" nominal. The height of doors shall not be less than 80". ***The current exit doors do not meet this requirement.***

SECTION	ITEM	SUMMARY
		The existing main exit from the Gymnasium (one pair) has a clear opening of 68". The rear exit doors (one pair) have a clear opening width of 68". A third exit door (single) has a clear opening width of 36". A fourth exit door (pair) has a clear net opening of 68".
		The minimum clear egress width (except stairs) per section 1005.1 is 110.6". The gymnasium space has four exit doors, although none are wide enough to exit more than 50% of the occupants. The exit discharge openings would need to be increased in width or additional exits would need to be created to accommodate the anticipated occupancy.
1008.1.2	*Door Swing*	Egress doors shall be side-hinged swinging. Doors shall swing in the direction of egress travel where serving an occupancy load of 50 or more. ***This requirement is met.***
1008.1.4	*Floor Elevation*	There shall be a floor landing on each side of a door. Such floor or landing shall be at the same elevation on each side of the door. Landings shall be level except at exterior landings, which are permitted to have a slope not to exceed .25 unit vertical in 12 units horizontal (2-percent slope).
1008.1.5	*Landings at doors*	Landings shall have a clear width of not less than the width of the stairway or the door, whichever is greater. Doors in the fully open position shall not reduce a required dimension by more than 7 inches. When a landing serves an occupant load of 50 or more, doors in any position shall not reduce than landing to less than one-half its required width. Landings shall have a length measured in the direction of travel of not less than 44 inches. ***This requirement is met.***
1008.1.6	*Thresholds*	Thresholds at doorways shall not exceed 0.75 inch inch in height for sliding doors serving a dwelling units or 0.5 inch for other doors. Raised thresholds and floor level changes greater than .25 inch at doorways shall be beveled with a slo[pe not greater than one unit vertical in two units horizontal (50-percent slope). ***This requirement is not met.*** ***The existing door thresholds do not currently meet this requirement. Existing thresholds would need to be modified/replaced in order to comply with the requirements prescribed in Section 1008.1.6. As an existing building.***

SECTION	ITEM	SUMMARY
		compliance with this section would be at the discretion of the governing building official.
1008.1.7	*Door Arrangement*	Space between two doors in a series shall be 48 inches minimum plus the width of a door swinging into the space. Doors in a series shall swing in the same direction or away from the space between the doors. ***This requirement is met.***
1008.1.8	*Door Operations*	Except as specifically permitted by this section, egress doors shall be readily openable from the egress side without the use of a key or special knowledge. ***This requirement is not met.*** ***The existing egress doors require the use of a key. The egress doors do not currently meet this requirement. New locking devices would need to be installed in order to comply with this requirement. As an existing building, compliance with this section would be at the discretion of the governing building official.***
1008.1.8.1	*Hardware*	Door handles, pulls, latches, locks and other operating devices on doors required to be accessible by Chapter 11A or 11B shall not require tight grasping, tight inching or twisting of the wrist to operate. ***Much of the existing hardware does not currently meet this requirement. New hardware would need to be installed in order to comply with this requirement. As an existing building, compliance with this section would be at the discretion of the governing building official.***
1008.1.8.2	*Hardware Height*	Door handles, pulls, latches, locks and other operating devices shall be installed 34 inches minimum and 48 inches maximum above the finished floor. Locks used only for security purposes and not used for normal operation are permitted at any height. ***This requirement is not met.*** ***Much of the existing hardware does not currently meet this requirement. New hardware would need to be installed in order to comply with this requirement. As an existing building, compliance with this section would be at the discretion of the governing building official.***
1008.1.8.3	*Locks and Latches*	Locks and latches shall be permitted to prevent operation of doors where any of the following exists: 22. Places of detention 23. In buildings in occupancy Group A having an occupant load of less than 300 or less, Groups, B,F,M, and S, and in places of religious worship, the main exterior doorr or odors are permitted to be equipped with key-operated locking devices from the egress side: 23.1 The locking device is readily distinguishable as locked. 23.2 A readily durable sign is posted on the egress side on or adjacent to the door. 23.3 The use of the key-operated locking device is revocable by the building official for due cause. 24. Where egress doors are used in pairs, approved automatic flush bolts shall be permitted to be used provided that the door leaf having the automatic flush bolt has no doorknob or surface-mounted hardware. 25. Doors in individual dwelling or sleeping units of Group R occupancies having an occupant load of 10 or less permitted to be equipped with a night latch, dead bolt or security chain, provided such devices are openable from the inside without the use of a key or tool. ***This requirement is not met.*** ***The existing latches and locks do not currently meet this requirement. New latches and locks would need to be installed in order to comply with this requirement. As an existing building, compliance with this section would be at the discretion of the governing building official.***
1009.3	*Stairway treads and risers*	Stair riser heights shall be 7 inches maximum and 4 inches minimum. Stair tread depths shall be 11 inches minimum. . . ***This requirement is not met. By code, alterations to existing buildings such as the Gymnasium do not require an accessible means of egress. Replacement of that steps would be at the discretion of the governing building official.***
1009.3.2	*Dimensional Uniformity*	Stair treads and risers shall be uniform in size and shape. The tolerance between the largest and the smallest riser height or between the largest and smallest tread depth shall not exceed 0.375 inch in any flight of stairs. ***This requirement is met.***
1011.1	*Exit Signs*	Exits and exit access doors shall be marked with an approved exit sign readily visible form any direction of egress travel.

SECTION	ITEM	SUMMARY
		Access to exits shall be marked by readily visible exit signs in cases where the exit or the path of egress travel is not immediately visible to the occupants.
1101.2	*Illumination*	Exit signs shall be internally lit.
1011.3	*Tactile exit signs*	For the purposes of Section 1.11.3 the term "tactile exit signs" shall mean those signs that comply with Section 1117B.5.1, Item 1. tactile exit signs shall be required at locations as specified in Section 1011.3
1011.5.3	*Power Source*	Exit signs shall be illuminated at all times. To ensure continued illumination for a duration of not less than 90 minutes, in case of primary poser loss, the design illumination means shall be connected to an emergency power system provided from storage batteries , unit equipment or an on site generator. ***The Gymnasium currently does not have illuminated exit signs and will require those so as to comply with these requirements. Tactile exits signs are not currently present and would also need to be installed.***
1012.1	*Stairway and ramp handrails*	Where required. Handrails for stairways and ramps shall be adequate in strength and attachment in accordance with Section 1607.7. Handrails required for stairways by Section 1009.10 shall comply with Sections 1012.2 through 1012.8. Handrails required for ramps by Section 1010.8 shall comply with Sections 1012.2 through 1012.7.
1012.2	*Handrail Height*	Handrail height, measured above stair tread nosing, or finish surface of ramp slope shall be uniform not less than 34" and not more than 38". ***Existing stairway handrail heights do not meet this requirement. Handrails will need to be modified/replaced at all exterior stairs in order to comply with this requirement. As an existing structure compliance with this section would be at the discretion of the governing building official.***
1012.5	*Handrail extensions*	Handrail shall return to a wall, guard, or the walking surface or shall be continuous to the handrail of an adjacent stair flight or ramp run. At stairways where handrails are not continuous between flights, the handrails shall extend horizontally at least 12 inches beyond the top riser and continue to slope for the depth of one tread beyond the bottom riser. ***This requirement is not met.***

SECTION	ITEM	SUMMARY
		The existing stairway handrail heights do not meet this requirement. No handrail extensions are currently present. Handrails would need to modified/replaced and extensions added in order to comply with this requirement. As an existing structure compliance with this section would be at the discretion of the governing building official.
1013.1	*Guards*	**Where required.** Guards shall be located along open-sided walking surfaces, mezzanines, industrial equipment platforms, stairways, ramps and landings that are located more than 30" above the floor or grade below. . . Exception: Guards are not required for the following locations. 37. On the loading side of loading docks. 38. On the audience side of stages and raised platforms, including steps leading to the stage and raised platforms. 39. On raised stages and platform floor areas, such as runways, ramps and side stages used for entertainment or presentations. 40. At vertical openings in the performance areas of stages and platforms. 41. At elevated walking surfaces appurtentant to stages and platforms for access to and utilization of special lighting or equipment. 42. In assembly seating where guards in accordance with Section 1025.14 are permitted and provided.
1013.2	*Guard height*	Guards shall form a protective barrier not less than 42" high, measured vertically above the leading edge of the tread, adjacent walking surface or adjacent seatboard.
1013.3	*Opening limitations for guards*	Open guards shall have balusters or ornamental patterns such that a 4-inch-diameter sphere cannot pass through any opening. ***The existing stairway guard heights do not meet this requirement. The openings present in the existing guards also do not meet this requirement.*** ***This requirement is not met. New guards which meet the requirements of sections 1013.1-1013.3 will need to be provided at the basement stairs.*** ***Replacement of the guards would be at the discretion of the governing building official.***
1014	*Exit Access*	The exit access arrangement shall comply with Sections 1014 through 1017 and the applicable provision of Sections 1003 through 1013.

SECTION	ITEM	SUMMARY
1014.2	*Egress through intervening spaces*	Egress from room or space shall not pass through adjoining or intervening rooms or areas, except where such adjoining rooms are accessory to the served, are not a high-hazard occupancy and provide a discernable path of travel to an exit. ***This requirement is met.***
1014.3	*Common path of egress travel*	In occupancies other than Groups H-1, H-2, and H-3, the common path of egress travel shall not exceed 75 feet. ***This requirement is met.***
1025.8	*Common path of egress travel for Group A Occupancies.*	The common path of egress travel shall not exceed 30 feet from any seat to a point where an occupant has a choice of two paths of egress. ***This requirement is met.***
1014.4	*Aisles*	Aisles serving as a portion of the exit access and the means of egress system shall comply other the requirements of this sections. Aisles shall be provided from all occupied portions of the exit access which contains seats, tables, furnishings, displays and similar fixtures or equipment. Aisles serving assembly areas, other than seating at tables, shall comply with Section 1025. The required width of aisles shall be unobstructed. ***The gymnasium does not currently have fixed seating. If fixed seating is proposed as a part of the modification of this structure, the layout of those seats must comply with Section 1014.4*** ***The allowable occupancy would also change with the inclusion of fixed seats.***
1015.1	*Number of exit and exit access doorways*	Two exits or exit access doorways form any space shall be provided where one of the following conditions exits: 22. The occupant load of the space exceeds the values in Table 1015.1 23. The common path of egress travel exceeds the limitations of section 1014.3 24. Where required by Sections 1015.3, 1015.4, and 1015.5 ***The maximum load for a single exit in an A occupancy is 49. The current gymnasium requires four exits as its occupant load is 1,019(min. number of exits is 4 /over 1000 persons)*** ***This requirement is met. The exit discharge openings would however need to be increased in width or additional exits would need to be created to accommodate the anticipated occupancy.***
1015.2.1	*Egress separation*	Where two exits or exit access doorways are required from any portion of the exit access, the exit doors or exit access doorways shall be placed a distance apart equal to not less than one-half of the length of the maximum diagonal dimension of the building or area to be serviced measured in a straight line between exit doors or exit access doorways. Exception: 17. Where exit enclosures are provided as a portion of the required exit and are interconnected by a 1-hour fire-resistance-rated corridor, conforming to the requirements of Section 1017, the required exit separation shall be measured along the shortest direct line of travel within a corridor. 18. Where a building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2, the separation distance of the exit doors or exit access doorways shall not be less than one-third of the length of the maximum overall diagonal dimension of the area served.
1016.1	*Travel distance limitations*	Exits shall be so located on each story such that the maximum length of exit access travel, measured from the most remote point within a story to the entrance to an exit along the natural and unobstructed path of egress travel, shall not exceed the distance given in Table 1016.1 Where the path of travel exit access includes unenclosed stairways or ramps within the exit access or includes unenclosed ramps or stairways as permitted in Section 1020.1, the distance of travel on such means of egress components shall also be included in the travel distance measurement. The measurement along stairways shall be made on a plane parallel and tangent to the stair tread nosings in the center of the stairway.
Per Table 1016	*Exit Access Travel Distance*	*The maximum exit access travel distance for group A occupancy is 200 feet without an automatic sprinkler system.* *The maximum exit access travel distance for group A occupancy is 250 feet without an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2 for occupancies where automatic sprinkler systems are permitted in accordance with Section 903.3.1.2.*

SECTION	ITEM	SUMMARY
		This requirement is met
1028.7	*Travel Distance*	*Exits and aisles shall be located so that the travel distance to an exit door shall be greater than 200 feet measured along the line of travel in non-sprinkled buildings. Travel distance shall not be more than 250 feet in sprinkled buildings. Where aisles are provided for seating, the distance shall be measured along the aisles accessway without travel over or on the seats.* ***This requirement is met***
1017.1	*Corridor construction*	Corridors shall be fire-resistance rated in accordance with Table 1017.1
Table 1017.1		***No rating of the corridors is required in A occupancies with sprinkled corridors for occupant loads greater than 30 persons. (1-hour rating is required in A occupancies with non-sprinkled corridors for occupant loads greater than 30 persons.)*** ***The 2010 CBC does recognize some plaster/lath/wood framed walls and ceilings as being 1-hr compliant. Further evaluation would need to be performed in order to determine that the existing walls and ceilings meet those requirements.*** ***This requirement can also be met with the installation of an approved fire-sprinkler system. For the purposes of this analysis, it is assumed that an automatic sprinkler system would be installed in the building.***
1019.1	*Number of exits*	All rooms and spaces within each story shall be provided with and have access to the minimum number of required independent exits required by Table 1019.1 based on the occupant load of the story. . . The required number of exits from any story, basement or individual space shall be maintained until arrival at grade of the public way.
Table 1019.		***Per table 1019.1; Occupancy of over 1000 persons requires a minimum of 4 exits.*** ***This requirement is met. The exit discharge openings however would need to be increased in width or additional exits would need to be created to accommodate the anticipated occupancy.***
1020.1.1	*Openings and penetrations*	Exit enclosure opening protectives shall be in accordance with the requirements of Section 715. Except as permitted in Section 402.4.6, openings in exit enclosures other than the unprotected exterior openings shall be limited to those necessary for exit access to the enclosure from normally occupied spaces and for egress from the enclosure. Where interior exit enclosures are extended to the exterior of the building by an exit passageway, the door assembly from the exit enclosure to the exit passageway shall be protected by a fire door assembly conforming to the requirements in Section 715.4. Fire Door assemblies in exit enclosures shall comply with Section 715.4.4. ***The existing discharge doors are not labeled as fire-rated. This requirement <u>is not</u> met. Further evaluation would be required to determine if the existing doors meet this requirement, or new fire-rated doors would need to be installed.***
1021	*Exit Passageways*	Exit passageways serving as an exit component in a means of egress system shall comply with the requirements of the section. An exit passageway shall not be used for any purpose other than as a means of egress.
1021.2	*Width*	The width of exit passageways shall be determined as specified in Section 1005.1 but such width shall not be less than 44 inches. The required width of exit passageways shall be unobstructed. Exception: Doors when fully opened, and handrails, shall not reduce the required width by more than 7 inches. Doors in any position shall not reduce the required width by more than one half. Other nonstructural projections such as trim and similar decorative features are permitted to project into the required width 1.5 inches on each side.
Per Table 1005.1		***If equipped with an automatic sprinkler system, the egress passageway must be a minimum of 110.9 inches wide. The existing egress passageway leading from the gymnasium to Entry #2 is 74 inches wide. The existing egress passageway leading from the gymnasium to Entry #3 is 96 inches wide.*** ***This requirement <u>is not</u> met. The exit passageways would need to be increased in width or additional exits would need to be created to accommodate the anticipated occupancy.***
1021.3	*Construction*	Exit passageway enclosures shall have w1alls, floors and ceilings of not less than 1-hour fire-resistance rating, and not less than required for any connecting exit enclosure.
715	*Opening protectives*	Exit passageways with a required minimum 1-hour fire rating,

SECTION	ITEM	SUMMARY
		shall contain doors with a minimum required 20-minute fire rating, and assembly ratings of 1-hour. (per Table 715.4).
1021.4	*Openings and penetrations*	Openings in exit passageways other than unexposed exterior openings shall be limited to those necessary for exit access to the exit passageway from normally occupied spaces and for egress from the exit passageway.
1024	*Exit Discharge*	Exits shall discharge directly to the exterior of the building. The exit discharge shall be at grade or shall provide direct access to grade. ***The exit passageways are required to be of 1-hour construction. Doors located in the passageway must be 20-minute fire-rated, and assemblies must be identified as having 1-hour ratings. Although the existing passageway does not meet this requirement (1-hour rating), rating identifications are not apparent on all of the existing doors or assemblies. Further evaluation would be required to determine if the existing doors meet this requirement, or new fire-rated doors would need to be installed.***
1023	*Exterior exit ramps and stairways.*	Exterior exit ramps and stairways serving as an element of a required means of egress shall comply with this section.
1023.3	*Open side*	Exterior exit ramps and stairways shall serving as an element of required means of egress shall be open on at least one side. An open side shall have a minimum of 35 square feet of aggregate open area adjacent to each floor level and the level of each intermediate landing. The required open area shall be located not less than 42 inches above the adjacent floor or landing level. ***The Gymnasium building <u>does not</u> currently include any exit ramps. Any new exit ramps would need to meet current code requirements.*** ***By code, alterations to existing buildings such as the Gymnasium <u>do not</u> require an accessible means of egress and would be <u>at the discretion of the governing building official</u>***
1024	*Exit Discharge*	Exits shall discharge directly to the exterior of the building. The exit discharge shall be at grade or shall provide direct access to grade.
1024.1	*Exit discharge*	Exits shall discharge directly to the exterior of the building. The exit discharge shall be at grade or shall provide direct access to grade. The exit discharge shall not reenter a building. A maximum of 50 percent of the number and capacity of the

SECTION	ITEM	SUMMARY
		exit enclosure is permitted to egress through areas on the level of discharge provided all of the following are met: 1.1 Such exit enclosures egress to a free and un-obstructed way to the exterior of the building. . . 1.2 The entire area of the level of discharge is separated form areas below by construction conforming to the fire – resistance rating the exit enclosure. 1.3 The egress path from the exit enclosure on the level of discharge is protected throughout by an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.1.2, or separated from the egress path in accordance with the requirements for the enclosure of exists. ***The egress path from the exit enclosure on the level of discharge is not currently protected throughout by an approved automatic sprinkler system. This requirement is not currently met, but would be met with the installation of an approved automatic fire sprinkler system.*** *Min. total exit width from Gymnasium building:* *Minimum Stairway widths: 1,019 x 0.3 inches = 305.7"* *Minimum Egress Component width: 1,109 x 0.2 inches = 203.8"* ***The existing main exit from the Gymnasium Building, (one pair doors at lobby) has a clear opening of 68".*** ***This requirement <u>is not</u> met.***
1025.2	*Egress for assembly occupancies*	Assembly main exit. Group A occupancies that have an occupant load of greater than 300 shall be provided with a main exit. The main exit shall be of sufficient width to accommodate not less than one-half of the occupant load,... Where the building is classified as Group A occupancy, the main exit shall front on at least one street or an unoccupied space of not less that 20 feet in width that adjoins a street or public way. Group A occupancies that have an occupant load greater than 300 shall be provide with at least 0.20-inch total exit width for each occupant served.
1025.3	Assembly other exits	In addition to having access to a main exit, each level in a Group A occupancy having an occupant load greater than 300 shall be provided with additional means of egress that shall provide an egress capacity of at least one-half of the total

SECTION	ITEM	SUMMARY
		occupant load. . .
		The current exit doors <u>do not</u> meet this requirement.
		The existing main exit from the Nelles School Gymnasium (one pair) has a clear opening of 68". As main exit doors, these doors do not meet the minimum required width of 102". These doors would have to enlarged or additional doors would have be installed at this location in order to provide the minimum required width.
		An additional pair of exit doors is located along the western wall of the gymnasium space and exit directly to the exterior of the building. Those doors provide a net clear opening of 68". Combined with the main exit doors, the minimum required exit door width of 203.7" is met.
		An additional set of exit doors (exiting on the north side of the building) provide a net clear width of 56". Those doors provide a net clear opening of 68". Combined with the main exit doors, the minimum required exit door width of 203.7" is met. These doors however open directly to stairs and do not provide the min. required landing area. The doors also do not currently swing the direction of travel. The swing of those doors would need to be reversed.
		An additional set of exit doors (exiting to the south off the rear hall) provide a net clear with of 68". Combined with the main exit doors, the minimum required exit door width of 203.7" is met. These doors however share a combined path of egress with the doors set of doors located along the western wall of the building. This shared path of travel may require fire sprinklers per the discretion of the governing building official.
		Another door (single) to the exterior, located on the south side of the entry lobby has a clear opening width of 36". Although this door meets the minimum required width of 32", it does not meet the minimum separation requirement from the main exit doors.
1025.4	Foyers and lobbies	In Group A-1 occupancies, where persons are admitted to the building at times when seats are not available and are allowed to wait in a lobby or similar space, such use of a lobby or similar space shall not encroach upon the required clear width of the means of egress by substantial permanent partitions of by fixed rigid railings not less than 42" high. Such foyer if not directly connect to a public street by all the main entrances or exits, shall have a straight and unobstructed corridor or path of travel

SECTION	ITEM	SUMMARY
		to every such main entrance or exit.
		The Nelles School Gymnasium meets this requirement.
1103B.1	*Accessibility Scope*	Accessibility to buildings or portions of buildings shall be provided for all occupancy classifications. An accessible route of travel complying with Section 1114B.1.2 shall connect all elements and spaces within a building or facility. Multi-story buildings must provide access to each level, including mezzanines, by ramp or passenger elevator.
		In its current state, the Gymnasium building <u>is not</u> fully accessible throughout. However, as an existing building, this may not be required upon discretion of the governing building official.
		Any future renovations shall be made accessible per this section of the code.
1104B	*Accessibility for Group A occupancies*	All Group A occupancies shall be accessible as provided in this chapter. See also the general requirements in the section.
1104B.2	*Assistive-listening systems in assembly areas.*	Assembly area, conference and meeting rooms shall provide assistive listening systems for persons with hearing impairments as provided in this section. 3. Number of personal receivers required. The minimum number of receivers to be provided shall be equal to 4 percent of the total number of seats but in no case less than two.
		41 receivers would be required in the gymnasium space. (1019 x .04 = 41)
		This requirement is not currently met, however as an existing building, this may not be required. Future renovations shall provide accommodation per this section of the code.
1115B	*Accessibility restroom Facility requirements*	*This section addresses the minimum requirements for restroom facilities. It should be used in the proposed upgrade of the restrooms.*
1115B.3.1	*Toilet Facilities*	***New, multiple-accommodation toilets facilities shall include the following in accordance with Section 1115B.3.1 – 1115B.4.5;*** ***51. Wheelchair clearance*** ***52. Clear floorspace at fixtures*** ***53. Accessible water closet*** ***54. Accessible water closet compartment*** ***55. Accessible urinals***

SECTION	ITEM	SUMMARY
		56. Accessible lavatories ***57. Accessible passageways*** ***58. Accessible symbols*** ***59. Accessible grab bars*** ***60. Accessible accessories*** ***The existing restroom facilities possess many deficiencies in regard to accessibility. Compliance with this section would be at the <u>discretion of the governing building official.</u>*** ***If existing restrooms were to be renovated, they would be required to meet accessibility requirements for wheelchair clearance, clear floorspace at fixtures, water closets, water closet compartments, urinals, lavatories, passageways, symbols, grab bars and accessories.*** ***The existing space allocated to toilet facilities most like would not accommodate the accessibility clearances or the number of fixtures required by CPC 2010 Table 4-1.***
1115B.4.6	*Accessible Drinking Fountains*	*The installation of new drinking foundations shall comply with the requirements of Section 1115B.4.6.* ***Currently, drinking fountains are not provided. As an existing building, this may not be required. Any future modifications however, shall be in compliance with this section of the code***
1117B	*Other Building Components*	***Any future modifications to the gymnasium shall include the following in accordance with Section 1115B.3.1;*** ***26. Water fountains*** ***27. Telephones*** ***28. Signs and identification*** ***29. Symbols of Accessibility*** ***30. Controls and operating mechanisms*** ***As an existing building, this may not be required. Any future modifications however, shall be in compliance with this section of the code***
1118B	*Space Allowance and reach ranges*	*Modification of the gymnasium shall comply with the requirements of Section 1118B.* ***As an existing building, this may not be required. Any future modifications however, shall be in compliance with this section of the code***
11120B.1	*Floor and levels*	In buildings and facilities, floors of a given story shall be a common level throughout, shall be connected by pedestrian ramps, passenger elevators or special access lifts. ***Currently, no accessible means (i.e. ramp of lift) are provided within the building. As an existing building, this may not be required.*** ***By code, alterations to existing buildings such as the The Nelles School Gymnasium <u>do not</u> require an accessible means of egress. Replacement of the guards would be <u>at the discretion of the governing building official.</u>***
1124B.1	*Floor Surfaces*	Ground and floor surfaces along accessible routes and in accessible rooms and spaces, including floors, walks, ramps, stairs and curb ramps, shall be stable, firm, slip resistant and shall comply with Sections 1124B.1-1124B.4 ***As an existing building, this may not be required. However, any modifications of the gymnasium shall comply with the requirements of floor surfaces, change in level, carpet and grating as specified in Section 1124B.1.***
1125B	*Storage*	If fixed storage faculties such as cabinets, shelves, closets or drawers are provided where access is required be Section 109.1, at least one of each type shall comply with this section. ***As an existing building, this may not be required. However, any new storage facilities shall comply with the requirements for clear space, height and hardware as specified ins section 1125B.***
1127B.1	*Exterior routes of travel*	***By code, alterations to existing buildings such as the The Nelles School Gymnasium, do not require an accessible means of egress.***
3403.1	*Existing Buildings – alterations, additions, or repairs*	Additions or alterations to any building or structure shall comply with the requirements of the code for new construction. Additions or alterations shall not be made to an existing building or structure that will cause the existing building or structure to be in violation of any portions of this code. . . Portions of the structure not altered and not affected by the alteration are not required to comply with the code requirements for a new structure. *Rooms and areas that are not upgraded can remain in their existing condition, unless a modification to some other item has an un-intentional impact on an area that was not scheduled to be modified.*
3403.2	*Structural impact to existing buildings*	Additions or alterations to an existing structure shall not increase the force in any structural element by more than 5%. . .

SECTION	ITEM	SUMMARY
3403.3	*Nonstructural modifications to existing buildings*	Nonstructural alterations or repairs to an existing building or structure are permitted to be made of the same materials of which the building or structure is constructed, provided that they do not adversely affect any structural member or the fire-resistance rating of any part of the building or structure.
3410.2.3	*Alterations and repairs to existing buildings*	An existing building or portion thereof, which does not comply with the requirements of this code for new construction, shall not be altered or repaired in such a manner that results in the building being less safe or sanitary than such building is currently.

TABLE 503 (RELEVANT SECTIONS)

GROUP		TYPE IIIB	SUMMARY
	Height (feet)	55' High max.	*The Nelles School Gymnasium is 43' feet high at the back and 46' high at the front. Neither exceeds the allowable height. The code requires an average of the heights based on areas for the height measurement.*
A-1	Stories	2 Stories max.	*The Nelles School Gymnasium does not exceed two stories in height. This requirement is met.*
	Area	9,500 sq.ft.	*The Nelles School Gymansium is 9,230 sq. ft.*

OCCUPANT LOAD (PER TABLE 1004.1.1 CBC)

AREA	FUNCTION OF SPACE	AREA	OCCUPANT LOAD FACTOR	TOTAL OCCUPANTS
Entrance Lobby	Assembly	348 s.f.	5 net	69.6
Men's Toilet			0	
Apparatus Room			0	
Women's Toilet			0	
Gymnasium (assembly area without fixed seats)		6,354 s.f	7net	907.7
Entry #3		168 s.f.	5 net	33.6
Closet			0	
Dressing Room#2 (office)		180 s.f.	100 gross	1.8
Showers (office)		82 s.f.	100 gross	.82
Toilet			0	
Dressing Room #1 (office)		562 s.f.	100 gross	5.62
Total		**7,694**		**1,019 persons**

MINIMUM EGRESS WIDTH OF STAIRS, ASSUMED SPRINKLERED (PER TABLE 1005.1 CBC)

AREA	OCCUPANCY TYPE	OCCUPANTS	STAIRWAY WIDTH FACTOR	TOTAL WIDTH REQUIRED (INCHES)
Gymnasium	Assembly	1,019	0.3	305.7"

MINIMUM EGRESS WIDTH OF OTHER COMPONENTS (DOOR WAYS, ETC.), ASSUMED SPRINKLERED (PER TABLE 1005.1 CBC)

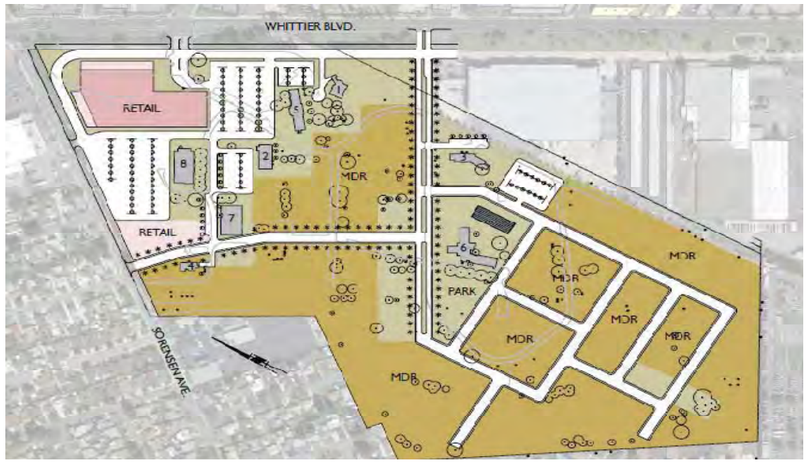
AREA	OCCUPANCY TYPE	OCCUPANTS	COMPONENT FACTOR	TOTAL WIDTH REQUIRED (INCHES)
Gymnasium	Assembly	1,019	0.2	203.8"

PLUMBING FIXTURE COUNTS (PER TABLE 4-1, CALIFORNIA PLUMBING CODE)

TYPE OF BUILDING OCCUPANCY	AREA	OCCUPANT LOAD FACTOR	OCCUPANTS OF EACH SEX*	MEN'S LAV.	MEN'S URINAL	MEN'S W/C	WOMEN'S LAV	WOMEN'S W/C	DRINKING FOUNTAINS
Assembly Places	9,230 sq.ft.	1,109	555	14	See Below	16	14	17	-

Urinals may be installed instead of water closets in toilet rooms to be used only be men provided that the number of water closets shall not be less than two thirds of the minimum number of toilet facilities specified.

* per Table A. Occupant Load Factor in CPC, 2010



Conceptual Design Cost Plan

for

Fred C. Nelles Youth Correctional Facility

Re-Use Feasibility Study

Job Number: 11317
October 19, 2011

mack5
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Emeryville, CA 94608
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Dear Ms. Todd,

Based on the Conceptual Design documents provided, Mack5 has prepared a construction budget of $17.1M for the proposed Fred C. Nelles Youth Correctional Facility. This budget is exclusive of soft costs or total project costs.

We would be pleased to answer any questions you may have regarding the costs included.

Sincerely,

Sam Staley, CPE, LEED AP BD+C
Senior Cost Consultant / Manager of Cost Services
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project introduction

The California Department of General Services Real Estate Division has asked Page & Turnbull to develop a Re-Use Feasibility Study of eight (8) properties at the Fred C. Nelles Youth Correctional Facility at 11850 E. Whittier Boulevard in Whittier, California. There are a total of forty-three (43) properties in the Fred C. Nelles facility however the subject properties for the Re-Use Feasibility Study are limited to the following: Superintendent's Residence, Auditorium, Infirmary, Assistant Superintendent's Residence, Administration, Chapel, Maintenance, and Gym.

mack^5 has developed the following Conceptual Cost Plan estimate based on existing building description and conditions, architectural and structural recommendations, building code review, reuse descriptions, conceptual drawings, and experience with similar projects.

items used for cost estimate

architectural drawings & narratives	Re-Use Feasibility Study For 8 Historic Buildings located at Fred C. Nelles Youth Correctional Facility in Whittier, CA dated 9/20/2011 by Page & Turnbull
structural narratives	Included with Feasibility Study
mechanical narratives	None available
electrical narratives	None available
civil drawings & narratives	Included with Feasibility Study
landscape drawings & narratives	None available
specifications	None available

assumptions

(a) Construction will start in June, 2012

(b) A construction period of 24 months

(c) The general contract will be competitively bid by a minimum of three (3) qualified contractors

(d) The general contractor will have full access to the site during normal business hours

(e) There are no significant phasing requirements

(f) There are no project requirements that would necessitate extended overtime nor schedule acceleration

(g) Any existing electrical power, fire/life safety systems are adequate for the increased loads

exclusions

(a) Hazardous material handling, disposal and abatement other than specifically noted

(b) Cost escalation beyond a midpoint of June, 2013

(c) Compression of schedule, premium or shift work, and restrictions on the contractor's working hours

(d) Project Soft Costs including builder's risk or owner provided insurance, design, planning, or management fees, owner costs, data / telecom systems, and fixtures, furnishings, and equipment

(e) Structural upgrades to provide new lateral load resisting elements in the building interior. New lateral elements will require connection to the existing diaphragm and likely new foundations

(f) Structural upgrades to deconstruct and rebuild the chimneys with adequate framing and reinforcing and to resist the seismic loads - reattach the original brick as a veneer to maintain the historical character of the chimneys

(g) Conduct an ASCE 31-03 Tier 2 investigation to confirm Tier 1 deficiencies where applicable

(h) New window coverings / black-out shades

(i) Stage rigging, curtains, and miscellaneous theatrical equipment

(j) Demolition of other existing buildings on the site

(k) Large scale grading and site improvements to surrounding campus

risk register

In the course of preparing the Cost Estimate, the following items were noted as areas of possible exposure.

(a) The existing electrical and fire-life safety systems may not have adequate capacity for the proposed work

(b) Current costs are based on conceptual designs excluding structural, mechanical, electrical, civil, or landscape designs - costs will change based on final engineering recommendations and designs

(c) Since this is a remodel project, there may be unforeseen conditions encountered once demolition begins. There is a risk that existing conditions may not be what was anticipated and costs could increase dramatically.

B1 Superintendent's Residence	$203.89/SF	$960,301
Proposed Use: Single Family Residence		
B2 Auditorium	$192.91/SF	$1,150,714
Proposed Use: Community Theater		
B3 Infirmary	$286.34/SF	$1,321,478
Proposed Use: Office		
B4 Asst Superintendent's Residence	$182.18/SF	$309,702
Proposed Use: Single Family Residence		
B5 Administration Building	$239.67/SF	$1,858,619
Proposed Use: Office		
B6 Chapel	$329.35/SF	$3,914,381
Proposed Use: Community Center		
B7 Maintenance Building	$193.96/SF	$2,190,822
Proposed Use: Grocery Store		
B8 Gymnasium	$345.29/SF	$5,389,915
Proposed Use: Church		
	TOTAL CONSTRUCTION:	**$17,095,931**

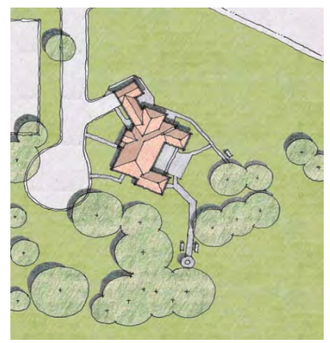
Alternates:

Sheathing Above Existing / Roof Replacement	$696,334

Proposed Use: Single Family Residence	Quantity	Unit	Rate	Total ($)

Scope:

The Superintendent's Residence will remain a single family home. The proposed work at this time consists of remodeling of the existing kitchen and pantry area, laundry room, and upstairs and downstairs bathrooms. Also, the rest of the homes interiors exteriors will be generally refinished / refurbished. It is assumed that this work will have no structural implications. Per Re-Use Feasibility Study, Reuse Description on page 46



Control Quantities (per digital take-off):

Stories	2	EA
Enclosed area	4,710	SF
Roof area (includes slope factor)	4,640	SF
Interior partitions	500	LF
Plumbing fixtures - allow	12	FX
Subtotal: Gross floor area	4,710	SF

Construction Costs (see below):

Structural Improvements			$72.92	$343,456
Code Improvements*			$22.67	$106,791
Architectural Improvements			$80.77	$380,443
Site Improvements			$27.52	$129,610
Total: Construction	4,710	SF	$203.89	$960,301

*Please note, there is potential that Building Official can excuse Code Requirement

STRUCTURAL IMPROVEMENTS	Quantity	Unit	Rate	Total ($)
Building Elements Demolition				
Demolish and remove portions of interior wall, floor, and ceiling as required for structural improvements	4,710	SF	$2.50	$11,775
Foundations				
Allowance for supplemental anchorage of wall and floor framing to existing foundations - allow for straps and hold-downs at perimeter of 1st floor	355	LF	$40.00	$14,200
Repair and reinforce existing foundations as required				NIC
Roof Construction				
Provide shear transfer between the roof and existing walls by adding new wood ledgers and blocking members to connect the existing roof diaphragm to the existing shear walls	570	LF	$25.00	$14,250
Strengthen the existing roof diaphragms with new plywood sheathing attached to the underside of the existing roof framing. Provide additional framing clips/straps for collector elements and at diaphragm openings as necessary	4,640	SF	$8.00	$37,120
Strengthen the existing brick URM walls with new shotcrete or composite fiber-reinforcing (FRP)	4,970	SF	$15.00	$74,550

STRUCTURAL IMPROVEMENTS	Quantity	Unit	Rate	Total ($)
Roof construction (continued)				
Provide new out-of-plane anchors/hold-downs along the building perimeter for anchorage of the existing walls to the roof diaphragm. Additional wood blocking, straps and framing clips would also be required	570	LF	$35.00	$19,950
Strengthen the existing chimneys. Some additional evaluation and possible exploratory demolition will likely be required to determine if there is any existing chimney anchorage and if that anchorage is adequate. Assuming the chimneys are not adequately attached and cannot resist the seismic demands, provide strengthening and/or bracing.	440	SF	$40.00	$17,600
Repair/replace damaged masonry units, and patch and fill existing cracks with epoxy injection - allow for 15% to be repaired and / or replaced	746	SF	$35.00	$26,110
Provide connection hardware and blocking at framing in basement	2,365	SF	$5.00	$11,825

STRUCTURAL IMPROVEMENTS	Quantity	Unit	Rate	Total ($)
Miscellaneous				
Conduct an ASCE 31-03 Tier 2 investigation to confirm Tier 1 deficiencies where applicable				Excluded, By Others
Dry-rot and termite damage - allowance pending further survey and investigation	1	LS	$10,000.00	$10,000
Miscellaneous metals and rough carpentry - allow	4,805	SF	$1.50	$7,208
General Contractor's Mark-ups:				
Bonds & Insurance		1.5%		$3,669
General Conditions		10.0%		$24,826
Contractor's Overhead & Profit		3.5%		$9,558
Contingency for Design Development		15.0%		$42,396
Cost Escalation		5.7%		$18,420
Subtotal For Structural Improvements:				**$343,456**

CODE IMPROVEMENTS*	Quantity	Unit	Rate	Total ($)
Fire Sprinklers and Rating Requirements				
Fire sprinklers - Group R occupancy				Not Required
Egress and Exit Requirements				Not Required
Stairs				Not Required
Accessibility				
Interior code signage - allow for tactile exit signs, accessibility symbols, etc.				Not Required
Toilet room accessories - allow	1	LS	$2,500.00	$2,500
Demolish all existing plumbing fixtures at toilet rooms (excludes showers) and replace for full renovation	10	FX	$5,000.00	$50,000
Minor electrical improvements, lights, receptacles, telephone, etc.	4,710	SF	$5.00	$23,550

CODE IMPROVEMENTS*	Quantity	Unit	Rate	Total ($)
Non-Structural Requirements				Not Required
General Contractor's Mark-ups:				
Bonds & Insurance			1.5%	$1,141
General Conditions			10.0%	$7,719
Contractor's Overhead & Profit			3.5%	$2,972
Contingency for Design Development			15.0%	$13,182
Cost Escalation			5.7%	$5,727
			Subtotal For Code Improvements*:	**$106,791**

*Please note, there is potential that Building Official can excuse Code Requirement

ARCHITECTURAL IMPROVEMENTS	Quantity	Unit	Rate	Total ($)
Exterior Walls				
Patch, repair, and paint exterior walls, fascia, and trim - allow	4,970	SF	$2.50	$12,425
Clean exposed masonry surfaces and seal, and repoint mortar joints - allow for 50% of exterior wall	2,485	SF	$7.50	$18,638
Exterior Windows				
Patch, repair, and repaint wood casements, in place - allow for 50%	2,485	SF	$2.50	$6,213
Repair damaged glazing, in place - allow for 15% of glazing	373	SF	$60.00	$22,380
Exterior Doors				
Repaint wood doors and frames, single where necessary - allow	7	EA	$150.00	$1,050
Repaint wood doors and frames, double where necessary - allow	4	PR	$300.00	$1,200
Roof Coverings				
Repair wood roof where necessary - allow for 15% of the roof area, assumed new plywood attached to existing framing from below otherwise entire roof replacement required	696	SF	$10.00	$6,960

ARCHITECTURAL IMPROVEMENTS	Quantity	Unit	Rate	Total ($)
Interior Partitions				
Repair / prepare walls for paint where necessary - allow	14,130	SF	$1.50	$21,195
Interior Doors				
Repaint wood doors and frames, single where necessary - allow	36	EA	$150.00	$5,400
Repaint wood doors and frames, double where necessary - allow	7	PR	$300.00	$2,100
Wall Finishes				
Paint to walls and trim - allow	14,130	SF	$0.75	$10,598
Repair, refinish, and / or replace wood trim, moldings, etc. where necessary - allow	3,140	LF	$5.00	$15,700
Floor Finishes				
Refinish wood floors - allow	4,440	SF	$8.00	$35,520
Repair/refinish/replace wood base - allow	1,400	LF	$15.00	$21,000
Repair, refinish, and / or replace oak staircases at entry and butler corridors	1	LS	$10,000.00	$10,000
Repair / regrout existing tile floor in toilet rooms - allow	270	SF	$10.00	$2,700
Repair / regrout existing tile base in toilet rooms - allow	170	LF	$7.50	$1,275
Ceiling Finishes				
Paint to ceiling - allow	4,710	SF	$1.50	$7,065
Repair / prepare ceiling for paint where necessary - allow	4,710	SF	$1.00	$4,710
Miscellaneous Finishes				
Allowance for miscellaneous repairs to existing finishes	4,710	SF	$1.50	$7,065
Plumbing				
Demolish all existing plumbing fixtures at kitchen and replace for full renovation	2	FX	$5,000.00	$10,000
Kitchen - allow	1	LS	$3,500.00	$3,500
Laundry - allow	1	LS	$600.00	$600

ARCHITECTURAL IMPROVEMENTS	Quantity	Unit	Rate	Total ($)
HVAC				
Minor improvements to existing	4,710	SF	$2.00	$9,420
Equipment				Not Applicable
Fixed Furnishings				
Repair, refinish, and / or replace casework in kitchen - allow	35	LF	$250.00	$8,750
New window coverings - allow				NIC, By Others
Building Elements Demolition				
Demolish roof above porch	623	SF	$5.00	$3,115
Remove existing carpet from upper floor	1,755	SF	$2.00	$3,510
Strip paint from all heavily repainted surfaces - allow	14,130	SF	$1.00	$14,130
Miscellaneous demolition	4,710	SF	$1.00	$4,710
General Contractor's Mark-ups:				
Bonds & Insurance			1.5%	$4,064
General Conditions			10.0%	$27,499
Contractor's Overhead & Profit			3.5%	$10,587
Contingency for Design Development			15.0%	$46,962
Cost Escalation			5.7%	$20,404
Subtotal For Architectural Improvements:				**$380,443**

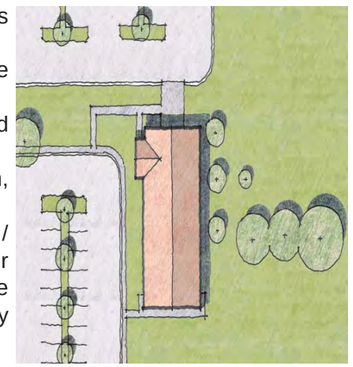
SITE IMPROVEMENTS	Quantity	Unit	Rate	Total ($)
Site demolition and relocations				
Demolish existing second garage - protect adjacent property	1	LS	$5,000.00	$5,000
Demolish existing paving at existing driveway	6,790	SF	$1.50	$10,185
Site earthwork				
Fine grading	6,790	SF	$1.00	$6,790
Vehicular paving				
Reconfigure driveway, per plan	6,790	SF	$7.50	$50,925

SITE IMPROVEMENTS	Quantity	Unit	Rate	Total ($)
Pedestrian paving				
Modify walkway to end at existing fountain	125	SF	$10.00	$1,250
Site development				
Repair / restore water feature and other historic landscape elements	1	LS	$5,000.00	$5,000
Landscaping				
Protect existing gardens and trees	1	LS	$2,500.00	$2,500
Repair and restore landscaping, as needed	7,100	SF	$1.50	$10,650
General Contractor's Mark-ups:				
Bonds & Insurance			1.5%	$1,385
General Conditions			10.0%	$9,368
Contractor's Overhead & Profit			3.5%	$3,607
Contingency for Design Development			15.0%	$15,999
Cost Escalation			5.7%	$6,951
Subtotal For Site Improvements:				**$129,610**

Proposed Use: Community Theater	Quantity	Unit	Rate	Total ($)

Scope:

The use of the Auditorium will essentially remain the same - its proposed re-use is that it becomes a "community theater."
The scope of work includes the following: demolition of the northeast stairs, demolition of one set of stage stairs to allow installation of a new accessible stage lift, demolition and replacement of plumbing and bathroom fixtures, demolition of partition walls near entry, relocation of the mechanical/fan room, new access to the balcony/storage area, new ticket window at entry, provide accessible access, and refinish / renovate interior and exterior finishes and walls. No other major modifications or features are proposed at this time for the re-use of this building as a community theater. Per Re-Use Feasibility Study, Reuse Description on page 57



Control Quantities (per digital take-off):

Stories	1	EA
Enclosed area	5,965	SF
Roof area (includes slope factor)	9,040	SF
Interior partitions	245	LF
Plumbing fixtures - allow	6	FX
Subtotal: Gross floor area	5,965	SF

Construction Costs (see below):

Structural Improvements			$74.11	$442,043
Code Improvements*			$68.89	$410,932
Architectural Improvements			$42.06	$250,897
Site Improvements			$7.85	$46,841
Total: Construction	5,965	SF	$192.91	$1,150,714

*Please note, there is potential that Building Official can excuse Code Requirement

STRUCTURAL IMPROVEMENTS	Quantity	Unit	Rate	Total ($)
Building Elements Demolition				
Demolish and remove portions of interior wall, floor, and ceiling as required for structural improvements	5,965	SF	$2.50	$14,913
Foundation				
Strengthen concrete at demolished set of stage stairs	1	LS	$1,500.00	$1,500
Dowel existing walls to foundations - allow for drilled epoxy dowel with anchors and clips at perimeter of 1st floor	335	LF	$150.00	$50,250
Roof Construction				
Provide shear transfer between the roof and existing walls by adding new wood ledgers and blocking members to connect the existing roof diaphragm to the existing shear walls	415	LF	$25.00	$10,375
Strengthen the existing roof diaphragms with new plywood sheathing attached to the underside of the existing roof framing. Provide additional framing clips/straps for collector elements and at diaphragm openings as necessary	9,040	SF	$8.00	$72,320
Verify the reinforcing of existing concrete elements, including walls and pilasters/buttresses. Provide new composite fiber-reinforcing (FRP) strengthening if the concrete has very little or no steel reinforcing	6,490	SF	$15.00	$97,350
Provide new out-of-plane anchors/hold-downs along the building perimeter for anchorage of the existing walls to the roof diaphragm. Additional wood blocking, straps and framing clips would also be required	415	LF	$35.00	$14,525

STRUCTURAL IMPROVEMENTS	Quantity	Unit	Rate	Total ($)
Roof Construction (continued)				
Repair/replace damaged masonry units, and patch and fill existing cracks with epoxy injection - allow for 15% to be repaired and / or replaced	974	SF	$35.00	$34,090
Miscellaneous				
Dry-rot and termite damage - allowance pending further survey and investigation	1	LS	$10,000.00	$10,000
Conduct an ASCE 31-03 Tier 2 investigation to confirm Tier 1 deficiencies where applicable				Excluded, By Others
Miscellaneous metals and rough carpentry - allow	6,315	SF	$1.50	$9,473
General Contractor's Mark-ups:				
Bonds & Insurance			1.5%	$4,722
General Conditions			10.0%	$31,952
Contractor's Overhead & Profit			3.5%	$12,301
Contingency for Design Development			15.0%	$54,566
Cost Escalation			5.7%	$23,708
			Subtotal For Structural Improvements:	**$442,043**

CODE IMPROVEMENTS*	Quantity	Unit	Rate	Total ($)
Fire Sprinklers and Rating Requirements				
Fire sprinklers - Group A occupancy*	5,965	SF	$3.50	$20,878
Egress and Exit Requirements				
Exterior egress and exit requirements - allow	1	LS	$30,000.00	$30,000
Interior doors leading to egress passageways need to be widened	1	LS	$5,000.00	$5,000

CODE IMPROVEMENTS*	Quantity	Unit	Rate	Total ($)
Stairs				
Modification / replacement to (E) stairway handrails and basement stairway guards including handrail extensions	1	LS	$2,500.00	$2,500
Modification / replacement to (E) stairs to dressing room, steps providing egress from south side of stage, and two sets of steps providing egress from north side of stage	1	LS	$5,000.00	$5,000
Modification / replacement to (E) treads of the (E) interior stairways	1	LS	$2,500.00	$2,500
New stairway / ladder to balcony storage	1	LS	$5,000.00	$5,000
Accessibility				
Interior code signage - allow for tactile exit signs, accessibility symbols, etc.	1	LS	$2,000.00	$2,000
Toilet room partitions and accessories - allow	1	LS	$10,000.00	$10,000
New lift at stage including power	1	LS	$20,000.00	$20,000
Demolish all existing plumbing fixtures at toilet rooms (excludes showers) and replace for full renovation	6	FX	$5,000.00	$30,000
Emergency and exit lighting	5,965	SF	$1.50	$8,948
Minor electrical improvements, lights, receptacles, telephone, etc.	5,965	SF	$5.00	$29,825
Non-Structural Requirements				
Clay tile anchorage - allow for removal and reinstallation of existing tile, 80% reusable tile	7,230	SF	$12.00	$86,760
Clay tile anchorage - allow for new tile to supplement those broken in the course of repair	1,810	SF	$18.00	$32,580

CODE IMPROVEMENTS*	Quantity	Unit	Rate	Total ($)
Other				
Demolish stage stairs for new lift (allow for strengthening of existing SOG)	1	LS	$250.00	$250
Demolish existing interior partitions	40	LF	$35.00	$1,400
General Contractor's Mark-ups:				
Bonds & Insurance		1.5%		$4,390
General Conditions		10.0%		$29,703
Contractor's Overhead & Profit		3.5%		$11,436
Contingency for Design Development		15.0%		$50,725
Cost Escalation		5.7%		$22,039
		Subtotal For Code Improvements*:		**$410,932**

ARCHITECTURAL IMPROVEMENTS	Quantity	Unit	Rate	Total ($)
Exterior Walls				
Patch, repair, and paint exterior walls (stucco) and trim - allow for 15%	974	SF	$15.00	$14,610
Paint exterior walls (stucco) - allow for 75%	4,868	SF	$1.50	$7,302
Exterior Windows				
Patch, repair, and repaint wood casements, in place - allow for 10%	649	SF	$2.50	$1,623
Repair damaged glazing, in place - allow for 15%	97	SF	$35.00	$3,395
Interior Partitions				
Repair / prepare walls for paint where necessary - allow	12,240	SF	$1.50	$18,360
Install ticket window at interior entry	1	LS	$3,000.00	$3,000

ARCHITECTURAL IMPROVEMENTS	Quantity	Unit	Rate	Total ($)
Wall Finishes				
Paint to walls and trim - allow	9,236	SF	$0.75	$6,927
Refinish proscenium wall above stage opening - allow for decorative / accent finish	1,000	SF	$30.00	$30,000
Repair, refinish, and / or replace wood trim, moldings, etc. where necessary - allow	1,630	LF	$5.00	$8,150
Floor Finishes				
Restain / seal concrete - allow	5,660	SF	$5.00	$28,300
Repair / refinish / replace rubber base - allow	775	LF	$2.75	$2,131
New ceramic floor tile - allow	305	SF	$20.00	$6,100
New ceramic floor base tile - allow	130	LF	$18.00	$2,340
Ceiling Finishes				
Paint to ceiling - allow	5,965	SF	$1.50	$8,948
Repair / prepare ceiling for paint where necessary - allow	5,965	SF	$1.00	$5,965
Miscellaneous Finishes				
Allowance for miscellaneous repairs to existing finishes	5,965	SF	$1.50	$8,948
HVAC				
Relocation of mechanical / fan room (including housekeeping pads)	1	LS	$15,000.00	$15,000
Fixed Furnishings				
Stage rigging, curtains, and miscellaneous theatrical equipment - allow				NIC, By Others
New window coverings / blackout shades at theater windows - allow				NIC, By Others

ARCHITECTURAL IMPROVEMENTS	Quantity	Unit	Rate	Total ($)
Building Elements Demolition				
Demolish northeast stairway (no structural implications)	1	LS	$1,000.00	$1,000
Remove existing floor surface	305	SF	$2.00	$610
Miscellaneous demolition	5,965	SF	$1.00	$5,965
General Contractor's Mark-ups:				
Bonds & Insurance		1.5%		$2,680
General Conditions		10.0%		$18,135
Contractor's Overhead & Profit		3.5%		$6,982
Contingency for Design Development		15.0%		$30,971
Cost Escalation		5.7%		$13,456
Subtotal For Architectural Improvements:				**$250,897**

SITE IMPROVEMENTS	Quantity	Unit	Rate	Total ($)
Site demolition and relocations				
Demolish existing paving at existing parking	575	SF	$1.50	$863
Site earthwork				
Fine grading	1,470	SF	$1.00	$1,470
Vehicular paving				
Provide new parking, per plan - allow for grading, AC paving and base, concrete curbs, striping and signage, etc.	575	SF	$15.00	$8,625
Pedestrian paving				
Reconfigure sidewalks to align with new parking	895	SF	$10.00	$8,950

B2 Auditorium Detail
Job #11317
October 19, 2011
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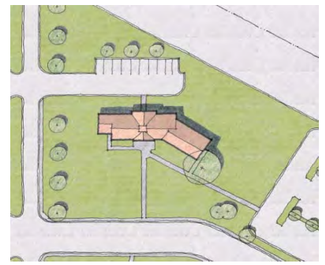
SITE IMPROVEMENTS	Quantity	Unit	Rate	Total ($)
Landscaping				
Protect existing gardens and trees	1	LS	$1,000.00	$1,000
Repair and restore landscaping, as needed	8,300	SF	$1.50	$12,450
General Contractor's Mark-ups:				
Bonds & Insurance		1.5%		$500
General Conditions		10.0%		$3,386
Contractor's Overhead & Profit		3.5%		$1,304
Contingency for Design Development		15.0%		$5,782
Cost Escalation		5.7%		$2,512
Subtotal For Site Improvements:				**$46,841**

Proposed Use: Office	Quantity	Unit	Rate	Total ($)

Scope:

The proposed re-use for the Old Infirmary building is a new office space. The scope of work appears to be a basic tenant improvement which will essentially include the demolition of the majority of existing partition walls, fixtures and furnishings to allow for the build out of new offices and rooms. Also, a new exit door is to be installed and the existing sunroom is to be demolished. No other major modifications or features are proposed at this time for the re-use of this building as an office. Per Re-Use Feasibility Study, Reuse Description on page 68



Control Quantities (per digital take-off):

Stories	1	EA
Enclosed area (existing inc. basement)	4,615	SF
Roof area (includes slope factor)	7,360	SF
Interior partitions	360	LF
Plumbing fixtures - allow	12	FX
Subtotal: Gross floor area	4,615	SF

Construction Costs (see below):

Structural Improvements			$39.24	$181,071
Code Improvements*			$100.96	$465,940
Architectural Improvements			$82.32	$379,903
Site Improvements			$63.83	$294,564
Total: Construction	4,615	SF	$286.34	$1,321,478

*Please note, there is potential that Building Official can excuse Code Requirement

STRUCTURAL IMPROVEMENTS	Quantity	Unit	Rate	Total ($)
Building Elements Demolition				
Demolish and remove portions of interior wall, floor, and ceiling as required for structural improvements	4,615	SF	$2.50	$11,538
Foundations				
Allowance for supplemental anchorage of wall and floor framing to existing foundations - allow for straps and hold-downs at perimeter of 1st floor	375	LF	$40.00	$15,000
Repair and reinforce existing foundations as required				NIC
Roof Construction				
Strengthen the existing roof diaphragms with new plywood sheathing attached to the underside of the existing roof framing. Provide additional framing clips/straps for collector elements and at diaphragm openings as necessary	7,360	SF	$8.00	$58,880
Provide new out-of-plane anchors/hold-downs along the building perimeter for anchorage of the existing walls to the roof diaphragm. Additional wood blocking, straps and framing clips would likely also be required	375	LF	$35.00	$13,125

STRUCTURAL IMPROVEMENTS	Quantity	Unit	Rate	Total ($)
Roof Construction (continued)				
Strengthen the existing chimneys. Some additional evaluation and possible exploratory demolition will likely be required to determine if there is any existing chimney anchorage and if that anchorage is adequate. Assuming the chimneys are not adequately attached and cannot resist the seismic demands, provide strengthening and/or bracing.	390	SF	$40.00	$15,600
Miscellaneous				
Conduct an ASCE 31-03 Tier 2 investigation to confirm Tier 1 deficiencies where applicable			Excluded, By Others	
Dry-rot and termite damage - allowance pending further survey and investigation	1	LS	$10,000.00	$10,000
Miscellaneous metals and rough carpentry - allow	4,805	SF	$1.00	$4,805
General Contractor's Mark-ups:				
Bonds & Insurance		1.5%		$1,934
General Conditions		10.0%		$13,088
Contractor's Overhead & Profit		3.5%		$5,039
Contingency for Design Development		15.0%		$22,351
Cost Escalation		5.7%		$9,711
Subtotal For Structural Improvements:				**$181,071**

CODE IMPROVEMENTS*	Quantity	Unit	Rate	Total ($)
Fire Sprinklers and Rating Requirements				
Fire sprinklers - Group B occupancy less than 6,000 SF and less than 40 LF in height				Not Required
Egress and Exit Requirements				
Exterior				
Remove and repair existing doors to remain, single - allow for new hardware, exit device, and new threshold	4	EA	$2,050.00	$8,200
New exit door at northwestern corner of open office suite, single	1	EA	$2,500.00	$2,500
Interior				
Remove and repair existing doors to remain, single - allow for new hardware, and new threshold	14	EA	$1,050.00	$14,700
Remove and repair existing doors to remain, double - allow for new hardware, and new threshold	2	EA	$2,100.00	$4,200
New interior door, frame, and hardware, painted, single - allow	1	EA	$2,000.00	$2,000
Stairs				
Modification / replacement to (E) basement stairway handrail and guard heights including handrail extensions. As an existing structure and because the stairs serve a non-public service area, the basement stairs, if left unaltered, may not require modification				Not Required
Accessibility				
Interior code signage - allow for tactile exit signs, accessibility symbols, etc.	1	LS	$6,000.00	$6,000
Toilet room partitions and accessories - allow	1	LS	$12,500.00	$12,500
Demolish existing plumbing fixtures	56	FX	$150.00	$8,400
New plumbing fixtures	12	FX	$4,850.00	$58,200
Emergency and exit lighting	4,615	SF	$1.50	$6,923
New power, lights, receptacles, telephone	4,615	SF	$15.00	$69,225

CODE IMPROVEMENTS*	Quantity	Unit	Rate	Total ($)
Non-Structural Requirements				
Clay tile anchorage - allow for removal and reinstallation of existing tile, 80% reusable tile	5,890	SF	$12.00	$70,680
Clay tile anchorage - allow for new tile to supplement those broken in the course of repair	1,470	SF	$18.00	$26,460
Hollow clay tile bracing - allow for replacement of tile partitions at main corridor	1,900	SF	$20.00	$38,000
Other				
Demolish existing exterior wall for new door	1	LS	$1,500.00	$1,500
Remove and store existing doors to be demolished	31	EA	$75.00	$2,325
General Contractor's Mark-ups:				
Bonds & Insurance			1.5%	$4,977
General Conditions			10.0%	$33,679
Contractor's Overhead & Profit			3.5%	$12,966
Contingency for Design Development			15.0%	$57,515
Cost Escalation			5.7%	$24,989
			Subtotal For Code Improvements*:	**$465,940**

ARCHITECTURAL IMPROVEMENTS	Quantity	Unit	Rate	Total ($)
Exterior Walls				
Patch, repair, and paint exterior walls, fascia, and trim - allow	5,270	SF	$2.50	$13,175
Exterior Windows				
Patch, repair, and repaint wood casements, in place - allow for 10%	527	SF	$2.50	$1,318
Repair damaged glazing, in place - allow for 15%	79	SF	$60.00	$4,740
Interior Partitions				
Repair / prepare walls for paint where necessary - allow	7,534	SF	$1.50	$11,301
Interior partitions including wall framing, batt insulation, and gypsum board sheathing	3,690	SF	$12.00	$44,280
Wall Finishes				
Paint to walls - allow	10,744	SF	$0.75	$8,058
Ceramic wall tile - allow to 4' high	480	SF	$18.00	$8,640

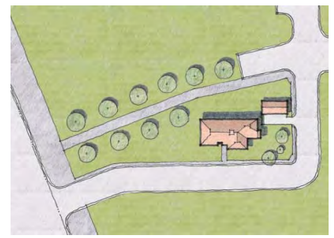
ARCHITECTURAL IMPROVEMENTS	Quantity	Unit	Rate	Total ($)
Floor Finishes				
Carpet / VCT - allow	4,225	SF	$4.50	$19,013
Rubber base - allow	975	SF	$3.00	$2,925
Ceramic floor tile - allow	390	SF	$20.00	$7,800
Ceramic floor base tile - allow	120	LF	$18.00	$2,160
Ceiling Finishes				
Acoustical tile ceiling and grid - allow	4,225	SF	$3.75	$15,844
Gypsum board, painted - allow	390	SF	$12.00	$4,680
Miscellaneous Finishes				
Allowance for miscellaneous repairs to existing finishes	4,615	SF	$1.50	$6,923
Plumbing				
New plumbing, including roof drainage, water heater	4,615	SF	$2.00	$9,230
HVAC				
All new with split fancoil system	4,615	SF	$12.00	$55,380
Fixed Furnishings				
New casework in kitchen / break room - allow	35	LF	$350.00	$12,250
New window coverings - allow				NIC, By Others
Miscellaneous furnishings - allow	4,615	SF	$1.00	$4,615
Building Elements Demolition				
Demolish existing sun room	425	SF	$2.50	$1,063
Demolish existing interior partitions	345	LF	$35.00	$12,075
Demolish existing casework	80	LF	$25.00	$2,000
Remove existing floor surface	4,615	SF	$2.00	$9,230
Remove existing dropped ceiling	4,615	SF	$2.00	$9,230
Miscellaneous demolition	4,615	SF	$1.00	$4,615
General Contractor's Mark-ups:				
Bonds & Insurance		1.5%		$4,058
General Conditions		10.0%		$27,460
Contractor's Overhead & Profit		3.5%		$10,572
Contingency for Design Development		15.0%		$46,895
Cost Escalation		5.7%		$20,375
Subtotal For Architectural Improvements:				**$379,903**

SITE IMPROVEMENTS	Quantity	Unit	Rate	Total ($)
Site demolition and relocations				
Demolish existing paving at existing parking	6,300	SF	$1.50	$9,450
Site earthwork				
Fine grading	8,645	SF	$1.00	$8,645
Vehicular paving				
Provide new parking, per plan - allow for grading, AC paving and base, concrete curbs, striping and signage, etc.	6,300	SF	$15.00	$94,500
Pedestrian paving				
Reconfigure sidewalks to align with new parking	2,345	SF	$10.00	$23,450
Replace / modify existing landings at exit doors	150	SF	$7.50	$1,125
Site development				
Preserve/restore historic open space	23,740	SF	$2.50	$59,350
Landscaping				
Protect existing gardens and trees	1	LS	$2,000.00	$2,000
Repair and restore landscaping, as needed	7,500	SF	$1.50	$11,250
General Contractor's Mark-ups:				
Bonds & Insurance		1.5%		$3,147
General Conditions		10.0%		$21,292
Contractor's Overhead & Profit		3.5%		$8,197
Contingency for Design Development		15.0%		$36,361
Cost Escalation		5.7%		$15,798
Subtotal For Site Improvements:				**$294,564**

Proposed Use: Single Family Residence	Quantity	Unit	Rate	Total ($)

Scope:

The Assistant Superintendent's Residence will remain a single family home. The only proposed work at this time is the remodeling of the existing bathrooms and kitchen, as well as refinishing/renovating the building interior/exterior finishes.
This work has no structural implications. Per Re-Use Feasibility Study, Reuse Description on page 77



Control Quantities (per digital take-off):

Stories	1	EA
Enclosed area	1,700	SF
Roof area (includes slope factor)	2,505	SF
Interior partitions	215	LF
Plumbing fixtures - allow	6	FX
Subtotal: Gross floor area	1,700	SF

Construction Costs (see below):

Structural Improvements			$58.06	$98,703
Code Improvements*			$24.37	$41,425
Architectural Improvements			$71.40	$121,374
Site Improvements			$28.35	$48,200
Total: Construction	1,700	SF	$182.18	$309,702

*Please note, there is potential that Building Official can excuse Code Requirement

STRUCTURAL IMPROVEMENTS	Quantity	Unit	Rate	Total ($)
Building Elements Demolition				
Stabilize existing trellis and remove trellis once a safe working environment has been established	1	LS	$1,500.00	$1,500
Demolish and remove portions of interior wall, floor, and ceiling as required for structural improvements	1,700	SF	$2.50	$4,250
Foundations				
Repair and reinforce existing foundations as required				NIC
Roof Construction				
Provide shear transfer between the roof and existing walls by adding new wood ledgers and blocking members to connect the existing roof diaphragm to the existing shear walls	210	LF	$25.00	$5,250
Strengthen the existing roof diaphragms with new plywood sheathing attached to the underside of the existing roof framing. Provide additional framing clips/straps for collector elements and at diaphragm openings as necessary	2,505	SF	$8.00	$20,040
Strengthen the existing shear walls with new plywood sheathing and framing clips	2,275	SF	$10.00	$22,750

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STRUCTURAL IMPROVEMENTS	Quantity	Unit	Rate	Total ($)
Roof Construction (continued)				
Strengthen the existing chimney. Some additional evaluation and possible exploratory demolition will likely be required to determine if there is any existing chimney anchorage and if that anchorage is adequate	120	SF	$40.00	$4,800
Miscellaneous				
Dry-rot and termite damage - allowance pending further survey and investigation	1	LS	$10,000.00	$10,000
Conduct an ASCE 31-03 Tier 2 investigation to confirm Tier 1 deficiencies where applicable				Excluded, By Others
Miscellaneous metals and rough carpentry - allow	1,700	SF	$1.00	$1,700

General Contractor's Mark-ups:

Bonds & Insurance	1.5%	$1,054
General Conditions	10.0%	$7,134
Contractor's Overhead & Profit	3.5%	$2,747
Contingency for Design Development	15.0%	$12,184
Cost Escalation	5.7%	$5,294

Subtotal For Structural Improvements: $98,703

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CODE IMPROVEMENTS*	Quantity	Unit	Rate	Total ($)
Fire Sprinklers and Rating Requirements				
Fire sprinklers - Group R occupancy				Not Required
Egress and Exit Requirements				Not Required
Stairs				
The treads and risers of the existing exterior steps do not meet code requirements. However, no change in use is proposed and it is reasonable to assume the existing steps would remain in use				Not Required
Accessibility				
Interior code signage - allow for tactile exit signs, accessibility symbols, etc.				Not Required
Toilet room accessories - allow	1	LS	$1,000.00	$1,000
Demolish all existing plumbing fixtures at toilet rooms (excludes showers) and replace for full renovation	4	FX	$5,000.00	$20,000
Minor electrical improvements, lights, receptacles, telephone, etc.	1,700	SF	$5.00	$8,500
Non-Structural Requirements				Not Required

General Contractor's Mark-ups:

Bonds & Insurance	1.5%	$443
General Conditions	10.0%	$2,994
Contractor's Overhead & Profit	3.5%	$1,153
Contingency for Design Development	15.0%	$5,113
Cost Escalation	5.7%	$2,222

Subtotal For Code Improvements*: $41,425

ARCHITECTURAL IMPROVEMENTS	Quantity	Unit	Rate	Total ($)
Exterior Walls				
Patch, repair, and paint exterior walls, fascia, and trim - allow	1,845	SF	$2.50	$4,613
Exterior Windows				
Patch, repair, and repaint wood casements, in place - allow for 10%	461	SF	$2.50	$1,153
Repair damaged glazing, in place - allow for 15%	69	SF	$60.00	$4,140
Exterior Doors				
Repaint wood doors and frames, single where necessary - allow	3	EA	$150.00	$450
Repaint wood doors and frames, double where necessary - allow	1	PR	$300.00	$300
Interior Partitions				
Repair / prepare walls for paint where necessary - allow	5,120	SF	$1.50	$7,680
Interior Doors				
Repaint wood doors and frames, single where necessary - allow	14	EA	$150.00	$2,100
Repaint wood doors and frames, double where necessary - allow	5	PR	$300.00	$1,500
Wall Finishes				
Paint to walls and trim - allow	5,120	SF	$0.75	$3,840
Repair, refinish, and / or replace wood trim, moldings, etc. where necessary - allow	1,280	LF	$5.00	$6,400
Floor Finishes				
New carpet - allow	1,615	SF	$4.50	$7,268
New wood base - allow	585	LF	$20.00	$11,700
Repair / regrout existing tile floor in toilet rooms - allow	85	SF	$10.00	$850
Repair / regrout existing tile base in toilet rooms - allow	55	LF	$7.50	$413
Ceiling Finishes				
Paint to ceiling - allow	1,700	SF	$1.50	$2,550
Repair / prepare ceiling for paint where necessary - allow	1,700	SF	$0.50	$850

ARCHITECTURAL IMPROVEMENTS	Quantity	Unit	Rate	Total ($)
Miscellaneous Finishes				
Allowance for miscellaneous repairs to existing finishes	1,700	SF	$1.50	$2,550
Plumbing				
Demolish all existing plumbing fixtures at kitchen and replace for full renovation	2	FX	$5,000.00	$10,000
Kitchen - allow	1	LS	$3,500.00	$3,500
HVAC				
Minor improvements to existing	1,700	SF	$2.00	$3,400
Fixed Furnishings				
Repair, refinish, and replace casework in kitchen - allow for 100%	25	LF	$250.00	$6,250
New window coverings - allow				NIC, By Other
Building Elements Demolition				
Remove existing carpet throughout	1,615	SF	$2.00	$3,230
Miscellaneous demolition	1,700	SF	$1.00	$1,700

General Contractor's Mark-ups:

Bonds & Insurance	1.5%	$1,297
General Conditions	10.0%	$8,773
Contractor's Overhead & Profit	3.5%	$3,378
Contingency for Design Development	15.0%	$14,982
Cost Escalation	5.7%	$6,510
Subtotal For Architectural Improvements:		**$121,374**

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SITE IMPROVEMENTS	Quantity	Unit	Rate	Total ($)
Site demolition and relocations				
Demolish existing paving at existing parking	445	SF	$1.50	$668
Demolish existing mechanical equipment - allow for residential type unit	1	LS	$500.00	$500
Site earthwork				
Fine grading	570	SF	$1.00	$570
Vehicular paving				
Reconfigure driveway, per plan	445	SF	$7.50	$3,338
Pedestrian paving				
New sidewalk to front door	125	SF	$10.00	$1,250
New patio / garden	1	LS	$5,000.00	$5,000
Landscaping				
Stabilize existing tree and remove tree once a safe working environment has been established	1	LS	$500.00	$500
Protect existing gardens and trees	1	LS	$1,500.00	$1,500
New landscaping	4,200	SF	$5.00	$21,000

General Contractor's Mark-ups:

Bonds & Insurance	1.5%	$515
General Conditions	10.0%	$3,484
Contractor's Overhead & Profit	3.5%	$1,341
Contingency for Design Development	15.0%	$5,950
Cost Escalation	5.7%	$2,585

Subtotal For Site Improvements: $48,200

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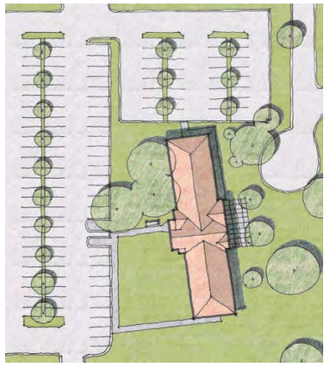
Proposed Use: Office

Scope:

The Administration building will continue to be used as an office building. The proposed scope of work appears to be a basic tenant improvement which will essentially result in the demolition of a the majority of existing corridor and partition walls, as well as other basic fixtures and furnishings to allow for the build out of new offices and rooms. No other major modifications or features are proposed at this time for the Administration building. Per Re-Use Feasibility Study, Reuse Description on page 87



Control Quantities (per digital take-off):

Stories	1	EA
Enclosed area	7,755	SF
Roof area (includes slope factor)	12,185	SF
Interior partitions	320	LF
Plumbing fixtures - allow	14	FX
Subtotal: Gross floor area	7,755	SF

Construction Costs (see below):

Structural Improvements			$85.02	$659,343
Code Improvements*			$31.20	$241,955
Architectural Improvements			$50.19	$389,248
Site Improvements			$73.25	$568,072
Total: Construction	7,755	SF	$239.67	$1,858,619

*Please note, there is potential that Building Official can excuse Code Requirement

STRUCTURAL IMPROVEMENTS	Quantity	Unit	Rate	Total ($)
Building Elements Demolition				
Demolish sally port at SW of building	445	SF	$10.00	$4,450
Demolish and remove portions of interior wall, floor, and ceiling as required for structural improvements	7,755	SF	$2.50	$19,388
Foundations				
Allowance for supplemental anchorage of wall and floor framing to existing foundations - allow for straps and hold-downs at perimeter of 1st floor	510	LF	$40.00	$20,400
Repair and reinforce existing foundations as required				NIC, By Others
Replace slab on grade as required	325	SF	$18.00	$5,850
Roof Construction				
Provide shear transfer between the roof and existing walls by adding new wood ledgers and blocking members to connect the existing roof diaphragm to the existing shear walls	510	LF	$25.00	$12,750
Strengthen the existing roof diaphragms with new plywood sheathing attached to the underside of the existing roof framing. Provide additional framing clips/straps for collector elements and at diaphragm openings as necessary	12,185	SF	$8.00	$97,480

STRUCTURAL IMPROVEMENTS	Quantity	Unit	Rate	Total ($)
Roof Construction (continued)				
Strengthen the existing brick URM walls with new shotcrete or composite fiber-reinforcing (FRP) or provide new lateral load resisting elements in the building interior	9,458	SF	$15.00	$141,870
Provide new out-of-plane anchors/hold-downs along the building perimeter for anchorage of the existing walls to the roof diaphragm. Additional wood blocking, straps and framing clips would also be required	510	LF	$35.00	$17,850
Strengthen the existing chimney. Some additional evaluation and possible exploratory demolition will likely be required to determine if there is any existing chimney anchorage and if that anchorage is adequate. Assuming the chimney is not adequately attached and cannot resist the seismic demands, provide strengthening and/or bracing	612	SF	$40.00	$24,480
Repair/replace damaged masonry units, and patch and fill existing cracks with epoxy injection - allow for 15% to be repaired and / or replaced	1,285	SF	$35.00	$44,975
Provide additional connection hardware at the beam to concrete pier support in the basement	6,204	SF	$5.00	$31,020
Reinforce existing joists and beams to account for greater spans	7,755	SF	$4.00	$31,020

STRUCTURAL IMPROVEMENTS	Quantity	Unit	Rate	Total ($)
Miscellaneous				
Dry-rot and termite damage - allowance pending further survey and investigation	1	LS	$10,000.00	$10,000
Conduct an ASCE 31-03 Tier 2 investigation to confirm Tier 1 deficiencies where applicable				Excluded, By Others
Miscellaneous metals and rough carpentry - allow	8,010	SF	$1.00	$8,010
General Contractor's Mark-ups:				
Bonds & Insurance		1.5%		$7,043
General Conditions		10.0%		$47,659
Contractor's Overhead & Profit		3.5%		$18,349
Contingency for Design Development		15.0%		$81,389
Cost Escalation		5.7%		$35,362
Subtotal For Structural Improvements:				**$659,343**

CODE IMPROVEMENTS*	Quantity	Unit	Rate	Total ($)
Fire Sprinklers and Rating Requirements				
Fire sprinklers - Group B occupancy	7,755	SF	$3.50	$27,143
Egress and Exit Requirements				
Exterior				
Remove and repair existing historic door to remain, single - allow for new hardware, and new threshold	1	EA	$1,500.00	$1,500
Interior				
New interior door, frame, and hardware, painted, single - allow	2	EA	$2,000.00	$4,000
Remove and repair existing doors to remain, single - allow for new hardware, and new threshold	11	EA	$1,050.00	$11,550

CODE IMPROVEMENTS*	Quantity	Unit	Rate	Total ($)
Stairs				Not Required
Accessibility				
Interior code signage - allow for tactile exit signs, accessibility symbols, etc.	1	LS	$3,500.00	$3,500
Toilet room partitions and accessories - allow	1	LS	$12,500.00	$12,500
Demolish all existing plumbing fixtures and replace	14	FX	$5,000.00	$70,000
Minor electrical improvements, lights, receptacles, telephone, etc.	7,755	SF	$5.00	$38,775
Non-Structural Requirements				Not Required
Building Elements Demolition				
Demolish existing slab on grade / raised floor at toilet rooms	325	SF	$1.50	$488
Remove and store existing doors to be demolished	38	EA	$75.00	$2,850
General Contractor's Mark-ups:				
Bonds & Insurance		1.5%		$2,585
General Conditions		10.0%		$17,489
Contractor's Overhead & Profit		3.5%		$6,733
Contingency for Design Development		15.0%		$29,867
Cost Escalation		5.7%		$12,976
Subtotal For Code Improvements*:				**$241,955**

ARCHITECTURAL IMPROVEMENTS	Quantity	Unit	Rate	Total ($)
Exterior Walls				
Patch, repair, and paint exterior walls, fascia, and trim - allow	8,568	SF	$2.50	$21,420
Clean exposed masonry surfaces and seal, and repoint mortar joints - allow for 50% of exterior wall	2,975	SF	$7.50	$22,313
Exterior Windows				
Patch, repair, and repaint wood casements, in place - allow for 20%	1,190	SF	$2.50	$2,975
Repair damaged glazing, in place - allow for 15%	179	SF	$60.00	$10,740
Interior Partitions				
Repair / prepare walls for paint where necessary - allow	9,508	SF	$1.50	$14,262
Interior partitions including wall framing, batt insulation, and gypsum board sheathing	301	SF	$12.00	$3,612
Wall Finishes				
Paint to walls and trim - allow	13,017	SF	$0.75	$9,763
Ceramic wall tile - allow to 4' high	400	SF	$18.00	$7,200
Floor Finishes				
Carpet / VCT - allow	7,485	SF	$4.50	$33,683
Rubber base - allow	1,050	SF	$3.00	$3,150
Ceramic floor tile - allow	270	SF	$20.00	$5,400
Ceramic floor base tile - allow	100	LF	$18.00	$1,800
Ceiling Finishes				
Acoustical tile ceiling and grid - allow	7,485	SF	$3.75	$28,069
Gypsum board, painted - allow	270	SF	$12.00	$3,240
Miscellaneous Finishes				
Allowance for miscellaneous repairs to existing finishes	7,755	SF	$1.50	$11,633
Preserve historic reception	1	LS	$10,000.00	$10,000
HVAC				
Minor improvements to existing	7,755	SF	$2.00	$15,510

ARCHITECTURAL IMPROVEMENTS	Quantity	Unit	Rate	Total ($)
Fixed Furnishings				
New casework in kitchenette - allow	35	LF	$350.00	$12,250
New window coverings - allow				NIC, By Other
Miscellaneous furnishings - allowance	7,755	SF	$1.00	$7,755
Building Elements Demolition				
Demolish existing interior partitions	390	LF	$35.00	$13,650
Remove floor surface	7,755	SF	$2.00	$15,510
Remove dropped ceiling	7,755	SF	$2.00	$15,510
Miscellaneous demolition	7,755	SF	$1.00	$7,755
General Contractor's Mark-ups:				
Bonds & Insurance		1.5%		$4,158
General Conditions		10.0%		$28,136
Contractor's Overhead & Profit		3.5%		$10,832
Contingency for Design Development		15.0%		$48,049
Cost Escalation		5.7%		$20,876
Subtotal For Architectural Improvements:				**$389,248**

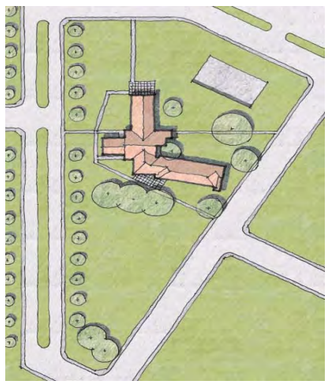
SITE IMPROVEMENTS	Quantity	Unit	Rate	Total ($)
Site demolition and relocations				
Demolish existing paving at existing parking	16,520	SF	$1.50	$24,780
Site earthwork				
Fine grading	19,965	SF	$1.00	$19,965
Vehicular paving				
Provide new parking, per plan - allow for grading, AC paving and base, concrete curbs, striping and signage, etc.	16,520	SF	$15.00	$247,800
Pedestrian paving				
Reconfigure sidewalks to align with new parking, per plan	2,385	SF	$10.00	$23,850
New plaza, per plan	1,060	SF	$25.00	$26,500

SITE IMPROVEMENTS	Quantity	Unit	Rate	Total ($)
Site development				
Repair/restore historic landscape elements - Scope to be determined	5,100	SF	$10.00	$51,000
Landscaping				
Protect existing gardens and trees	1	LS	$3,000.00	$3,000
Repair and restore landscaping, as needed	5,100	SF	$1.50	$7,650
General Contractor's Mark-ups:				
Bonds & Insurance		1.5%		$6,068
General Conditions		10.0%		$41,061
Contractor's Overhead & Profit		3.5%		$15,809
Contingency for Design Development		15.0%		$70,122
Cost Escalation		5.7%		$30,467
			Subtotal For Site Improvements:	**$568,072**

Proposed Use: Community Center

Scope:

The proposed re-use for the Chapel building is a new community center. The scope of work is to include the following: demolition of the interior partitions, demolition and relocation of existing stairway at choir loft, removal of chapel furnishings, demolition of entry vestibule, and build-out mixed use spaces. No other major modifications or features are proposed at this time for the re-use of this building as a church. Per Re-Use Feasibility Study, Reuse Description on page 98



Control Quantities (per digital take-off):

Stories	1	EA
Enclosed area	11,885	SF
Roof area (includes slope factor)	18,835	SF
Interior partitions	395	LF
Plumbing fixtures - allow	14	FX
Subtotal: Gross floor area	11,885	SF

Construction Costs (see below):

Structural Improvements			$83.54	$992,875
Code Improvements*			$77.63	$922,608
Architectural Improvements			$90.02	$1,069,944
Site Improvements			$78.16	$928,955
Total: Construction	11,885	SF	$329.35	$3,914,381

*Please note, there is potential that Building Official can excuse Code Requirement

STRUCTURAL IMPROVEMENTS	Quantity	Unit	Rate	Total ($)
Building Elements Demolition				
Demolish and remove portions of interior wall, floor, and ceiling as required for structural improvements	11,885	SF	$2.50	$29,713
Foundations				
Allowance for supplemental anchorage of wall and floor framing to existing foundations - allow for straps and hold-downs at perimeter of 1st floor	890	LF	$40.00	$35,600
Repair and reinforce existing foundations as required				NIC, By Others
Replace slab on grade as required	635	SF	$18.00	$11,430
Roof Construction				
Provide shear transfer between the roof and existing walls by adding new wood ledgers and blocking members to connect the existing roof diaphragm to the existing shear walls	890	LF	$25.00	$22,250
Strengthen the existing roof diaphragms with new plywood sheathing attached to the underside of the existing roof framing. Provide additional framing clips/straps for collector elements and at diaphragm openings as necessary	18,835	SF	$8.00	$150,680

STRUCTURAL IMPROVEMENTS	Quantity	Unit	Rate	Total ($)
Roof Construction (continued)				
Strengthen the existing brick URM walls with new shotcrete or composite fiber-reinforcing (FRP)	17,783	SF	$15.00	$266,745
Provide new out-of-plane anchors/hold-downs along the building perimeter for anchorage of the existing walls to the roof diaphragm. Additional wood blocking, straps and framing clips would also be required	890	LF	$35.00	$31,150
Strengthen the existing chimney. Some additional evaluation and possible exploratory demolition will likely be required to determine if there is any existing chimney anchorage and if that anchorage is adequate. Assuming the chimney is not adequately attached and cannot resist the seismic demands, provide strengthening and/or bracing	96	SF	$40.00	$3,840
Repair/replace damaged masonry units, and patch and fill existing cracks with epoxy injection - allow for 15% to be repaired and / or replaced	2,451	SF	$35.00	$85,785
Provide additional connection hardware at the beam connections to brick masonry	9,508	SF	$5.00	$47,540

STRUCTURAL IMPROVEMENTS	Quantity	Unit	Rate	Total ($)
Miscellaneous				
Dry-rot and termite damage - allowance pending further survey and investigation	1	LS	$10,000.00	$10,000
Conduct an ASCE 31-03 Tier 2 investigation to confirm Tier 1 deficiencies where applicable				Excluded, By Others
Miscellaneous metals and rough carpentry - allow	12,330	SF	$1.00	$12,330
General Contractor's Mark-ups:				
Bonds & Insurance		1.5%		$10,606
General Conditions		10.0%		$71,767
Contractor's Overhead & Profit		3.5%		$27,630
Contingency for Design Development		15.0%		$122,560
Cost Escalation		5.7%		$53,250
Subtotal For Structural Improvements:				**$992,875**

CODE IMPROVEMENTS*	Quantity	Unit	Rate	Total ($)
Fire Sprinklers and Rating Requirements				
Fire sprinklers - Group A-3 occupancy	11,885	SF	$3.50	$41,598
Egress and Exit Requirements				
Exterior				
New exit door at main lobby, double	1	EA	$5,000.00	$5,000
Remove and repair existing doors to remain, single - allow for new hardware, exit device, and new threshold	4	EA	$2,050.00	$8,200
Remove and repair existing doors to remain, single - allow for new hardware, and new threshold	3	EA	$1,050.00	$3,150
Remove and repair existing doors to remain, double - allow for new hardware, and new threshold	1	EA	$2,000.00	$2,000

CODE IMPROVEMENTS*	Quantity	Unit	Rate	Total ($)
Egress and Exit Requirements				
Interior				
Remove and repair existing doors to remain, single - allow for new hardware, and new threshold	2	EA	$1,050.00	$2,100
Remove and repair existing doors to remain, double - allow for new hardware, and new threshold	1	EA	$2,100.00	$2,100
New interior door, frame, and hardware, painted, single - allow	12	EA	$2,000.00	$24,000
New interior door, frame, and hardware, painted, double - allow	5	EA	$4,000.00	$20,000
Stairs				
Install new stair to control room	1	FLT	$10,000.00	$10,000
Accessibility				
Interior code signage - allow for tactile exit signs, accessibility symbols, etc.	1	LS	$7,500.00	$7,500
Toilet room partitions and accessories - allow	1	LS	$10,000.00	$10,000
Demolish all existing plumbing fixtures and replace	14	FX	$5,000.00	$70,000
Emergency and exit lighting	11,885	SF	$1.50	$17,828
New power, lights, receptacles, telephone, etc.	11,885	SF	$15.00	$178,275
Non-Structural Requirements				
Clay tile anchorage - allow for removal and reinstallation of existing tile, 80% reusable tile	15,070	SF	$12.00	$180,840
Clay tile anchorage - allow for new tile to supplement those broken in the course of repair	3,765	SF	$18.00	$67,770

CODE IMPROVEMENTS*	Quantity	Unit	Rate	Total ($)
Building Elements Demolition				
Demolish existing slab on grade at toilet rooms	635	SF	$1.50	$953
Remove stair to choir loft	70	SF	$10.00	$700
Remove and store existing doors to be demolished	23	EA	$75.00	$1,725
Demolish entry vestibule on west side	219	SF	$15.00	$3,285
General Contractor's Mark-ups:				
Bonds & Insurance		1.5%		$9,855
General Conditions		10.0%		$66,688
Contractor's Overhead & Profit		3.5%		$25,675
Contingency for Design Development		15.0%		$113,886
Cost Escalation		5.7%		$49,481
			Subtotal For Code Improvements*:	**$922,608**

ARCHITECTURAL IMPROVEMENTS	Quantity	Unit	Rate	Total ($)
Exterior Walls				
Patch, repair, and paint exterior walls, fascia, and trim - allow	16,340	SF	$2.50	$40,850
Clean exposed masonry surfaces and seal, and repoint mortar joints - allow for 75%	12,255	SF	$7.50	$91,913
Exterior Windows				
Patch, repair, and repaint wood casements, in place - allow for 15%	5,874	SF	$2.50	$14,685
Repair damaged glazing, in place - allow for 15%	881	SF	$60.00	$52,860
Interior Partitions				
Repair / prepare walls for paint where necessary - allow	18,775	SF	$1.50	$28,163
Interior partitions including wall framing, batt insulation, and gypsum board sheathing	5,771	SF	$12.00	$69,252

ARCHITECTURAL IMPROVEMENTS	Quantity	Unit	Rate	Total ($)
Wall Finishes				
Paint to walls and trim - allow	23,687	SF	$0.75	$17,765
Ceramic wall tile - allow to 4' high	860	SF	$18.00	$15,480
Repair, refinish, and / or replace wood trim, moldings, etc. where necessary - allow	3,360	SF	$5.00	$16,800
Repair water damage in entry and waiting area	1	LS	$3,500.00	$3,500
Floor Finishes				
Carpet / VCT - allow	11,250	SF	$4.50	$50,625
Rubber base - allow	1,465	LF	$3.00	$4,395
Ceramic floor tile - allow	635	SF	$20.00	$12,700
Ceramic floor base tile - allow	215	LF	$18.00	$3,870
Ceiling Finishes				
Paint to ceiling - allow	5,625	SF	$1.50	$8,438
Gypsum board, painted - allow	635	SF	$12.00	$7,620
Acoustical ceiling tile and grid - allow	5,625	SF	$3.75	$21,094
Repair / prepare ceiling for paint where necessary - allow	5,625	SF	$1.00	$5,625
Miscellaneous Finishes				
Allowance for miscellaneous repairs to existing finishes	11,885	SF	$1.50	$17,828
Preserve arch masonry ribs on ceiling and any other historic features	1	LS	$20,000.00	$20,000
HVAC				
All new with split fancoil system	11,885	SF	$12.00	$142,620
Equipment				
Install full equipped teaching kitchen including casework	1	LS	$30,000.00	$30,000
Fixed Furnishings				
New window coverings - allow				NIC, By Others
Miscellaneous furnishings - allow	11,885	SF	$1.00	$11,885

ARCHITECTURAL IMPROVEMENTS	Quantity	Unit	Rate	Total ($)
Building Elements Demolition				
Remove platforms associated with chapels	1,005	SF	$5.00	$5,025
Demolish existing interior partitions	630	LF	$35.00	$22,050
Remove existing floor surface	11,885	SF	$2.00	$23,770
Remove existing ceiling	5,625	SF	$2.00	$11,250
Miscellaneous demolition	11,885	SF	$1.00	$11,885
General Contractor's Mark-ups:				
Bonds & Insurance		1.5%		$11,429
General Conditions		10.0%		$77,338
Contractor's Overhead & Profit		3.5%		$29,775
Contingency for Design Development		15.0%		$132,073
Cost Escalation		5.7%		$57,383
Subtotal For Architectural Improvements:				**$1,069,944**

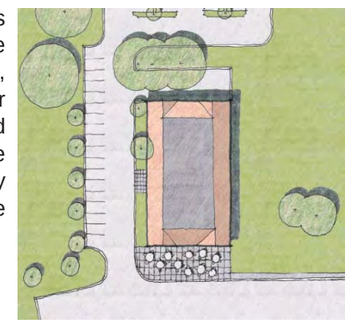
SITE IMPROVEMENTS	Quantity	Unit	Rate	Total ($)
Site demolition and relocations				
Remove exterior air conditioning equipment	1	LS	$1,000.00	$1,000
Demolish existing paving at existing parking	5,110	SF	$1.50	$7,665
Site earthwork				
Fine grading	7,075	SF	$1.00	$7,075
Vehicular paving				
New parking, per plan - allow for grading, AC paving and base, concrete curbs, striping and signage, drainage, lighting, etc.	550	SF	$15.00	$8,250
Pedestrian paving				
Reconfigure sidewalks to align with new driveway, per plan	4,560	SF	$10.00	$45,600
New plaza, per plan	1,965	SF	$25.00	$49,125

SITE IMPROVEMENTS	Quantity	Unit	Rate	Total ($)
Site development				
Provide new community pool, per plan	1	LS	$100,000.00	$100,000
Preserve/restore historic open space, per plan	1	LS	$75,000.00	$75,000
Community park elements - allow for play structures, site furnishings, etc.	28,826	SF	$2.50	$72,065
Landscaping				
Provide new landscaping per plan	28,826	SF	$5.00	$144,130
Protect existing gardens and trees	1	LS	$7,500.00	$7,500
Repair and restore landscaping, as needed	57,653	SF	$2.50	$144,133
General Contractor's Mark-ups:				
Bonds & Insurance		1.5%		$9,923
General Conditions		10.0%		$67,147
Contractor's Overhead & Profit		3.5%		$25,851
Contingency for Design Development		15.0%		$114,670
Cost Escalation		5.7%		$49,822
Subtotal For Site Improvements:				**$928,955**

Proposed Use: Grocery Store	Quantity	Unit	Rate	Total ($)

Scope:

The proposed re-use for the Old Maintenance Garage building is a new grocery store. The scope of work is to include the following: demolition of the interior partitions and mezzanines, infill of an existing wall opening, new loading dock/lifts for delivery, and build-out for some small offices, restrooms, and storage space. No other major modifications or features are proposed at this time for the re-use of this building as a grocery store. Per Re-Use Feasibility Study, Reuse Description on page 109



Control Quantities (per digital take-off):

Stories	1	EA
Enclosed area	11,295	SF
Roof area (includes slope factor)	16,655	SF
Interior partitions	255	LF
Plumbing fixtures - allow	6	FX
Subtotal: Gross floor area	11,295	SF

Construction Costs (see below):

Structural Improvements			$53.36	$602,746
Code Improvements*			$38.37	$433,428
Architectural Improvements			$68.41	$772,681
Site Improvements			$33.82	$381,967
Total: Construction	11,295	SF	$193.96	$2,190,822

*Please note, there is potential that Building Official can excuse Code Requirement

STRUCTURAL IMPROVEMENTS	Quantity	Unit	Rate	Total ($)
Building Elements Demolition				
Demolish and remove portions of interior wall, floor, and ceiling as required for structural improvements	11,295	SF	$2.50	$28,238
Foundations				
Allowance for supplemental anchorage of wall and floor framing to existing foundations - allow for straps and hold-downs at perimeter of 1st floor	445	LF	$40.00	$17,800
Repair and reinforce existing foundations as required				NIC, By Others
Replace slab on grade as required	480	SF	$18.00	$8,640
Roof Construction				
Provide shear transfer between the roof and existing walls by adding new wood ledgers and blocking members to connect the existing roof diaphragm to the existing shear walls	445	LF	$25.00	$11,125
Strengthen the existing roof diaphragms with new plywood sheathing attached to the underside of the existing roof framing. Provide additional framing clips/straps for collector elements and at diaphragm openings as necessary	16,655	SF	$8.00	$133,240
Strengthen the existing brick URM walls with new shotcrete or composite fiber-reinforcing (FRP) or provide new lateral load resisting elements in the building interior	8,187	SF	$15.00	$122,805

STRUCTURAL IMPROVEMENTS	Quantity	Unit	Rate	Total ($)
Roof Construction (continued)				
Provide new out-of-plane anchors/hold-downs along the building perimeter for anchorage of the existing walls to the roof diaphragm. Additional wood blocking, straps and framing clips would also be required.	445	LF	$35.00	$15,575
Repair/replace damaged masonry units, and patch and fill existing cracks with epoxy injection - allow for 15% to be repaired and / or replaced	1,082	SF	$35.00	$37,870
Provide secondary steel supports for trusses supported on URM walls	445	LF	$50.00	$22,250
Miscellaneous				
Dry-rot and termite damage - allowance pending further survey and investigation	1	LS	$10,000.00	$10,000
Conduct an ASCE 31-03 Tier 2 investigation to confirm Tier 1 deficiencies where applicable				Excluded, By Others
Miscellaneous metals and rough carpentry - allow	11,295	SF	$1.00	$11,295
Exterior Walls				
Exterior wall infill - allow for concrete masonry to match surrounding wall, fully reinforced and dowelled to existing	208	SF	$50.00	$10,400
General Contractor's Mark-ups:				
Bonds & Insurance		1.5%		$6,439
General Conditions		10.0%		$43,568
Contractor's Overhead & Profit		3.5%		$16,774
Contingency for Design Development		15.0%		$74,403
Cost Escalation		5.7%		$32,326
Subtotal For Structural Improvements:				**$602,746**

CODE IMPROVEMENTS*	Quantity	Unit	Rate	Total ($)
Fire Sprinklers and Rating Requirements				
Fire sprinklers - Group M occupancy				Not Required
Egress and Exit Requirements				
Exterior				
New glass doors with full side lites on East elevation, double	3	PR	$15,000.00	$45,000
Replace swing doors on north elevation	2	EA	$5,000.00	$10,000
Repair large sliding door on south elevation	365	SF	$50.00	$18,250
Interior				
New interior door, frame, and hardware, painted, single - allow	4	EA	$2,000.00	$8,000
New interior door, frame, and hardware, painted, double - allow	2	EA	$4,000.00	$8,000
Stairs				Not Required
Accessibility				
Interior code signage - allow for tactile exit signs, accessibility symbols, etc.	1	LS	$3,000.00	$3,000
Toilet room partitions and accessories - allow	1	LS	$10,000.00	$10,000
Demolish all existing plumbing fixtures and replace	6	FX	$5,000.00	$30,000
Minor electrical improvements, lights, receptacles, telephone, etc.	11,295	SF	$5.00	$56,475
Non-Structural Requirements				
Clay tile anchorage - allow for reinstallation of existing tile, 80% reusable tile	9,485	SF	$8.00	$75,880
Clay tile anchorage - allow for new tile to supplement those broken in the course of repair	2,370	SF	$18.00	$42,660

CODE IMPROVEMENTS*	Quantity	Unit	Rate	Total ($)
Building Elements Demolition				
Demolish existing slab on grade at toilet rooms	480	SF	$1.50	$720
Remove and store existing doors to be demolished	9	EA	$75.00	$675
General Contractor's Mark-ups:				
Bonds & Insurance		1.5%		$4,630
General Conditions		10.0%		$31,329
Contractor's Overhead & Profit		3.5%		$12,062
Contingency for Design Development		15.0%		$53,502
Cost Escalation		5.7%		$23,246
		Subtotal For Code Improvements*:		**$433,428**

ARCHITECTURAL IMPROVEMENTS	Quantity	Unit	Rate	Total ($)
Exterior Walls				
Patch, repair, and paint exterior walls, fascia, and trim - allow	7,215	SF	$2.50	$18,038
Clean exposed masonry surfaces and seal, and repoint mortar joints - allow for 60%	4,329	SF	$7.50	$32,468
Provide sun protection for windows on South elevation	137	SF	$55.00	$7,535
Exterior Windows				
Patch, repair, and repaint wood casements, in place - allow	40	SF	$5.00	$200
Repair damaged glazing, in place - allow for 50%	20	SF	$60.00	$1,200
Replace windows in existing upper windows on East elevation	190	SF	$75.00	$14,250
Exterior Doors				
Overhead rolling doors at dock	231	SF	$90.00	$20,790

ARCHITECTURAL IMPROVEMENTS	Quantity	Unit	Rate	Total ($)
Roof Coverings and Openings				
Repair or replace flat roof - allow	4,800	SF	$10.00	$48,000
Preserve existing skylight, reinforce and provide seismic protection measures	800	SF	$75.00	$60,000
Interior Partitions				
Repair / prepare walls for paint where necessary - allow	10,675	SF	$1.50	$16,013
Interior partitions including wall framing, batt insulation, and gypsum board sheathing	3,889	SF	$12.00	$46,668
Wall Finishes				
Paint to walls and trim - allow	14,064	SF	$0.75	$10,548
Ceramic wall tile - allow to 4' high	500	SF	$18.00	$9,000
Floor Finishes				
Carpet / VCT - allow	11,294	SF	$4.50	$50,823
Rubber base - allow	830	LF	$3.00	$2,490
Ceramic floor tile - allow	475	SF	$20.00	$9,500
Ceramic floor base tile - allow	125	LF	$18.00	$2,250
Ceiling Finishes				
Paint to ceiling - allow	10,820	SF	$1.50	$16,230
Gypsum board, painted - allow	475	SF	$12.00	$5,700
Repair / prepare ceiling for paint where necessary - allow	10,820	SF	$1.00	$10,820
Miscellaneous Finishes				
Allowance for miscellaneous repairs to existing finishes	11,295	SF	$1.50	$16,943
HVAC				
Minor improvements to existing	11,295	SF	$2.00	$22,590
Equipment				
Provide dock levelers	2	EA	$25,000.00	$50,000
Grocery fixtures and furnishings				NIC, By Others
Furnishings				
New window coverings - allow				NIC, By Others

ARCHITECTURAL IMPROVEMENTS	Quantity	Unit	Rate	Total ($)
Building Elements Demolition				
Demolish all interior partitions	345	LF	$35.00	$12,075
Remove all existing equipment at wall, floor, and ceiling	11,295	SF	$2.00	$22,590
Demolish plywood infill and windows at east façade	370	SF	$15.00	$5,550
Demolish overhead doors at west and south façade	410	SF	$10.00	$4,100
Remove floor surface	11,295	SF	$2.00	$22,590
Miscellaneous demolition - allow	11,295	SF	$1.00	$11,295
General Contractor's Mark-ups:				
Bonds & Insurance		1.5%		$8,254
General Conditions		10.0%		$55,851
Contractor's Overhead & Profit		3.5%		$21,503
Contingency for Design Development		15.0%		$95,379
Cost Escalation		5.7%		$41,440
			Subtotal For Architectural Improvements:	**$772,681**

SITE IMPROVEMENTS	Quantity	Unit	Rate	Total ($)
Site demolition and relocations				
Demolish existing paving at existing parking	13,395	SF	$1.50	$20,093
Site earthwork				
Fine grading	13,395	SF	$1.00	$13,395
Vehicular paving				
New parking, per plan - allow for grading, AC paving and base, concrete curbs, striping and signage, drainage, lighting, etc.	11,270	SF	$15.00	$169,050
Pedestrian paving				
New plaza, per plan	2,125	SF	$25.00	$53,125

SITE IMPROVEMENTS	Quantity	Unit	Rate	Total ($)
Landscaping				
Protect existing trees	1	LS	$3,000.00	$3,000
Repair and restore landscaping, as needed	8,900	SF	$1.50	$13,350
General Contractor's Mark-ups:				
Bonds & Insurance		1.5%		$4,080
General Conditions		10.0%		$27,609
Contractor's Overhead & Profit		3.5%		$10,630
Contingency for Design Development		15.0%		$47,150
Cost Escalation		5.7%		$20,486
			Subtotal For Site Improvements:	**$381,967**

Proposed Use: Church	Quantity	Unit	Rate	Total ($)

Scope:

The proposed re-use for the Gymnasium building is a chapel. The scope of work includes the following: demolition of the entire 1962 southwest addition area, demolition of interior partition walls, demolition of plumbing, doors, and other non-structural items, demolition of existing exterior wall for new window openings, reconstruct the patio area at southwest corner to match original building construction, build out of new rooms/offices in the existing building, build out of basement for fellowship hall, classrooms and kitchen, addition of interior fire stairs, and addition of elevator. No other major modifications or features are proposed at this time for the re-use of this building as a chapel. Per Re-Use Feasibility Study, Reuse Description on page 120

Control Quantities (per digital take-off):

Stories	2	EA
Enclosed area	15,610	SF
Roof area (includes slope factor)	14,015	SF
Interior partitions	720	LF
Plumbing fixtures - allow	16	FX
Subtotal: Gross floor area	15,610	SF

Construction Costs (see below):

Structural Improvements			$26.15	$408,188
Code Improvements*			$72.15	$1,126,248
Architectural Improvements			$87.13	$1,360,072
Site Improvements			$159.86	$2,495,407
Total: Construction	15,610	SF	$345.29	$5,389,915

*Please note, there is potential that Building Official can excuse Code Requirement

STRUCTURAL IMPROVEMENTS	Quantity	Unit	Rate	Total ($)
Building Elements Demolition				
Demolish and remove portions of interior wall, floor, and ceiling as required for structural improvements	789	SF	$2.50	$1,973
Foundations				
Dowel existing walls to foundations - allow for drilled epoxy dowel with anchors and clips at perimeter of 1st floor				NIC, not required
Allowance for supplemental anchorage of wall and floor framing to existing foundations - allow for straps and hold-downs at perimeter of 1st floor	320	LF	$40.00	$12,800
Replace slab on grade as required	595	SF	$18.00	$10,710
Elevator pit - allow	1	LS	$20,000.00	$20,000
Roof Construction				
Strengthen the existing roof diaphragms with new plywood sheathing attached to the underside of the existing roof framing. Provide additional framing clips/straps for collector elements and at diaphragm openings as necessary	14,015	SF	$8.00	$112,120
Provide new out-of-plane anchors/hold-downs along the building perimeter for anchorage of the existing walls to the roof diaphragm. Additional wood blocking, straps and framing clips would also be required	535	LF	$35.00	$18,725
Patch and fill existing cracks in concrete building with epoxy injection - allow for 15% to be repaired and / or replaced	2,528	SF	$35.00	$88,480

STRUCTURAL IMPROVEMENTS	Quantity	Unit	Rate	Total ($)
Miscellaneous				
Dry-rot and termite damage - allowance pending further survey and investigation	1	LS	$10,000.00	$10,000
Conduct an ASCE 31-03 Tier 2 investigation to confirm Tier 1 deficiencies where applicable				Excluded, By Others
Miscellaneous metals and rough carpentry - allow	15,878	SF	$1.00	$15,878
General Contractor's Mark-ups:				
Bonds & Insurance		1.5%		$4,360
General Conditions		10.0%		$29,505
Contractor's Overhead & Profit		3.5%		$11,359
Contingency for Design Development		15.0%		$50,386
Cost Escalation		5.7%		$21,892
			Subtotal For Structural Improvements:	**$408,188**

CODE IMPROVEMENTS*	Quantity	Unit	Rate	Total ($)
Fire Sprinklers and Rating Requirements				
Fire sprinklers - Group A-3 occupancy	15,610	SF	$3.50	$54,635
Egress and Exit Requirements				
Exterior				
New exterior door, frame, and hardware, painted, single - allow	2	EA	$2,000.00	$4,000
New exterior door, frame, and hardware, painted, double - allow	4	EA	$4,000.00	$16,000
Interior				
New interior door, frame, and hardware, painted, single - allow	17	EA	$2,000.00	$34,000
New interior door, frame, and hardware, painted, double - allow	9	EA	$4,000.00	$36,000
Stairs				
New interior exit stair	1	FLT	$15,000.00	$15,000

CODE IMPROVEMENTS*	Quantity	Unit	Rate	Total ($)
Accessibility				
Interior code signage - allow for tactile exit signs, accessibility symbols, etc.	1	LS	$7,500.00	$7,500
Toilet room partitions and accessories - allow	1	LS	$17,500.00	$17,500
New elevator including demolition and patch for install, crane time, etc. - allow	1	LS	$200,000.00	$200,000
New plumbing fixtures	16	FX	$4,850.00	$77,600
Emergency and exit lighting	15,610	SF	$1.50	$23,415
Major electrical improvements, lights, receptacles, telephone	15,610	SF	$20.00	$312,200
Non-Structural Requirements				Not Required
Building Elements Demolition				
Demolish existing plumbing fixtures	10	FX	$150.00	$1,500
Demolish existing slab on grade at toilet rooms	595	SF	$1.50	$893
Remove and store existing doors to be demolished	24	EA	$75.00	$1,800
General Contractor's Mark-ups:				
Bonds & Insurance		1.5%		$12,031
General Conditions		10.0%		$81,407
Contractor's Overhead & Profit		3.5%		$31,342
Contingency for Design Development		15.0%		$139,023
Cost Escalation		5.7%		$60,403
			Subtotal For Code Improvements*:	**$1,126,248**

ARCHITECTURAL IMPROVEMENTS	Quantity	Unit	Rate	Total ($)
Exterior Walls				
Patch, repair, and paint exterior walls, fascia, and trim - allow	16,850	SF	$2.50	$42,125
Paint exterior walls (stucco) - allow for 60%	10,110	SF	$1.50	$15,165

ARCHITECTURAL IMPROVEMENTS	Quantity	Unit	Rate	Total ($)
Exterior Windows				
Patch, repair, and repaint wood casements, in place - allow for 25%	4,213	SF	$2.50	$10,533
Repair damaged glazing, in place - allow for 15%	632	SF	$60.00	$37,920
New windows at office wing and ground level	170	SF	$75.00	$12,750
Interior Partitions				
Repair / prepare walls for paint where necessary - allow	13,390	SF	$1.50	$20,085
Interior partitions including wall framing, batt insulation, and gypsum board sheathing	11,429	SF	$12.00	$137,148
Wall Finishes				
Paint to walls and trim - allow	37,288	SF	$0.75	$27,966
Ceramic wall tile - allow to 4' high	960	SF	$18.00	$17,280
Repair, refinish, and / or replace wood trim, moldings, etc. where necessary - allow	4,590	LF	$5.00	$22,950
Floor Finishes				
Refinish wood floors - allow	5,140	SF	$8.00	$41,120
Repair/refinish/replace wood base - allow	2,055	LF	$15.00	$30,825
Carpet / VCT - allow	9,665	SF	$4.50	$43,493
Ceramic floor tile - allow	805	SF	$20.00	$16,100
Ceramic floor base tile - allow	240	LF	$18.00	$4,320
Ceiling Finishes				
Paint to ceiling - allow	15,015	SF	$1.50	$22,523
Gypsum board, painted - allow	595	SF	$12.00	$7,140
Repair / prepare ceiling for paint where necessary - allow	15,015	SF	$1.00	$15,015
Miscellaneous Finishes				
Allowance for miscellaneous repairs to existing finishes	15,610	SF	$1.50	$23,415
Plumbing				
Kitchen - allow	1	LS	$3,500.00	$3,500

ARCHITECTURAL IMPROVEMENTS	Quantity	Unit	Rate	Total ($)
HVAC				
All new with split fancoil system	15,610	SF	$18.00	$280,980
Equipment				
Full kitchen for catering - allow	1	LS	$25,000.00	$25,000
Fixed Furnishings				
New window coverings - allow				NIC, By Others
Miscellaneous furnishings - allow	15,610	SF	$2.50	$39,025
Building Elements Demolition				
Demolish portions of exterior wall for new window openings	102	SF	$15.00	$1,530
Demolish existing 1962 addition	1,730	SF	$5.00	$8,650
Demolish existing interior partitions	230	LF	$35.00	$8,050
Demolish existing floor finish	10,200	SF	$2.00	$20,400
Remove all existing equipment at wall, floor, and ceiling	8,970	SF	$2.00	$17,940
Miscellaneous demolition - allow	15,610	SF	$1.00	$15,610

General Contractor's Mark-ups:		
Bonds & Insurance	1.5%	$14,528
General Conditions	10.0%	$98,308
Contractor's Overhead & Profit	3.5%	$37,849
Contingency for Design Development	15.0%	$167,886
Cost Escalation	5.7%	$72,943
Subtotal For Architectural Improvements:		**$1,360,072**

SITE IMPROVEMENTS	Quantity	Unit	Rate	Total ($)
Site demolition and relocations				
Demolish existing at new parking	97,505	SF	$0.50	$48,753
Site earthwork				
Fine grading	11,710	SF	$1.00	$11,710

SITE IMPROVEMENTS	Quantity	Unit	Rate	Total ($)
Vehicular paving				
New parking, per plan - allow for grading, AC paving and base, concrete curbs, striping and signage, drainage, lighting, etc.	97,505	SF	$15.00	$1,462,575
Pedestrian paving				
Reconfigure sidewalks to align with new parking	9,955	SF	$10.00	$99,550
New plaza, per plan	1,755	SF	$25.00	$43,875
Site development				
New porch / patio at office wing - allow	1,070	SF	$55.00	$58,850
Accessible ramp and stairs at porch / patio at office wing - allow	585	SF	$35.00	$20,475
Modification / replace to (E) handrail and guard heights including handrail extensions	1	LS	$5,000.00	$5,000
Landscaping				
Protect existing gardens and trees	1	LS	$1,500.00	$1,500
Repair and restore landscaping, as needed	10,700	SF	$2.50	$26,750
General Contractor's Mark-ups:				
Bonds & Insurance		1.5%		$26,686
General Conditions		10.0%		$180,572
Contractor's Overhead & Profit		3.5%		$69,520
Contingency for Design Development		15.0%		$308,372
Cost Escalation		5.7%		$131,219
			Subtotal For Site Improvements:	**$2,495,407**

Sheathing Above Existing / Roof Replacement	Quantity	Unit	Rate	Total ($)
Alternate Description:				
Allow for removal and replacement of existing roofing in order to add additional plywood sheathing above existing sheathing per structural recommendations. Included in the base estimate are costs for add additional plywood sheathing to underside of the existing roof framing.				
ADD:				
Building Elements Demolition				
Demolish existing wood roof - allow at Building 1, 4, 5, and 8	38,145	SF	$3.00	$114,435
Clay tile anchorage - allow for removal of existing tile, salvage for reinstall - allow at Building 2, 3, 6, and 7	47,090	SF	Included with Base Costs	
Roof Construction				
Strengthen existing diaphragms with new plywood sheathing added above existing 1x sheathing. Provide additional framing clips/straps for collector elements and at diaphragm openings as necessary - allow at Building 1, 2, 3, 4, 5, 6, 7, and 8	85,235	SF	Included with Base Costs	
Roof Coverings				
New wood roof - allow at Building 1, 4, 5, and 8	38,145	SF	$10.00	$381,450
Clay tile anchorage - allow for removal and reinstallation of existing tile, 80% reusable tile - allow at Building 2, 3, 6, and 7	37,675	SF	Included with Base Costs	
Clay tile anchorage - allow for new tile to supplement those broken in the course of repair - allow at Building 2, 3, 6, and 7	9,415	SF	Included with Base Costs	
Mark-up's per Overall Summary	40.4%			$200,449
			Subtotal For Sheathing Above Existing / Roof Replacement:	**$696,334**

ANALYSIS OF POTENTIAL FEASIBILITY OF RE-USE OF EIGHT HISTORIC STRUCTURES LOCATED ON THE GROUNDS OF THE FORMER FRED C. NELLES YOUTH CORRECTIONAL FACILTY, WHITTIER, LOS ANGELES COUNTY, CALIFORNIA

A Memorandum Report to

STATE OF CALIFORNIA DEPARTMENT OF GENERAL SERVICES
REAL ESTATE SERVICES DIVISION, ASSET ENHANCEMENT BRANCH
FOR

PAGE & TURNBULL

From

GRUEN GRUEN + ASSOCIATES
Urban Economists, Market Strategists & Land Use/Public Policy Analysts

November 2011

C1314

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GRUEN GRUEN + ASSOCIATES
MEMORANDUM

Date: November 2, 2011
To: Ruth Todd, Page & Turnbull
From: Gruen Gruen + Associates
Subject: C1314 Analysis of Potential Feasibility of Re-use of Eight Historic Structures Located on the Grounds of the Former Fred C. Nelles Youth Correctional Facility, Whittier, Los Angeles County, California

INTRODUCTION

This memorandum report summarizes the results of the market and financial feasibility assessment of the potential re-use of eight historic structures located on the grounds of the former Fred C. Nelles Youth Correctional Facility in Whittier, Los Angeles County, California.

Table 1 lists the eight structures for which re-use alternatives are postulated.

TABLE 1

Historic Structures and Postulated Re-use Alternatives

Historic Structures	Postulated Re-use Alternatives
Former Superintendent's Residence	Single-Family Residence
Former Auditorium	Auditorium
Former Infirmary	Office
Former Assistant Superintendent's Residence	Single-Family Residence
Former Administration Building	Office
Former Chapel	Community Center
Former Maintenance Garage	Library or Grocery Store
Former Gymnasium	Church
Source: Page & Turnbull	

In order to evaluate the potential market responsiveness and financial feasibility of private re-use alternatives including residential, office, and grocery store options, GG+A conducted research and analysis to identify:

- the primary advantages and disadvantages of the location and buildings from the perspective of potential buyers/users;
- the market conditions and prevailing rents or sales prices within the relevant market for comparable types of uses; and
- given estimates of obtainable rents or sales prices, construction and related costs to prepare the structures for re-use alternatives, and other financial variables, whether it would be profitable for a developer or user to undertake to re-use each structure. Because the price of the land highly influences feasibility, for purposes of this analysis, to permit comparison

across re-use alternatives, we assume that the sites for each structure would be available at no cost. The exclusion of such a significant cost factor lowers the threshold for feasibility.

For public or non-profit uses such as auditorium, community center, church, and library re-use alternatives, research and analysis focused on whether users are likely to be obtainable and whether such users could afford to retrofit the buildings and thereafter pay all operating and maintenance costs.

BASIC CONCLUSION

As described in detail below, limited demand pertains to all of the postulated uses. Even when demand from users which rent or buy space is assumed to apply to private residential, office, and retail uses, the costs of the retrofits to repurpose or re-use the building space exceed the value estimated to apply to the refurbished and remodeled space. This failure to pass a feasibility threshold is before consideration of land purchase costs, financing costs, marketing costs, and other expenses likely to apply to the re-use, operation, and conveyance of the retrofitted space.

As noted below, the findings suggest that alternative uses to the primary and best candidate re-use opportunities postulated in the main report produce similar findings of lack of demand and financial infeasibility. A major constraint is many of the buildings are special purpose facilities that previously served the unique needs of an integrated youth correctional facility; the demands for which are not readily replicated by other types of institutions or space users. The re-use of any one building such as an auditorium may not be demanded as stand alone facilities not part of campuses by institutional uses such as Whittier College.

ASSESSMENT OF RE-USE OF SUPERINTENDENT'S RESIDENCE AND ASSISTANT SUPERINTENDENT'S RESIDENCE AS SINGLE-FAMILY RESIDENCES

To complete an assessment of the potential feasibility of the re-use of the former Superintendent's Residence and former Assistant Superintendent's Residence into single-family residences, GG+A staff interviewed local residential real estate brokers knowledgeable of the Whittier market area and reviewed secondary sales and listing data to identify:

- the relative advantages and disadvantages or constraints associated with the re-use and sale of each Residence as singe-family homes;
- potential obtainable sales prices (assuming each property was rehabilitated to contemporary standards); and
- whether the estimated obtainable sales prices would be at least equal to the retrofit costs in order for the re-use of each Residence to be feasible before considering the cost of the land.

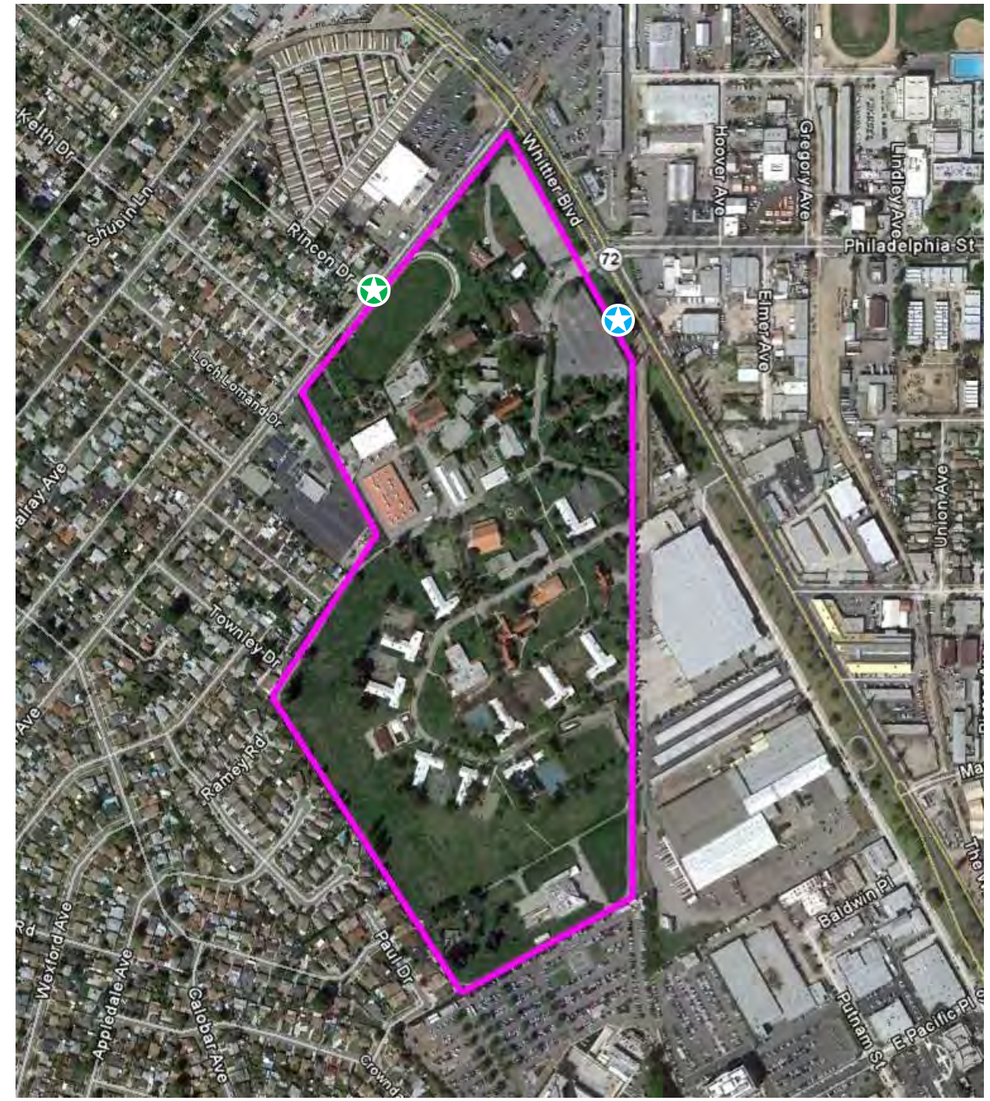
Based on information furnished by Page & Turnbull, we understand the Superintendent's Residence presently contains six bedrooms and approximately 3,900 usable square feet of building space. The Assistant Superintendent's Residence contains three bedrooms and approximately 1,600 usable square feet of building space.

Superintendent's Residence

Assistant Superintendent's Residence

Constructed in 1920, the Superintendent's Residence is approximately 90 years old. The Assistant Superintendent's Residence, constructed in 1926, is approximately 85 years old. The Superintendent's Residence adjoins the Administration Building, abutting the eastern boundary of the site near Whittier Boulevard. The Assistance Superintendent's Residence is located on the northwest portion of the site closest to Sorensen Avenue. Map 1 summarizes the location of each property with respect to the overall boundaries of the site.

MAP 1: Location of Single Family Residences



Superintendent's Residence Assistant Superintendent's Residence

SINGLE-FAMILY HOME MARKET OVERVIEW

EXISTING SINGLE FAMILY HOME PRICES IN WHITTIER

Table 2 below presents current median sales prices for existing single family homes in the City of Whittier by zip code.[1]

TABLE 2

Median Sales Prices of Single Family Homes in City of Whittier by Zip Code: July 2011

Zip Code	Number of Sales #	Median Sales Price $	Price Change from July 2010
90601	16	410,000	5.80%
90602	13	300,000	-24.60%
90603	18	352,000	-6.10%
90604	32	313,000	-13.20%
90605	19	295,000	-1.70%
90606	19	282,000	0.20%

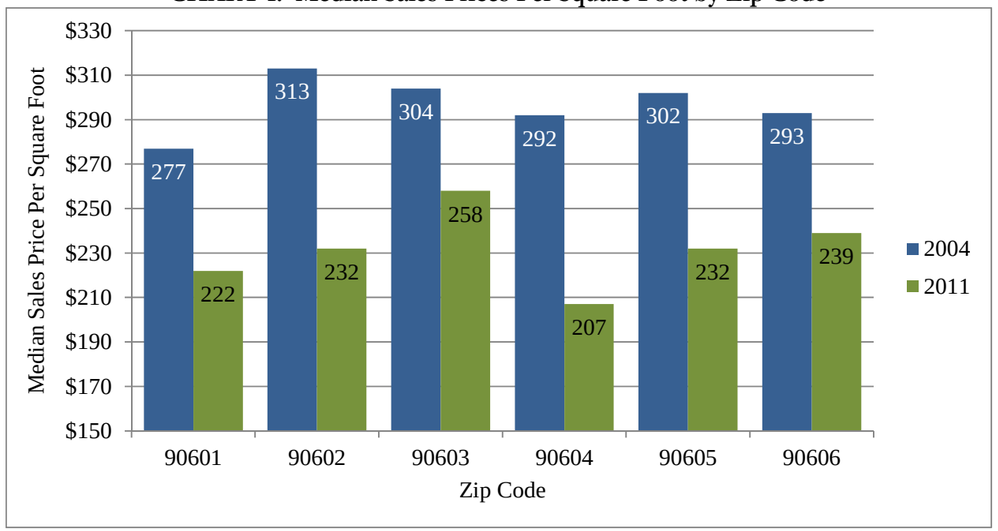
Sources: DQNews.com, *Southern California Home Resale Activity*; Gruen Gruen + Associates.

In July 2011, the median single family resale price in the 90601 zip code approximated $410,000. This represented a year-over-year median sales price growth of 5.8 percent. Median sales prices in the 90606 zip code were $282,000, representing virtually no change in median price over the past year. Median sales prices in all other Whittier zip codes declined between July 2010 and July 2011. The median single family home resale price in all other Whittier zip codes ranged from approximately $295,000 to $350,000.

Chart 1 below summarizes current and historical single family home resale prices per square foot.

[1] The former Fred C. Nelles Youth Correctional Center is technically located in the 90601 zip code area. Its location, however, is most geographically consistent with the 90606 zip code area which generally covers the northern portions of Whittier located southwest of Whittier Boulevard.

CHART 1: Median Sales Prices Per Square Foot by Zip Code



Sources: DQNews.com, *Southern California Home Resale Activity*; Gruen Gruen + Associates.

As illustrated above, median prices per square foot for Whittier homes are still 15 to 30 percent below 2004 levels, prior to the "bursting of the housing bubble". In 2004, median single family prices within Whittier ranged from approximately $280 to $310 per square foot. In July 2011, median sales prices per-square-foot ranged from approximately $210 to $260. The median sales prices in the 90601 and 90606 zip codes, respectively, approximated $220 and $240 per square foot. Note, however, that median single family home sizes in these zip codes are considerably smaller than the Superintendent's Residence of approximately 4,000 square feet. Typically, per square foot prices decline as home size increases.

ACTIVE LISTINGS AND COMPARABLE SALES

Table 3 below summarizes active single family listings near the site of the former Fred C. Nelles Youth Correctional Center. The summary includes only detached single family homes built prior to 1940. The listings are divided by smaller size and larger size homes to illustrate prices that may correspond to the potential prices for the Superintendent's Residence and Assistant Superintendent's Residence.

TABLE 3

Active Single Family Listings Near the Former Fred C. Nelles Youth Correctional Center Site[1]

Map ID	Address	Distance to Site # Miles	Year Built	Number of Beds Baths #/#	Living Area # Square Feet	Asking Price $	Asking Price $ Per Square Foot
A	8310 Comstock Ave	1.0	1901	4/2	2,024	299,000	148
B	6716 Pickering Ave	0.6	1921	3/2	2,085	430,000	206
C	13025 Camilla St	1.0	1925	3/2.5	2,284	355,000	155
D	6222 Painter Ave	1.3	1910	5/3	3,498	630,000	180
E	6027 Friends Ave	1.2	1919	4/4	2,126	495,000	233
F	6303 Painter Ave	1.2	1914	5/4	3,604	745,000	207
G	6353 Painter Ave	1.1	1911	3/3	2,500	588,000	235
H	6348 Alta Ave	1.3	1920	4/2	2,108	510,000	242
I	5811 Alta Ave	1.4	1920	4/2	3,550	650,000	183
	Average		***1916***		***2,642***	***522,000***	***198***
J	7935 Comstock Ave	0.8	1939	3/1	1,644	272,000	165
K	6257 Gregory Ave	0.6	1923	2/2	1,492	280,000	188
L	12324 Broadway	0.7	1928	3/2	1,696	409,000	241
M	13709 Penn St	1.2	1895	3/2	1,490	495,000	332
N	6541 Painter Ave	1.1	1905	4/2	1,456	487,500	335
O	6007 Washington Ave	1.2	1920	3/1.5	1,694	425,000	251
	Average		***1918***		***1,579***	***395,000***	***250***

[1] Detached single family housing built prior to 1940.

Sources: Zillow.com; Prudential California Realty; Gruen Gruen + Associates.

Nine single family homes currently listed for sale, ranging in size from 2,024 to 3,604 square feet, are located within approximately 1.5-miles of the site of the former Fred C. Nelles Youth Correctional Center. The average year built of the listed homes is 1916. The listed homes average 2,642 square feet of space. The average listing price approximates $522,000 or just under $200 per square foot. The three largest homes consisting each of approximately 3,500 square feet of space are listed at an average asking price of $675,000 or $190 per square foot.

Six single family homes including 1,456 to 1,696 square feet of space are listed within 1.5-miles of the site of the former Fred C. Nelles Youth Correctional Center. These smaller homes include an average of 1,579 square feet of space and were built, on average, in 1918. The average listing price approximates $395,000 or $250 per square foot.

The three home listings closest to Whittier Boulevard (See Map Key A, J, and K) are all listed at prices per square foot below the average for homes elsewhere in the area of comparable size and age.

Map 2 below summarizes the locations of the listings relative to the site of the former Fred C. Nelles Youth Correctional Center.

MAP 2: Nearby Single Family Listings

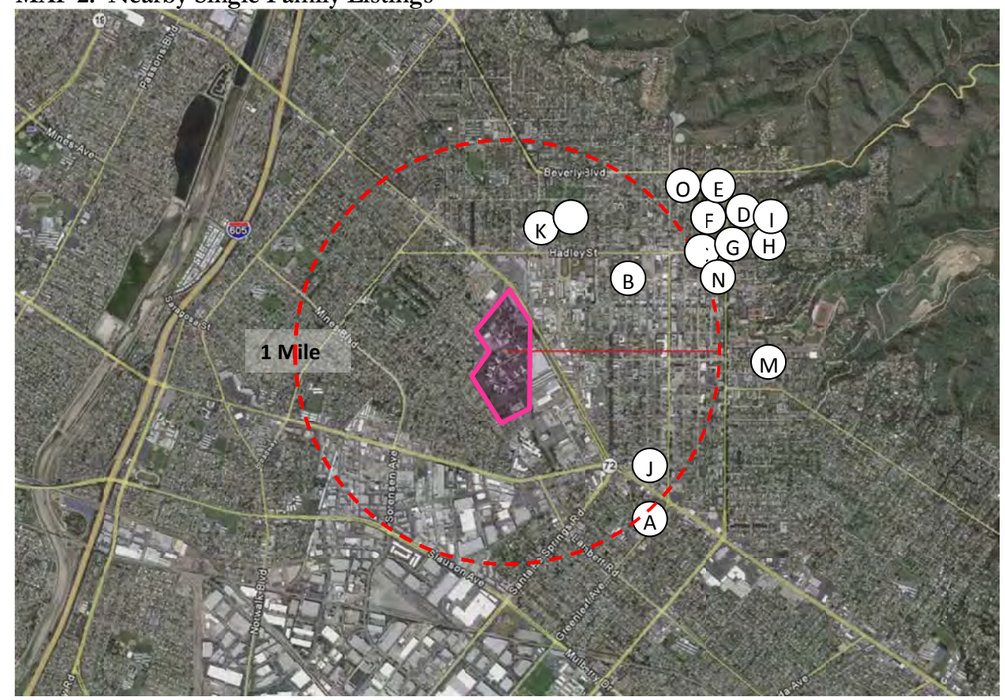


Table 4 below summarizes a sample of 2011 single family home sales within Whittier. Similar to the data presented in Table 3, the homes have been divided into a larger and smaller size sample to correspond to the sizes of the Superintendent's Residence and Assistant Superintendent's Residence, respectively.

TABLE 4

Sample of Comparable Single Family Home Sales in the City of Whittier

Address	Year Built	Number of Beds Baths #/#	Living Area # Square Feet	Sale Date	Sale Price $	Sale Price $ Per Square Foot
6304 Painter Ave	1909	¾	2,943	1/12/2011	400,000	136
13524 Sycamore Dr	1940	4/2	2,830	3/7/2011	692,500	245
12345 Avalon Rd	1934	3/2	3,042	4/28/2011	357,000	117
6242 Painter Ave	1915	5/3	2,128	5/23/2011	500,000	235
7036 Worsham Dr	1936	4/4	3,587	6/1/2011	620,000	173
13544 Beverly Blvd	1930	3/2.5	2,589	6/28/2011	500,000	193
5727 Pickering Ave	1933	3/3	2,472	7/25/2011	450,000	182
6303 Painter Ave	1914	5/4	3,604	4/28/2011	690,000	191
6731 Painter Ave	1920	5/3	3,346	1/6/2011	515,000	154
8603 California Ave	1925	3/1	2,258	4/22/2011	575,000	255
Average	***1926***		***2,880***		***530,000***	***184***
8131 Friends Ave	1931	4/3	1,492	7/11/2011	350,000	235
7941 Caldwell Ave	1938	3/2	1,457	7/20/2011	250,000	172
7031 Painter Ave	1905	4/2	1,638	6/7/2011	278,500	170
13709 Penn St	1895	3/2	1,490	2/23/2011	380,000	255
13703 Philadelphia St	1936	3/1.5	1,568	2/9/2011	490,000	313
6027 Painter Ave	1919	3/2	1,475	3/29/2011	425,000	288
Average	***1921***		***1,520***		***362,000***	***238***

Sources: Zillow.com; Prudential California Realty; Gruen Gruen + Associates.

The review of comparable sales data obtained from Prudential California Realty and Zillow.com, for single family homes in Whittier built prior to 1940 and comparable in size to the Superintendent's Residence and Assistant Superintendent's Residence, indicates as would be expected that actual sales prices over the past several months are lower than current asking prices for similarly sized and aged homes. For all units greater than 2,000 square feet in size whose lot sizes range in size from nearly 11,000 square feet to over 20,000 square feet, the average sales price approximated $530,000 or $185 per square foot (the average single family home size was 2,880 square feet).

Four homes containing more than 3,000 square feet were sold near the site of the former Fred C. Nelles Youth Correctional Center during the first six months of 2011. The average sales price per

square foot was approximately $160. For homes that appear to have been remodeled or updated and located in or near the Whittier Uptown Historic District about one mile to the site, per square foot prices were $190 or higher. Homes that needed remodeling or updating such as the property located at 7036 Worsham Drive were less than $175 per square foot.

For all homes with 1,600 square feet or less of space, the average sales price was $362,000 or $238 per square foot. The lot sizes range from approximately 5,000 square feet to 7,000 square feet. Two of the homes, 8131 Friends Avenue and 7941 Caldwell Avenue, are closer to the site of the former Fred C. Nelles Youth Correctional Center and the sales prices of $350,000 and $250,000, respectively, are about 65 percent to 80 percent of the sales prices of the other smaller size homes located in the Uptown Historic District.

ADVANTAGES AND DISADVANTAGES OR CONSTRAINTS FOR RE-USE OF SUPERINTENDENT'S RESIDENCE AND ASSISTANT SUPERINTENDENT'S RESIDENCE FOR SINGLE-FAMILY RESIDENCES

The results of the interviews with knowledgeable and active local residential real estate brokers are consistent with the lower asking prices and actual prices found to apply to single-family homes close (or closer) to the site of the former Fred C. Nelles Youth Correctional Center. While the brokers indicate that a segment of housing consumers prefer "historic" houses to newer product, this housing market segment also prefers locations in well established, desirable residential neighborhoods in which significant other historic homes are located. Historic homes in residential neighborhoods in or near the Uptown Historic District (which serves as Whittier's historic core or central business district) are perceived to have a far higher image as a residential location than the image associated with the location of the former Fred C. Nelles Youth Correctional Center. Preferred neighborhoods just north of Uptown Whittier are Central Park and Hadley-Greenleaf, both of which have been designated historic districts by the City of Whittier Historic Resources Commission. College Hills surrounding Whittier College has also been designated a historic district.

In addition to the disadvantage of not being located in a desirable residential neighborhood including comparable historic residences, another primary constraint with the Superintendent's Residence is its proximity to relatively high traffic, noisy, Whittier Boulevard and a variety of commercial and industrial uses.

FINANCIAL FEASIBILITY ANALYSIS OF RE-USE OF SUPERINTENT'S RESIDENCE AND ASSISTANT SUPERINTENDENT'S RESIDENCE AS SINGLE-FAMILY HOMES

Table 5 presents a financial feasibility analysis of a single-family re-use for Superintendent's Residence. Based on the review described above, a sales price of $180 per square foot, or $702,000 has been assumed. The estimated per square foot obtainable sales price is lower than older remodeled homes in Whittier have sold for but consistent with the larger size of the residence (i.e., per square foot price typically decreases as home size increases) and less desirable location proximate

to Whittier Boulevard. The estimate, however, would be higher than any sales prices of completed transactions and would exceed the asking prices of all but one listing referenced above in Table 3. In addition, the land area allocated for the Superintendent's Residence is much smaller than the land sizes typically associated with comparable sizes of housing units. Accordingly, it is likely that the assumption of an obtainable price of $180 per square foot is optimistic.

TABLE 5

Feasibility Assessment of Single-Family Home Re-Use of Superintendent's Residence

	$
Estimated Sales Price at $180 Per Useable Square Foot[1]	702,000
Remodeling/Refurbishment Costs at $205 Per Gross Square Foot[2]:	965,000
Profit/(Loss) Before Any Profit Margin of Sales Price	-263,000
Available for Land Purchase and Carrying Costs	-263,000

[1]Sales price estimate based on approximately 3,900 useable square feet of space.
[2] Cost estimate based on approximately 4,710 square feet of gross floor area.

Sources: Page & Turnbull; Mack[5]; Gruen Gruen + Associates

According to the cost estimator Mack[5], the total remodeling and refurbishment costs are estimated at $205 per gross square foot of space or $965,000 assuming approximately 4,710 square feet of gross floor area. Therefore, the loss before consideration of any profit margin for the builder would be $263,000. Accordingly, the re-use and sale of the Superintendent's Residence would not leave available any dollars for land purchase or carrying costs or off-site work.

Table 6 presents an analysis of a single-family re-use for the Assistant Superintendent's residence. Based on the review described above, a sales price of $190 per square foot, or $304,000 has been assumed. The estimated sales per square foot price is lower than older, remodeled homes in Whittier have sold for but consistent with the smaller size of the residence (i.e., per square foot price typically increases as home size decreases) and less desirable location than the Uptown District of Whittier.

TABLE 6

Feasibility Assessment of Single-Family Home Re-Use of Assistant Superintendent's Residence

	$
Estimated Sales Price at $190 Per Useable Square Foot[1]	304,000
Remodeling/Refurbishment Costs at $207 Per Gross Square Foot[2]:	351,000
Profit/(Loss) Before Any Profit Margin of Sales Price	-47,000
Available for Land Purchase and Carrying Costs	-47,000

[1]Sales price estimate based on approximately 1,600 useable square feet of space.
[2] Cost estimate based on approximately 1,700 square feet of gross floor area.

Sources: Page & Turnbull; Mack[5]; Gruen Gruen + Associates.

According to the cost estimator Mack[5], the total remodeling and refurbishment costs are estimated at nearly $207 per gross square foot of space or about $351,500 assuming approximately 1,700 square feet of gross floor area. Therefore, the loss before consideration of any profit margin for the builder would be $47,000. Accordingly, the re-use and sale of the Assistance Superintendent's Residence would not leave available any dollars for land purchase or carrying costs[2] or off-site work.

CONCLUSIONS ABOUT POTENTIAL FEASIBILITY OF RE-USE OF SUPERINTENT'S RESIDENCE AND ASSISTANT SUPERINTENDENT'S RESIDENCE

Even assuming relatively optimistic obtainable sales prices, and not factoring in financing, marketing, and other carrying costs, and excluding land purchase costs or costs of off-site work, the re-use of the Superintendent's Residence and Assistant Superintendent's Residence as single-family homes is not financially feasible.

The analysis of the office re-use options presented below suggests that the re-use of the Superintendent's Residence, former Maintenance Garage building and former Chapel are unlikely to be financially feasible for office space because the costs of preparing the structures for an office use are likely to considerably exceed the value associated with such a re-use due to the low rents that will apply.

ASSESSMENT OF RE-USE OF FORMER INFIRMARY AND ADMINISTRATION BUILDING AS OFFICE SPACE

To complete an assessment of the potential feasibility of the re-use of the former Infirmary and Administration Building into office space, GG+A staff interviewed a leading local office broker with many office space listings in Whittier and reviewed secondary office space data sales and listing data to identify:

- the relative advantages and disadvantages or constraints associated with the re-use, development and leasing of the former Infirmary and Administration Building as office space;
- potential obtainable rents for the office space (assuming each property was rehabilitated to contemporary standards); and

[2] Carrying costs refer to the expenses necessary for holding property such as property taxes, insurance costs, and interest on debt costs when the property is idle or under construction or redevelopment.

- whether the estimated obtainable capitalized values[3] based on estimated obtainable rents and capitalization rates[4] would be at least equal to the estimated retrofit costs in order for the re-use of the Infirmary and Administration Building to be feasible before considering the cost of the land.

OFFICE MARKET CONDITIONS

The site of the former Fred C. Nelles Youth Correctional Center site is located in the Southeast Los Angeles office submarket which according to CoStar (and summarized in Table 7) contains a total office space inventory of approximately 8.1 million square feet. Approximately 650,000 square feet of space in the submarket is currently vacant for an overall vacancy rate of eight percent. As described below, the vacancy rate for office space in Whittier is considerably higher than the overall vacancy rate for the Southeast Los Angeles submarket. Average asking full-service rental rates in the market are currently reported at $21 per square foot; the lowest average asking rent among all office markets in Los Angeles County.

TABLE 7

Southeast Los Angeles Office Market Conditions: Mid-Year 2011

	Buildings #	Total Inventory # Sq. Ft.	Vacant Space # Sq. Ft.	Vacancy Rate %	2011 Year-to-Date Absorption # Sq. Ft.	Under Construction # Sq. Ft.	Quoted Annual Rental Rates $ Per Sq. Ft.
Class A	15	1,525,373	181,583	11.9	-18,547	0	23.47
Class B	113	3,103,601	283,872	9.1	-11,656	80,394	21.08
Class C	383	3,482,104	182,379	5.2	15,728	0	17.21
Total	**511**	**8,111,078**	**647,834**	**8.0**	**-14,475**	**80,394**	**20.99**

Sources: CoStar, *Los Angeles Office Market Mid-Year 2011 Report;* Gruen Gruen + Associates.

As summarized in Table 7, the Southeast Los Angeles office submarket is characterized by smaller second-generation Class B and C buildings. As confirmed by the broker interview, the Whittier submarket is not a primary or preferred office location within the region. Office space users tend to consist of smaller firms serving area residents and businesses, as opposed to larger Class A office space users which generally export their services beyond the local market. The vacancy rate is highest at nearly 12 percent for Class A space in the market. Class A asking rents approximate $23.50 per square foot annually. Asking rents for Class C office space (representing the largest source of inventory in the market) currently average $17.20 per square foot.

[3] Capitalized value refers to the present lump sum value of an anticipated income stream.

[4] A capitalization rate refers to a rate of return used to derive the capital value of an income stream. A capitalization rate is divided into the expected periodic (annual) income to derive a capital value for the expected income.

LOCAL MARKET CHARACTERISTICS

Table 8 and Map 3 below summarize asking rental rates for available office space close to the site of the former Fred C. Nelles Youth Correctional Center. The largest concentration of office space is in Uptown with most much of the space in older, smaller buildings of less than 20,000 square feet in size. No significant supply of office space has been built since the early 1990's indicating weak demand for office space in Whittier.

TABLE 8

Asking Rental Rates for Available Office Space Near the Site of the Former Fred C. Nelles Youth Correctional Center

Map ID	Location	Total Available Space # Square Feet	Year Built	Monthly Asking Rent[1] $ Per Square Foot
A	6608 Gretna Ave	1,750	1948	0.80
B	12225 Whittier Blvd	3,303		1.20
C	12252 Whittier Blvd	5,180	2000s	1.75 (full service)
D	13710 Whittier Blvd	5,872		1.25
E	14530 Whittier Blvd	3,082		1.65
F	7217 Painter Ave	2,474	1958	1.20
G	7250 Painter Ave	6,275	1989	0.95-1.25
H	7630 Painter Ave[2]	5,178	1981	1.85
I	7731 Painter Ave	2,900		1.03
J	7740 Painter Avenue	863		1.45
K	8135 Painter Ave[2]	20,754	1986	1.75 (full service)
L	8522 Painter Ave	4,964		Negotiable
M	13020 Bailey	4,513		0.85
N	6709 Greenleaf Ave	1,529	1929	1.45
O	7200 Greenleaf Ave	1,000	1985	1.75
P	12546 Lambert Road	5,200	2010	1.65
Q	12911 Hadley Street	5,974		0.85-0.95
R	7007 Washington Ave	6,350		1.00-1.25
S	13305 Penn Street	3,877	1984	1.35-1.65 (full service)
T	12225 Beverly Blvd	3,303		1.20
	Total	94,341		

[1] Modified gross rents, unless otherwise noted. Tenant pays utilities in a modified gross lease.
[2] Medical office buildings.

Sources: Loopnet; Gruen Gruen + Associates.

MAP 3: Available Office Space

According to a leading local real estate broker, the Whittier office portion of the larger submarket has a vacancy rate of at least 20 percent. This is significantly higher than the average vacancy rate of 10 percent in 2005. Based on a search of office properties on Loopnet.com, as shown on Table 8 and Map 3, over 94,000 square feet of office space is available near the site of the former Fred C. Nelles Youth Correctional Center. Office space gross rents range from $0.80 per square foot per month to $1.85 per square foot per month with rents for most spaces falling in between the high and low of the range. The review of rents and interviews suggest potential range of obtainable gross rent of $0.90 to $1.35 per square foot per month for small spaces.

Because of the relative distance to key transportation links, relatively small inventory of office space and small base of space users, and limited commute shed served, demand for office space in Whittier has historically been tied to residential activity and the growth of the local population. Many users are in the finance, insurance, and real estate and service sectors geared to serving Whittier residents or other businesses. Office buildings in Whittier have historically attracted users expanding and relocating from within the City but the downturn in residential markets has reduced the demand for office space. Most office users in the Whittier office market are small in the range of 200 square

foot to 1,000 square foot users in the professional services sector. The largest office space demand generator in Whittier has been the Presbyterian Intercommunity Hospital which has been able to accommodate its space needs on their existing campus with the addition of a 106,500-square-foot office building added in 2005. The Hospital is also currently building a new medical tower that when complete in 2012 will allow the hospital to retrofit the old tower for offices.

According to a local real estate broker, the former five-story Bank of America building in Uptown Whittier obtains rents of $0.90 to $1.20 per square foot. Buildings in Uptown and along Whittier Boulevard will compete for office users with office space created from the potential re-use of the former Infirmary and Administration Building. For any larger or less price sensitive users, office buildings closer to Interstate 605 in Santa Fe Springs will also represent supply competition. More modern office parks such as Legacy Heritage Corporate Center located in Santa Fe Springs, approximately 3.5 miles to the site, have reportedly reduced their rental rates from $1.75 per square foot to $1.00 per square foot to renew existing tenants.

ADVANTAGES AND DISADVANTAGES OR CONSTRAINTS FOR RE-USE OF INFIRMARY AND ADMINISTRATION BUILDING FOR OFFICE SPACE

The primary advantage of the location, especially for the better situated Administration Building is proximity to the relatively high traffic Whittier Boulevard and to Presbyterian Intercommunity Hospital adjoining the site. The former Infirmary is located close to Whittier Boulevard but lacks visibility and frontage to the street.

The disadvantages include the following:

- significant supply competition and weak demand;
- less desirable ambiance compared to office space available in Uptown which has better proximity to support services, shopping, and restaurants; and
- lack of accessibility and visibility to major highways and proximity to a critical mass of office space users.

The configuration of both buildings includes a central corridor with rooms running off the corridor. The room sizes especially for the former Infirmary are smaller than contemporary office users would require. In the Administration Building, room sizes are generally in the 200 to 500 square foot range with a few rooms as low as approximately 55 square feet in size. The Administration Building has a main reception area of nearly 700 square feet of space.
The former Infirmary has many more individual rooms but most are in the 75 to 85 square foot size range consistent with its former use as patient rooms. Neither the former Infirmary nor the Administration Building are designed or configured for modern offices. This will likely require the demolition of existing tenant improvements. The cost estimates presented below shares this conclusion.

FINANCIAL FEASIBILITY ANALYSIS OF RE-USE OF INFIRMARY AND ADMINISTRATION BUILDING FOR OFFICE SPACE

Table 9 presents a financial feasibility analysis of the re-use of the former Infirmary and Administration Building for office space.

TABLE 9

Feasibility of Re-use of Former Infirmary and Former Administration Building as Office Space

	Former Infirmary	Administration Building
Building Size – Square Feet of Space	4,612 gross 4,555 net	7,750 gross 7,020 net
Gross Revenue	$68,000[1]	$126,000[2]
Net Revenue Less 5% Vacancy Allowance	$65,000	$120,000
Total Value Capitalized at 8% Capitalization Rate	$813,000 ($178 per square foot)	$1,500,000 ($214 per square foot)
Retrofit Costs	$1,320,000	$1,740,000
Available for Land Purchase and Carrying Costs	-$507,000	-240,000

[1] Assumes unrealistically high monthly net rent of $1.25 per square foot. No allowance has been made for operating expenses, reserves, or leasing commissions.
[2] Assumes unrealistically high monthly net rent of $1.50 per square foot. No allowance has been made for operating expenses, reserves, or leasing commissions.

Sources: Page & Turnbull; Mack[5]; Loopnet.com; Gruen Gruen + Associates.

Assuming an unrealistically high obtainable net monthly rent of $1.25 per square foot and ignoring operating costs, leasing commission costs, reserves for future capital costs, and other expenses, the former Infirmary would realize gross annual revenue of approximately $68,000. Assuming a well below market vacancy rate of five percent results in an estimate of annual net revenue of approximately $65,000. Assuming a low capitalization rate of eight percent produces an estimate of the value of the refurbished with new interior office space and 95 percent occupied former Infirmary of $813,000. According to the cost estimator Mack[5] the costs to retrofit the Infirmary into office space will total approximately $1,320,000. Even ignoring financing costs and marketing costs, as well as the other excluded costs including land costs, the estimated re-use value of $813,000 would be worth $507,000 less than the costs of $1,320,000 associated with the re-use of the Infirmary. Therefore, the re-use of the Infirmary would fall far short of a feasibility threshold.

Assuming an unrealistically higher obtainable net monthly rent of $1.50 per square foot for the better located former Administration Building produces an estimate of gross annual revenue of approximately $126,000. At a five percent vacancy rate assumption, well below the market vacancy rate, and again ignoring expenses the property owner would occur, the net annual revenue from the reuse and leasing of the former Administration Building would total approximately $120,000. Assuming a low capitalization rate of eight percent produces an estimate of the value of the refurbished with new interior office space and 95 percent occupied former Administration Building of $1,500,000. According to the cost estimator Mack[5] the costs to retrofit the Administration

Building into office space will total approximately $1,740,000. Even ignoring financing costs and marketing costs, as well as the other excluded costs including land costs, the estimated re-use value of $1,500,000 would be worth $240,000 less than the costs of $1,740,000 associated with the re-use of the Administration Building. Therefore, the re-use of the Administration Building would not be financially feasible.

CONCLUSIONS ABOUT POTENTIAL FEASIBILITY OF RE-USE OF INFIRMARY AND ADMINISTRATION BUILDING FOR OFFICE SPACE

Even assuming highly optimistic and favorable revenue and value assumptions, and ignoring costs that the owner or developer would likely incur, the costs of retrofitting both the former Infirmary and Administration Building would more than offset the value of the re-used buildings. Given the market risks associated with the surplus of office space relative to demand and the disadvantages associated with the location for office users, the re-use of the Infirmary and Administration Building for office space will not be market responsive and financially feasible to undertake as a profit making enterprise.

EVALUATION OF FEASIBILITY OF RE-USE OPTIONS FOR THE FORMER MAINTENANCE GARAGE

Two options evaluated for the re-use of the former maintenance garage are for a library branch or for a grocery store. The re-use of the former maintenance garage for a grocery store would provide for approximately 7,690 square feet of selling or shop space, a 235-square-foot office, cold storage of 865 square feet plus loading and dry storage space of 1,280 square feet of space. According to the cost estimator Mack[5] to re-use the Maintenance Garage for a grocery store would total approximately $2,157,000.

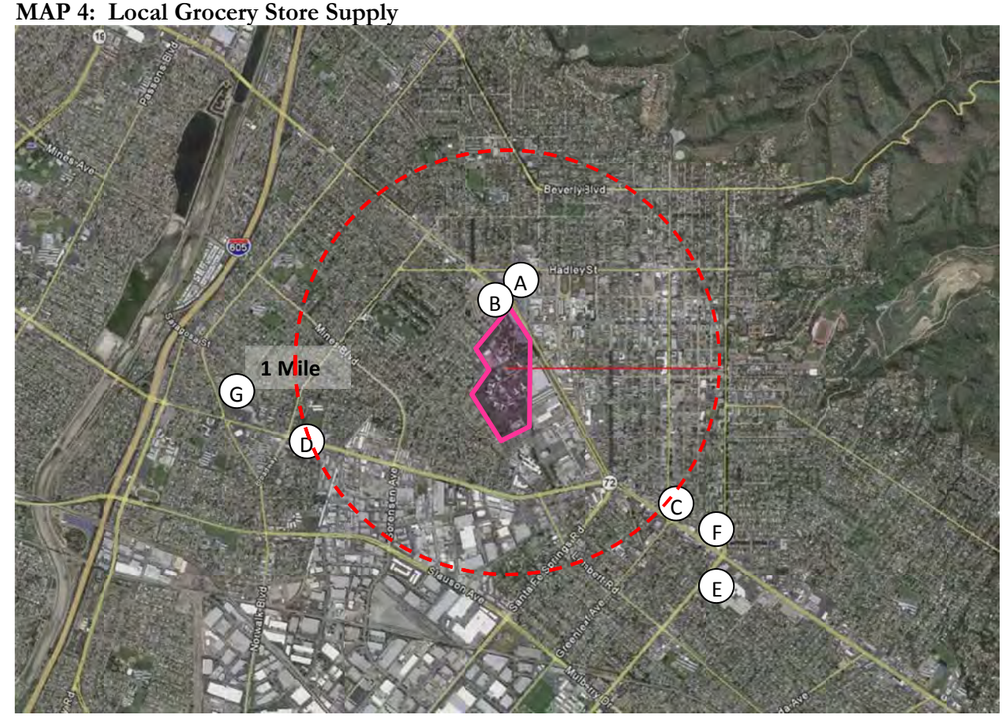
Library Branch Alternative

To evaluate the potential for the re-use of the garage as a library branch, GG+A staff contacted the Director of Library Services in Whittier to ascertain whether possible interest could interest in establishing a library branch at the property. The Library Director indicated that the library is currently expanding its existing Whittwood branch on the east side of Whittier and has no plans for other building expansion or new branch building in Whittier. The Library Director also indicated that the main library branch in Whittier is located on Washington Avenue, a little over one mile from the site. According to the Director the main branch currently adequately serves residents on this side of Whittier. The Library has no foreseeable needs or interest in the property.

Grocery Store Alternative

The overall site has less than ideal ingress and egress, accessibility, and cross-roads-type traffic typically preferred by grocery stores and the location of the former garage is not on the frontage of the property (therefor precluding visibility from Whittier Boulevard). The primary access route requires potential shoppers to pass by major concentrations of retail uses on the way to the site, including the following grocery stores shown on Map 4.

MAP 4: Local Grocery Store Supply



A – Ralph's	*B – Stater Brothers*	*C – Albertson's*
D – Smart and Final	*E – Ralph's*	*F – Fresh & Easy*
G – Food 4 Less		

Four full-service grocery stores and five drug stores are location within approximately one mile of the site. A 44,000-square-foot Ralph's and a 22,000-square-foot Sav-on-Drug are located across Whittier Boulevard from the site. A 35,000-square-foot Stater Brothers grocery store is located immediately east of the site. Three additional grocery stores and three drug stores are situated within two miles of the site (a Trade Joes and another Ralph's are located within three miles of the

site). In addition to large format stores, small format stores such as Fresh & Easy have already located in the vicinity of the site.

The trade area from which a grocery store would draw customers is likely to be highly circumscribed given the small amount of space the store would comprise, its less than ideal location, the presence of significant grocery stores near the site more conveniently located to shoppers other than perhaps the future residents of the site. It is unlikely that a grocery store in the former garage will be able to siphon off demand from existing stores that can offer better price, more selection, and greater convenience. In addition, the small size of the store would suggest that the only potential operator would be a non-chain which means such an operator is also likely to have a competitive disadvantage in terms of financial capacity to undertake the retrofit and be able to fund ongoing operating and maintenance costs.

While a small grocery store is not likely to be supportable at the site, presented below in Table 10 is an analysis of the financial feasibility of the re-use of the former Maintenance Garage for a grocery store.

TABLE 10

Feasibility of Re-use of Former Maintenance Garage as Grocery Space

Building Size – Net Square Feet	10,540
Annual Revenue Assuming 100% Leased at Annual Net Rent of $15.00 Per Square Foot	$158,100
Total Value Capitalized at 8% Capitalization Rate	$1,976,000
Retrofit Costs	$2,157,000
Available for Land Purchase and Carrying Costs	-$181,000
[1] No allowance has been made for operating expenses, reserves, or leasing commissions.	
Sources: Page & Turnbull; Mack[5]; Loopnet.com; GM Properties; Gruen Gruen + Associates.	

We optimistically assume a fully leased building at an annual net rent of $15 per square foot or $158,100. This compares to the asking rent of $5.16 per square foot for 12,874 square feet of space in a commercial building located near the site at 11217 Whittier Boulevard and $9 per square foot for a 16,000-square-foot building at 16269 Whittier Boulevard with superior visibility and signage near the Whitwood Town Center. Capitalizing the estimated rental income at a rate of eight percent produces a value of $1,976,000. The retrofit costs are estimated to total $2,157,000. This leaves the retrofitted and leased building worth $181,000 less than the cost of the retrofit.

CONCLUSIONS ABOUT POTENTIAL FEASIBILITY OF MAINTENANCE GARAGE FOR LIBRARY OR GROCERY STORE

Even without considering land costs, financing costs, marketing costs, and other expenses, the re-use of the former Maintenance Garage for a grocery store (or other retail space) would not be financially feasible to undertake, even if effective demand pertained to the use at the location.

Therefore, we conclude the postulated re-use of the former maintenance garage for either a library, or grocery and related retail uses will not be feasible.

EVALUATION OF FEASIBILITY OF RE-USE OF AUDITORIM

According to the cost estimator Mack[5], the costs to retrofit the Auditorium are estimated to total nearly $1,249,000 before land costs, financing and carrying costs. To investigate the potential demand for the former 6,393-square-foot Auditorium for re-use as an auditorium (theater), we spoke with the Vice President for Finance and Administration of Whittier College. The Vice President indicated that Whittier College would not have any interest in the Auditorium. The College has a performing arts center (the Ruth B. Shannon Center for Performing Arts) that has seats for 403 people. It also has an "events" building. The Auditorium is not on or adjoining the campus of the College and is smaller than its existing facilities. Whittier College has a challenge in holding very large events and the Auditorium would not help the College meet that challenge.

Neither has the City of Whittier identified a need for the Auditorium. In addition, the Whittier Union High School already has an auditorium (the 2,448 seat Vic Lopez Auditorium suitable for a variety of cultural activities and presentations) on its campus.

Accordingly, we do not believe the Auditorium will be feasible to re-use given the unique, special purpose of the facility and the lack of interest in it from the most likely candidates. A major constraint is that the auditorium, like many of the buildings, are special purpose facilities that previously served the unique needs of an integrated youth correctional facility; the demands for which are not readily replicated by other types of institutions or space users. The re-use of any one building such as an auditorium may not be demanded as stand alone facilities not part of campuses by institutional uses such as Whittier College.

EVALUATION OF FEASIBILITY OF RE-USE OF CHAPEL

According to the cost estimator Mack[5], to retrofit the Chapel for a community center would cost about $3,839,000. To evaluate the feasibility of the re-use of the nearly 12,000-square-foot Chapel as a community center, the Assistant City Manager (appointed to become the next City Manager in January 2012) of the City of Whittier was contacted to ascertain if the City would have interest and if so to be in the position to fund the capital and operating costs of another community center. The City of Whittier does not have interest in the Chapel or other building on the site for a community center. The City does not have the capability of funding the operating costs of another community center. It does not have a revenue source to operate such a facility. It would also need to obtain capital funds over time for acquisition and construction. Accordingly, we conclude that the re-use of the Chapel as a community center will not be feasible.

EVALUATION OF FEASIBILITY OF RE-USE OF GYMNASIUM

According to the cost estimator Mack[5,] to retrofit the Gymnasium as a church would cost approximately $5,630,000. To evaluate the feasibility of the re-use of the former Gymnasium for an approximately 15,900-square-foot chapel, we contacted a sample of existing churches in Whittier to ascertain whether any churches would have interest in relocating to the site and the means to convert the Gymnasium into a chapel and thereafter to operate and maintain the chapel. The Family Church at 8434 Greenleaf Avenue has had a stable membership, rents out available space in their facilities (which includes about 300 seating capacity) to other groups and would not have interest in the re-use opportunity. The Good Sheppard Bible Church at 6712 Washington Avenue in Whittier has a 20,000 square-foot facility. Its space requirements cannot be accommodated in the proposed chapel. It also rents out space to the Cornerstone Church Group. The Saint Matthias Episcopal Church at 7056 Washington Avenue in Whittier has been at the location for approximately 100 years. It has excess capacity but a variety of activities including a school for the hearing impaired. The church would not be interested in relocating to the site. The First United Methodist Church at 13222 Bailey Street in Whittier has experienced a decline in membership to approximately 300 families. Their facility has plenty of capacity and is made available to other groups.

None of the representatives of the churches contacted indicated any needs of their own or were aware of other churches which might be interested in the re-use opportunity. In addition, some local chapel facilities are available for sale, including Immanuel Church which has listed its nearly 30,000 square-foot facility for sale at $4.6 million and Morningstar Christian Chapel, which has listed its nearly 38,000-square-foot facility with a 700 seat sanctuary on 4.66 acres of land for sale at $8.2 million. The Whittier Apostolic Faith Center has an 11,000-square-foot facility for which it seeks to lease out 4,000 square feet of space at $1,500 per month.

Given the ample supply of existing church facilities with space of varying sizes and types available for rent or sale, it is unlikely that a user will be found willing and able to expend approximately $5,630,000 on capital costs as well as to fund ongoing operating and maintenance costs to convert the former Gymnasium to a chapel.

Gruen Gruen + Associates (GG+A) is a firm of economists, sociologists, statisticians and market, financial and fiscal analysts. Developers, public agencies, attorneys and others involved in real estate asset management utilize GG+A research and consulting to make and implement investment, marketing, product, pricing and legal support decisions. The firm's staff has extensive experience and special training in the use of demographic analysis, survey research, econometrics, psychometrics and financial analysis to describe and forecast markets for a wide variety of real estate projects and economic activities.

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