



Marin City Center for Community Life Schematic Design Report

June 2017



Architect – Group 4 Architecture, Research + Planning

Civil Engineer – CSW/Stuber-Stroeh

Landscape Architect – RHAA

Structural Engineer – Degenkolb

MEP Engineer – Lefler

Electrical Engineer – O'Mahony & Myer

Telecom/Security/AV Engineer – SFMI

Food Service Consultants – The Marshall Associates, Inc.

Hazmat – Ninyo & Moore

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Schematic Architectural Design Narrative

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ARCHITECTURAL NARRATIVE

SUMMARY

The proposed Center for Community Life campus includes a total of six buildings and associated site work, ranging in scope from a select remodel to new construction. The proposed campus square footage for the Phase 1 of the overall master plan is 36,000 sf, and will provide for updated and expanded facilities for CSD recreation uses, senior programming, Health & Wellness services, Early Childhood Education space, and improved offices for staff.

At the heart of the campus will be the new two-story recreation building, which will contain new classrooms, dedicated boxing, fitness, and dance spaces, and a greatly expanded multi-use gymnasium. The Harriet Tubman House will be brought back to life through a historically sensitive remodel, providing a new home for CSD offices and other non-profit offices. The Marguerita C. Johnson Senior Center will be renovated to include an upgraded kitchen, new meeting and gathering spaces, new finishes, and mechanical systems. The new Early Childhood Education center will replace existing onsite modular classrooms with permanent construction to suite their growing needs. A new Health & Wellness Clinic, nearly doubling its current size, will provide much needed space for their dental, medical, and counseling services.

A flexible facility. The new CFCL facilities will utilize flexible space design techniques to allow for ease of operation while maximizing programs and services offered. Large room sizes, complementary room adjacencies, and added storage will create program efficiencies that can accommodate various events or programs.

A smart facility. The new center will be fully integrated with building and user technology such as audio/visual technology, WiFi, RFID locks and building management systems that will provide 21st century service to patrons and operational efficiencies for staff. The systems will be designed to keep pace with technological innovations for years to come.

An expanded gymnasium. As part of the CFCL campus, a high quality, large gymnasium will be offered to community residents. The flex-use gym will allow for existing programs, such as basketball and indoor soccer, to continue and flourish, while also providing new program opportunities such as volleyball. The gym will accommodate one full-sized basketball court up to 94'-0" in length, while also providing three small cross-courts, which will make the gym capable of tournament and rental use. The existing Manzanita Gym will remain operational until a future phase replacement, and in the interim, can be transitioned to a more dedicated use as a community events hall. Both the new gym and existing one will be serviced by a new commercial/small demonstration kitchen included in the new Main Recreation Center design.

An indoor/outdoor facility. Situated along Phillips Dr., and located directly adjacent to several other public facilities, including Bayside MLK Academy, Rocky Graham Park, Cornerstone Church and the Marin County Public Safety Building, the CFCL buildings will play an important role in engaging and activating the places and people around it. The new facilities and their site concept will also promote a campus approach through their design, tying the new facilities to the existing through continuous pathways and a redesigned Phillips Drive with continuous sidewalks, street parking, and raised crossings. A mix of terraced outdoor seating responding to the unique topography of the site, a large plaza for events, and open lawn spaces, will allow the interior spaces to flow to the outside, while also allowing for a diverse of public outdoor gathering spaces that support various forms of social interaction. The outdoor seating and landscaping will increase the center's usable area, and can accommodate additional programming through most of the year.

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An efficient facility. Quality design will allow the new CFCL facilities to operate its many buildings with minimal demand on staff. It will also incorporate sustainable materials and systems that ensure continued health not only of facility users but of the environment around us.

The new Center for Community Life will stand as a shining example for community-engaged public facilities, while simultaneously serving as the civic heart of Marin City. It will embrace contemporary and emerging trends in community facilities while remaining flexible enough to evolve with the ever-emerging needs of the community. The new Center will be a cherished community hub whose full array of activities, programs and events, services, and social opportunities will be a draw to all.

Summary Building Description and Scope of Work

M - Marguerita C. Johnson Senior Center (MJSC)

Description: This existing 4,561 SF single story frame, wood framed building, constructed in 1980's will get a select remodel.

Use: Senior and general recreation programs and support spaces.

Scope of work:

- Hazardous Material Abatement: none
- Demolition of existing kitchen to studs
- Construction expansion of new kitchen and pantry space.
- Other interior reconfiguration to convert offices to another conference room
- Exterior doors and windows: existing to remain – select repairs where indicated.
- Interior finishes: new carpet and resilient flooring throughout, full interior repainting.
- Exterior siding: power wash and paint
- Existing roof: to remain
- Replacement of existing HVAC unit, and modifications to kitchen HVAC

R - Main Recreation Building (REC)

Description: New 21,150 sf steel and wood framed building comprised of single story gymnasium and kitchen and two-story activity/classroom portion.

Use: Multigenerational recreation including a large gym supporting basketball, volleyball, indoor soccer and community events and rentals, kitchen serving both this building and the Manzanita recreation building, a teen lounge, teen multi-purpose classroom, multi-purpose art/STEAM classroom, boxing, fitness, and dance rooms, restrooms with lockers, and support spaces.

Scope of work:

- Structure – piles, concrete foundations, slab on grade, steel structure, steel trusses, acoustical metal deck, vinyl foam sports gym floor (base), isolated wood gym floor (add alternate) with graphics, operable (with electric motor) basketball back boards, padded walls and score boards.
- Vibration isolation floor (specifically for weight room)
- Boxing gym flooring
- Dance studio, sprung wood floor, mirrored wall
- movable partition
- Art classroom
- Exposed spiral ductwork, roof top mechanical system.
- AV for
- Kitchen

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Manzanita Building (MAN)

Description: Existing 20,829 sf wood framed building constructed in 1970 to be reduced to 8,165 sf to receive limited capital maintenance and cosmetic upgrades.

Use: After reduction in size, within the Manzanita Building the existing multi-purpose room for community events, rentals, and supplemental sports complementing the new gym in the REC building, plus restrooms and small flexible office/classroom will remain in use.

Scope of work:

- Hazardous Material Abatement: throughout – as required for demolition and for continued use of spaces to remain in use. See abatement report.
- Phased Demolition: Initial demolition of eastern and southern portions of existing building comprising approximately 7,954 sf. Approximately two years later, after construction of new HWC building, existing clinic and teen wing to be demolishing, comprising approximately 4,440 sf.
- Temporary Construction: build temporary closure of stage into short term multipurpose area.
- New wood framed plywood shear walls to be constructed at lines of demolition. New eastern wall at demolition to be constructed to 2 hr fire rating.
- New architectural screen wall on south elevation above existing exterior porch to remain.
- Patch/replace missing siding, power wash and paint exterior.
- On south elevation replace existing exterior doors with new steel doors and frames with vision panels with one new ADA operator, other existing doors to remain to receive new hardware, existing windows to remain.
- New asphalt rolled roofing, aluminum gutter and downspouts.
- New resilient flooring in vestibule, restrooms, and catering staging area, no work on gym floor.
- Paint interior painted surfaces.
- Add alternate to upgrade existing kitchen – see Marshall Associates kitchen designs.
- New fire sprinklers throughout and new fire service, predominantly exposed.

T - Harriet Tubman House (HTH)

Description: This existing 2,516 sf wood framed former house built in 1920 will be gut remodeled.

Use: CSD offices supporting the entire CFCL campus. It will also have a small conference room available for public use that will have historic displays

Scope of work: –

- Hazardous Material Abatement: full – see abatement report
- Demolition of most interior partitions, removal of exterior plaster and sheathing and interior plaster and lathe wall and ceiling finishes to studs, selective demolition and repair of conference room decorative plaster and trim, removal of existing plumbing, ductwork, electrical systems, removal of existing kitchen and cabinetry, exterior stairs, removal of existing clay roof tiles and sheathing, gutters and downspouts, removal of exterior plaster, removal of existing windows and doors.
- Exterior – existing stucco walls, assume 10% will require remedial repair and patching. Windows will be replaced with residential grade metal clad wood with insulated low 'e' dual glazing. The roof will be replaced with asphalt shingles as the base. As an add alternate, use clay tile roofing. Include roof vents, aluminum gutters and downspouts, steel picket railing on upper level balcony and top level porch.
- Interior - new painted gypsum wall board, painted wood base, painted solid core wood doors in painted wood frames, custom pair arc topped wood glazed doors into conference room, replace subflooring only where needed, new carpet, resilient flooring, ceramic tile, new wood picket guardrail and handrail on stair and hallway, new wood handrails on lower level stairs and top level stairs. Commercial grade laminate finish base and wall cabinets in reception and break room, with solid surface counters.
- New power, lighting, and data and telcom wiring throughout.
- New HVAC, see Lefler summary
- New commercial restroom fixtures, new kitchenette (full size refrigerator, sink disposal, dishwasher, microwave).
- New fire sprinklers throughout - concealed.

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- The HVAC will be limited to heating only, with operable windows. The building will be equipped with a hydronic radian heating with a dedicated boiler, refer to the mechanical narrative for further information.

E - Early Childhood Education Center (ECE)

Description: New wood frame building of 4,400 sf. and new parking area and driveway to HTH.

Use: State licensed early childhood center with three classrooms and support spaces.

Scope of work:

- Temporary Facilities: relocate existing modular classrooms to location behind Bayside/MLK Academy. Provide power, telephone, water and sewer connections, asphalt walkway to ADA ramps, exterior lighting.
- Demolition: removal of existing loop driveway and tree.
- Excavation, and export of material to level grade for building and play yard.
- Structure: continuous concrete spread footings and slab on grade and, retaining walls, wood framed structure, plywood shear walls with roof framing of dimensional lumber exposed wood trusses, (deduct alternate of lightweight premanufactured wood trusses and suspended ceilings below)
- Exterior: stucco, cementitious siding wood with wood veneer finish, phenolic colored accent panel, aluminum storefront windows with integrated spandrel panel and aluminum sunshade, asphalt shingle gabled roof with aluminum gutter and downspout, TPO flat roof, overflow scuppers to exterior
- Interior: stud walls, painted gypsum board, painted wood base, painted solid core doors in wood frames, commercial grade casework, resilient flooring, carpet, ceramic tile, acoustic tile, painted wood decking and painted gypsum board ceilings
- Attic furnace and AC, bulkhead ductwork.

H - Health and Wellness Center (HWC)

Description: New wood frame building of 4,100 sf.

Use: Federally licensed clinic for medical, dental, and behavioral health services and support spaces.

Scope of work:

- Excavation, and export of material to level grade for building.
- Structure: continuous concrete spread footings and slab on grade, wood framed structure, plywood shear walls with roof framing of lightweight premanufactured wood trusses and suspended ceilings below.
- Exterior: stucco, cementitious siding wood with wood veneer finish, phenolic colored accent panel, aluminum storefront windows with integrated spandrel panel and aluminum sunshade, asphalt shingle gabled roof with aluminum gutter and downspout, TPO flat roof, overflow scuppers to exterior
- Interior: stud walls, painted gwb, painted wood base, painted solid core doors in wood frames, commercial grade casework, resilient flooring, carpet, ceramic tile, acoustic tile, painted wood decking and painted gwb ceilings
- Attic furnace and AC, bulkhead ductwork.

Phillips Drive and Main Parking Lot

Description: This private driveway is the community's "main street" along which civic, recreational, educational, and religious facilities are located. Included in this part of the project is a reconfigured main CSD parking lot.

Scope of work:

- New utility and storm water connections for CSD facilities
- Reconfigured roadway with traffic calming measures and expanded parking
- New sidewalks and landscaping
- New street lighting and signage

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OUTLINE SPECIFICATION

On the right side of the each spec section will be the initials of each building. When the initials are **bold** then that spec section will apply to that building. For example, this indicates the section applies for the Marin City Main Recreation Building: [HTH HWC ECE **REC** MJSC]

DIVISION 0 – BIDDING, CONTRACT FORMS AND CONDITIONS OF THE CONTRACT

- Suggestion of a Construction Manager at Risk with a Guaranteed Maximum Price delivery.
- **INTRODUCTORY INFORMATION**

BIDDING REQUIREMENTS

BY OWNER

CONTRACT FORMS

BY OWNER

CONDITIONS OF THE CONTRACT

BY OWNER

- Local hiring and training requirements to be coordinated with the Marin City Community Development Corporation. Construction Sequencing
 - Stage 1:
 - MJSC
 - HTH
 - MAN temp construction
 - Stage 2
 - MAN Demolition stage 1
 - MREC construction
 - MAN minor renovation
 - Stage 3
 - ECE
 - HWC and parking
 - Stage 4
 - MAN Demolition stage 2
 - Phillips Drive and main parking lot

DIVISION 1 – GENERAL REQUIREMENTS

DIVISION 2 – SITE CONSTRUCTION

SECTION 02780 – CONCRETE PAVERS

Summary: See Landscape narrative.

DIVISION 3 – CONCRETE

[HTH HWC ECE REC MJSC]

Foundation Summary: Note that our geotechnical report is from 2005 and is in the process of being updated. Based on the recommendation from 2005, there is concern regarding the high volume gym structure. Two foundation systems are currently being evaluated. Once an updated report is available, we hope to have direction for the foundation. But if there are significant changes to the recommendations, the foundation will need to be updated. See Structural narrative.

Slab Summary: See Structural narrative.

DIVISION 4 – MASONRY Not used.

DIVISION 5 – METALS

SECTION 05120 – STRUCTURAL STEEL FRAMING

[HTH HWC ECE REC MJSC]

Summary: See Structural narrative.

SECTION 05121 – ARCH EXPOSED STRUCTURAL STEEL

[HTH HWC ECE REC MJSC]

Summary: Limited application.

SECTION 05340 – METAL DECKING

[HTH HWC ECE REC MJSC]

Summary: Factory-finished metal roof and floor decks.

Materials: Thermal insulation, perforated painted metal decking.

Manufacturers: Epic Metals Epicore Roof and Acoustical Ceiling Systems.

SECTION 05500 – METAL FABRICATIONS

[HTH HWC ECE REC MJSC]

Summary: Shop fabricated ferrous metal items, galvanized and prime painted, see paints and coatings for final finished if exposed. Includes steel weld plates and embeds, break metal items, elevator pit ladders, metal bollards and all associated fasteners and installation accessories.

SECTION 05730 – ORNAMENTAL FORMED METAL

[HTH HWC ECE REC MJSC]

Summary: Includes stair handrails, guardrails at lobby second floor and exterior second floor decks, and exterior painted metal trellises. Handrails and guardrails to have wood handrail.

DIVISION 6 – WOOD AND PLASTICS

SECTION 06100 – ROUGH CARPENTRY

[HTH HWC ECE REC MJSC]

Summary: Wood framing, timber posts for posts and beams, rooftop equipment bases and support curbs, wood grounds, nailers, blocking, and wall and roof sheathing; See structural narrative for wood structural system.

Manufacturers: FSC wood, no added urea formaldehyde (NAUF) .

SECTION 06105 – MISCELLANEOUS CARPENTRY

[HTH HWC ECE REC MJSC]

Summary: Miscellaneous carpentry of the following items: rooftop support curbs; wood blocking, cants and nailers; wood furring; wood sleepers; plywood, fire-rated as required, backing panels for telecommunications and electrical equipment.

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Materials: FSC wood, no added urea formaldehyde (NAUF).

SECTION 06200 – FINISH CARPENTRY

[HTH HWC ECE REC MJSC]

Summary: Finished wood carpentry of the following items: Door and window trims; exterior and interior standing running trim; interior wood bulkhead paneling; wood trim at wall caps.

Materials: Stained or painted FSC wood, no added urea formaldehyde (NAUF).

SECTION 06410 – ARCHITECTURAL WOODWORK

[HTH HWC ECE REC MJSC]

Summary: Quartz countertops, Custom cabinets as indicated in drawings.

Materials: Quartz countertops: ¾" thick, 1-1/2" edge, 90% crushed quartz aggregate with aggregates and pigment. AWS cabinet grade: Custom, Style A Frameless, Type II, flush overlay, ¾" cabinet material thickness. Exposed Surfaces: For stained cabinets: veneer plywood, stained white maple, vertical grain, slip match veneer leaves. Semi-exposed Surfaces: Thermoset white melamine.

Manufacturers: Counters: Caesarstone, Silestone, Cambria.

DIVISION 7 – THERMAL AND MOISTURE PROTECTION

SECTION 07 2100 – BATT BUILDING INSULATION

[HTH HWC ECE REC MJSC]

Summary: Building insulation in batt form at exterior walls. Acoustic insulation at interior walls as noted on drawings.

Materials: Exterior walls: R-19, foil-faced kraft paper. Acoustic: Type I, STC 50 min, unfaced. Roof: R-30, foil-faced kraft paper.

Manufacturers: Johns Manville, Owens Corning, Thermafiber.

SECTION 07 2110 – RIGID BUILDING INSULATION

[HTH HWC ECE REC MJSC]

Summary: Building insulation in rigid board form for roof and walls

Materials: Includes cover board insulation, foam plastic insulation, cellulosic-fiber cover board insulation, polyisocyanurate foam insulation, perlite cover board insulation, foam plastic insulation, and tapered insulation.

Manufacturers: Sto Corp.

SECTION 07 2400 – EXTERIOR INSULATION AND FINISH SYSTEMS [HTH HWC ECE REC MJSC]

Summary: Building enclosure system.

Materials: Integrally-colored EIFS. Includes mechanical fasteners, extruded rigid cellular polystyrene, acrylic emulsion, polymer modified Portland cement, and reinforcing fabric.

Manufacturers: Sto Corp., Dryvit.

SECTION 07 2613 – UNDERLAYMENTS

[HTH HWC ECE REC MJSC]

Summary: Underlayment and flashing for exterior plaster, flexible flashings at underlayments, flashings and sheet metal – asphalt building paper.

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Metal panels – VaproShield Wrap Shield IT

Materials: Exterior Plaster: Building paper and flashing, Type 1, Grade D, Style 2 vapor permeable, 60 minute building paper. Flexible Flashings at Underlayment Penetrations: Sheet membranes, self-adhering, cold-applied rubberized asphalt: Grace Vycor Plus. Flashing and Sheet Metal Underlayment: Sheet membrane, self-adhering, cold-applied rubberized asphalt: Grace Ice and Water or Bituthane 3000.

Window and Doors: Grace Vycor V40.

Manufacturers: Grace Construction Products, Carlisle Coatings and Waterproofing.

SECTION 07 2613 – FLUID APPLIED VAPOR PERMEABLE MEMBRANE AIR BARRIER

[HTH HWC ECE REC MJSC]

Summary: Fluid applied, UV and mold resistant water-based elastomeric air barrier membrane

Materials: Air Bloc 33MR with Blueskin VP 160 at transitions and joints.

Manufacturers: Henry Company, STO, Dryvit

SECTION 07 3113 – COMPOSITE ASPHALT SHINGLES (BASE FOR HTH) [HTH HWC ECE REC MJSC]

Summary: Composite Asphalt shingles. Include all required attachment accessories. Coordinate with underlayments, flashing, roof vents, grills, gutters and downspouts.

SECTION 07 3216 – CLAY TILE ROOF (ADD ALTERNATE)

[HTH HWC ECE REC MJSC]

Summary: 1-Piece S Tile roof tiles. Include all required attachment accessories. Coordinate with underlayments, flashing, roof vents, grills, gutters and downspouts.

SECTION 07 4200 –PHENOLIC WALL PANELS

[HTH HWC ECE REC MJSC]

Summary: Homogeneous panel composed of a high density bakelite core with an integrated wood-look veneer surface treated with synthetic resin and an exterior PVDF film to be used as exterior cladding.

Materials: Prodema Prodex Composite Wall Panel, 14mm thickness, chamfered and mechanically connected corner conditions. Color by Architect from full range of Prodex wood-look veneer finishes.

Manufacturers: Trespa, Prodema, Parklex

SECTION 07 4293 – FIBER CEMENT SOFFIT

[HTH HWC ECE REC MJSC]

Summary: Engineered fiber cement soffit panels.

SECTION 07 4646 – FIBER CEMENT SIDING

[HTH HWC ECE REC MJSC]

Summary: Engineered siding.

Manufacturers: Nichiha Vintage Wood (Bases of Design), Allura USA, lap siding.

Materials: Acrylic impregnated

SECTION 07 5400 – THERMOPLASTIC MEMBRANE ROOFING

[HTH HWC ECE REC MJSC]

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Summary: Single ply TPO roofing over insulation

Manufacturers: Firestone, GAF, Certaineed

SECTION 07 6000 – FLASHING AND SHEET METAL [HTH HWC ECE REC MJSC]

Summary: Flashing and sheet metal at exterior and interior conditions.

Materials: Galvanized steel, all exposed surfaces painted unless noted otherwise.

SECTION 07 7123 – GUTTERS AND DOWNSPOUTS

Summary: Gutters, expansion joints, downspouts, and accessories.

Materials: Galvanized steel, all exposed surfaces painted unless noted otherwise.

SECTION 07 8400 – FIRESTOPPING [HTH HWC ECE REC MJSC]

Summary: Through-penetration firestop systems for rated construction.

Materials: UL listed for the given condition.

Manufacturers: 3M Fire Protection Products, Hilti Construction Chemicals, Specified Technologies.

SECTION 07920 – JOINT SEALANTS [HTH HWC ECE REC MJSC]

Summary: Exterior joint sealants, interior acoustic and non-rated sealants.

Materials: Silicone, polyurethane, single component interior, latex, acoustic.

Manufacturers: Sika Corporation, Tremco, Inc, BASF Corporation.

DIVISION 8 – DOORS AND WINDOWS

SECTION 08 110 – STEEL DOORS AND FRAMES [HTH HWC ECE REC MJSC]

Summary: Standard steel doors and frames for interior and exterior locations – service doors for storage, mechanical and support spaces.

Materials: Welded steel frames, steel doors

Manufacturers: Amweld Building Products, Ceco Corporation, Curries Company

SECTION 08 1200 – INTERIOR ALUMINUM DOOR AND WINDOW FRAMES [HTH HWC ECE REC MJSC]

Summary: Standard interior aluminum door and sidelight frames for office. Including glazed doors where shown.

Materials: Aluminum, Kawneer Trifab 451, color to be selected by Architect from the full range of manufacturer's colors. Doors to have medium width stiles.

Manufacturers: Kawneer, Inc.

SECTION 08 1416 – FLUSH WOOD DOORS [HTH HWC ECE REC MJSC]

Summary: Solid core wood doors on offices and other doors where shown. 7' wide sliding barn door on wall mounted track between arts and crafts studios.

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Materials: Solid core veneer-faced door, five ply construction with stiles and rails bonded to the core, veneered in white maple, stained to architect's sample.

Manufacturers: Algoma Hardwoods, Eggers Industries, Marshfield Door Systems.

SECTION 08 1600 – EXTERIOR ALUMINUM SLIDING GLASS DOORS [HTH HWC ECE REC MJSC]

Summary: Automatic aluminum architectural sliding glass doors with multiple sliding panels, ADA hardware, and a metal track recessed into the floor slab.

Materials: Aluminum, Fleetwood Aluminum Norwood Series 3070, custom color by architect. Doors to have medium width stiles.

Manufacturers: Fleetwood Aluminum Products

SECTION 08 3131 – ACCESS DOORS [HTH HWC ECE REC MJSC]

Summary: Access panels and doors.

Materials: Painted steel in non-restroom areas, stainless steel in wet locations, including restrooms and janitorial spaces.

Manufacturers: J.L. Industries, Larsen's Manufacturing, Milcor, Inc.

SECTION 08 4100 – ALUMINUM-FRAMED ENTRANCES AND STOREFRONTS

[HTH HWC ECE REC MJSC]

Summary: Exterior, thermally broken, aluminum storefront window system.

Materials: Aluminum, Kawneer Trifab 451T, color to be selected by Architect from the full range of manufacturer's colors.

Manufacturers: Kawneer, Inc.

SECTION 08 5213 – METAL CLAD WOOD WINDOWS [HTH HWC ECE REC MJSC]

Summary: Replacement windows, custom size, dual glazed, operable with screens.

SECTION 08 6213 – SKYLIGHTS [HTH HWC ECE REC MJSC]

Summary: at Center for Community Life wing hallway and classroom lobby.

Materials: Acrylic dome with metal tubes and metal roof mounting (diffuser type, and other additional features/switches to be selected by architect)

Manufacturers: Bristol, Velux, Wasco

SECTION 08 7100 – DOOR HARDWARE [HTH HWC ECE REC MJSC]

Summary: Per client standard; Client to coordinate access control

SECTION 08 8000 – GLAZING [HTH HWC ECE REC MJSC]

Summary: Glazing for interior windows and doors, exterior windows and doors.

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Materials: Interior acoustic windows at conference room and offices: 1" IGU, tempered as required. Interior non-acoustic windows: ¼" clear, tempered as required. Exterior windows: 1" IGU, Solarban70, Low-E, or equal. Tempered as required.

Manufacturers: Oldcastle Architectural Glass, PPG Industries, Guardian Industries.

SECTION 08 9100 – GLAZED ALUMINUM CURTAIN WALLS [HTH HWC ECE REC MJSC]

Summary: Exterior, pre-finished curtain wall system, complete with glazing, structural anchors, attachments, and shims.

Materials: Aluminum; Basis of Design: Kawneer 1600 System, color to be selected by Architect from the full range of manufacturer's colors; Glazing as specified in section 08800

Manufacturers: Kawneer, Inc.; Arcadia

SECTION 08 9119 – FIXED LOUVERS [HTH HWC ECE REC MJSC]

Summary: Fixed wood louvers with painted metal frames at exterior locations as sunshade.

Materials: IPE wood horizontal drainable-blade louvers.

Manufacturers: Airolite, Construction Specialties, Ruskin.

DIVISION 9 – FINISHES

SECTION 09 2423 – PORTLAND CEMENT PLASTER [HTH HWC ECE REC MJSC]

Summary: Metal furring and lathing and exterior Portland cement plaster system.

Materials: Three-coat Portland cement plaster exterior finish system with integral color acrylic based finish coat.

SECTION 09 2982 – GYPSUM BOARD

Summary: Gypsum wallboard, gypsum board ceiling, rated and non-rated. Ceramic tile backer board. Exterior sheathing and soffit board substrate.

Materials: Interior: 5/8" thickness, rated where shown on drawings. Water resistant in wet locations where ceramic tile is not used. Exterior: 5/8" Dens-Glass Gold Exterior Sheathing.

Manufacturers: Georgia Pacific, USG, Pabco.

SECTION 09300 – CERAMIC TILE [HTH HWC ECE REC MJSC]

Summary: Glazed wall and floor tile, thresholds.

Materials: Ceramic tile in wet locations where shown on the drawings. Thin set tile on walls, full mortar bed on floors, sloped to drain. Epoxy grout.

Manufacturers: Dal-Tile

SECTION 093026 – PLASTIC TILE [HTH HWC ECE REC MJSC]

Summary: Floor to ceiling panels on walls of commercial kitchen, catering pantry, and café back of house.

Materials: Fiber reinforced plastic panels

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SECTION 09513 – ACOUSTIC CEILING TILE

[HTH HWC ECE **REC** MJSC]

Summary: acoustical tile ceilings

Materials: Acoustical tile ceilings: wood fiber tiles, wood fibers bonded with inorganic hydraulic cement. Water repellent tile ceilings: washable “kitchen zone” where shown on the drawings. Large format acoustic ceiling tile: where shown on the drawings.

Manufacturers: Armstrong

SECTION 09 5323 – METAL ACOUSTICAL CEILING SUSPENSION ASSEMBLIES/ACOUSTICAL METAL PANEL CEILING SYSTEM

[HTH HWC ECE **REC** MJSC]

Summary: Perforated acoustic metal ceiling system in entry lobby, Center for Community Life lobby, main hall corridor, and interior ceiling perimeter in main hall and classrooms.

Materials: Modular acoustical metal ceiling panels with wood-grained laminate finish and trim. Perforated with sound-absorbing materials. Modular suspension assemblies and grid.

Manufacturers: Ceilings Plus Sarante PVC Free modular panels

SECTION 09 5423 – EXTERIOR METAL LINEAR CEILINGS

[HTH HWC ECE **REC** MJSC]

Summary: Metal pans and associated suspension system for exterior soffits

Materials: 8” square pan edge, unperforated, Wood Effects; 1” reveal at edge with wood-pattern finish.

Manufacturers: Basis of Design: Armstrong MetalWorks Wood Effects Linear Exterior 66M1

SECTION 10 2226 – OPERABLE PARTITIONS

[HTH HWC ECE **REC** MJSC]

Summary: 10’ high movable partition walls for class room.

SECTION 09 6466 – GYM FLOOR: ENGINEERED ATHLETIC WOOD FLOORS (**ADD ALTERNATE**)

[HTH HWC ECE **REC** MJSC]

Summary: Engineered wood plank sprung floor, base, and wood reducer strips – for gym, and dance studio.

Materials: Acrylic impregnated engineered hardwood flooring; tongue and groove; 3/8” nominal thickness; Random plank: 2-2/3” wide by random length; solid cherry wood material; edge detail: micro-bevel; factory-finished acrylic impregnated wear layer with factory applied UV-cured urethane. Basis of Design: Nydree Flooring, Acrylic Impregnated Engineered Hardwood Flooring

Manufacturers: Nydree Floor, Acrylic Impregnated Engineered Hardwood Flooring; Bruce Hardwood Floors; Harris-Tarkett; Hartco Flooring

SECTION 09 6566 – GYM FLOOR: VINYL FOAM ATHLETIC SPORTS FLOORING (**BASE FOR ESTIM.**)

[HTH HWC ECE **REC** MJSC]

Summary: Foam backed (8 mm nominal) vinyl sports flooring with wood look and shock absorption.

Manufacturer: Bases of design Tarkett Sports.

Marin City Center for Community Life

Cost Estimate Schematic Design Report – 5/19/2017

Schematic Architectural Design Narrative

Group 4 Architecture, Research + Planning Inc.

SECTION 09 6516 – RESILIENT FLOORING

[HTH HWC ECE REC MJSC]

Summary: Linoleum sheet flooring, resilient wall base, luxury vinyl tile

Materials: Linoleum resilient sheet flooring on natural jute backing. Rubber wall base, coved, 4” high, color as selected by Architect from manufacturer’s full range. Luxury vinyl tile to be selected by Architect from manufacturer’s full range.

Manufacturers: Linoleum and luxury vinyl tile: Armstrong World Industries, Azrock Commercial Flooring

SECTION 09 6519 – RUBBER FLOOR

[HTH HWC ECE REC MJSC]

Summary: Two layers 1” plywood subfloor with 8 mm rubber mat flooring.

SECTION 09 6813 – CARPET TILE

[HTH HWC ECE REC MJSC]

Summary: Modular, non-indexed, carpet tile

Materials: 20”x20” or 24”x24” carpet tile (size dependent on selected manufacturer). Multiple colors and patterns, see drawings for locations.

Manufacturers: Shaw Floors, Bentley Prince Street, Interface Flooring Systems, Lees Carpets.

SECTION 09 6253 – RUBBER FLOORING

[HTH HWC ECE REC MJSC]

Summary: Weight Room to have rubber flooring over sprung wood floor/

SECTION 09 8413 – ACOUSTICAL WALL PANELS

[HTH HWC ECE REC MJSC]

Summary: Fabric-wrapped acoustical/tackable wall panels

Materials: 1 1/8” fabric wrapped panel with trimless square edges and corners, noncombustible and dimensionally stable glass fiber core. NRC .85 Fabric chosen by Architect.

Manufacturers: Panel: Conwed Designscape by Owens Corning

Fabric: Maharam, Knoll.

SECTION 09 9100 – PAINTING

[HTH HWC ECE REC MJSC]

Summary: Surface prep, priming and painting of interiors and exteriors

Materials: Low-VOC paint and primer

Manufacturers: Benjamin Moore, Frazee, ICI, Kelly-Moore, Sherwin-Williams.

SECTION 09 9310 – WOOD STAINS AND TRANSPARENT FINISHES

[HTH HWC ECE REC MJSC]

Summary: Wood trim and panel finishes

Materials: Low-VOC stains and transparent finishes

Manufacturers: Benjamin Moore, Cabot, Coronado Paint, ICI, Sherwin-Williams.

SECTION 09 9600 – HIGH-PERFORMANCE COATINGS

[HTH HWC ECE REC MJSC]

Summary: High-performance coatings on exterior steel elements.

Marin City Center for Community Life

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Group 4 Architecture, Research + Planning Inc.

Materials: Semi-gloss polyurethane – aliphatic polyurethane enamel, color to match Architect's sample.

Manufacturers: Carboline, DuPont, Tnemec.

SECTION 09 9656 – EPOXY COATINGS [HTH HWC ECE REC MJSC]

Summary: Epoxy coating of commercial kitchen, catering pantry, and back of house.

Materials: Low-VOC, slip resistant grip, 6" cove base.

SECTION 09 9800 – VAPOR EMISSION TREATMENT SYSTEMS [HTH HWC ECE REC MJSC]

Summary: Liquid applied floor treatment for newly poured substrates that are scheduled to receive resilient and carpet tile products.

Materials: Penetrating floor sealer.

Manufacturers: FloorSeal.

SECTION 09 9890 – CONCRETE FLOOR SEALING [HTH HWC ECE REC MJSC]

Summary: Concrete floor sealer/hardener at exposed concrete locations not scheduled to receive further treatment.

Materials: Low-VOC, high solids, solvent based, non-yellowing, acrylic copolymer concrete curing system.

Manufacturers: NoxCreete Cure&Seal, ProSoCo.

DIVISION 10 – SPECIALTIES

SECTION 101100 – VISUAL DISPLAY SURFACES [HTH HWC ECE REC MJSC]

Summary: Floor to ceiling markerboards and tack boards in arts room, crafts room and music room. Slat wall on gift shop back wall from top of casework to ceiling.

SECTION 10 1400 – SIGNAGE

Summary: Exiting and room identification signage for code and ADA requirements; custom illuminated aluminum building signage

SECTION 10 1680 – SOLID COLOR REINFORCED COMPOSITE TOILET COMPARTMENTS

[HTH HWC ECE REC MJSC]

Summary: Toilet enclosure and urinal.

Materials: Solid surface toilet partitions and sight screens; floor-to-ceiling mounted pilasters; headrail braced; attachments; solid surfacing material: use only solid surfacing products free of added urea formaldehyde resin binders.

Manufacturers: Bobrick Washroom Equipment, Inc. Sierra Series

SECTION 10 2226 – OPERABLE PARTITIONS [HTH HWC ECE REC MJSC]

Summary: 10' high movable partition walls for class room.

Marin City Center for Community Life

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Group 4 Architecture, Research + Planning Inc.

Materials: Acoustic panel walls with sound-insulating wall above.

Manufacturers: Hufcor, Modernfold

SECTION 10 2600 – WALL GUARDS [HTH HWC ECE REC MJSC]

Summary: Bumper rails in storage rooms

Materials: Bumper rail – rigid, impact-resistant plastic and associated retainer system.

Manufacturers: Balco, Construction Specialties, IPC, Bobrick.

SECTION 10 2800 – COMMERCIAL TOILET ACCESSORIES [HTH HWC ECE REC MJSC]

Summary: Toilet room accessories.

Materials: Stainless steel .

Manufacturers: Bobrick.

SECTION 10 4400 – FIRE PROTECTION SPECIALTIES [HTH HWC ECE REC MJSC]

Summary: Fire extinguishers and cabinets.

Materials: Dry chemical type, UL rating 2A-10B:C.

Manufacturers: Larsen's Manufacturing Company, J.L. Industries.

SECTION 10 5100 – METAL LOCKERS [HTH HWC ECE REC MJSC]

Summary: Metal lockers with ADA units.

DIVISION 11 – EQUIPMENT

SECTION 11 0640.13 – FOOD SERVICE EQUIPMENT [HTH HWC ECE REC MJSC]

Summary: see food service drawings for commercial kitchens.

DIVISION 12 – FURNISHINGS

SECTION 12 3550 – CUSTOM CASEWORK [HTH HWC ECE REC MJSC]

Summary: see food service drawings for commercial kitchens.

SECTION 12495 – ROLLER SHADES [HTH HWC ECE REC MJSC]

Summary: Manual roller shades

Materials: Shade cloth @ 1% open, manual rollers and shade housing pockets. For motorized blackout system, provide 1% open shades for standard glare and light control, and opaque shades with tracked sides for complete blackout. Provide all accessories and controls as required per system type.

Manufacturers: MechoShade Systems, Lutron Shading Solutions by VIMCO.

DIVISION 13 – ATHLETIC AND RECREATIONAL SPECIAL CONSTRUCTION

Marin City Center for Community Life

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Schematic Architectural Design Narrative

Group 4 Architecture, Research + Planning Inc.

SECTION 13 2810 – Folding Basketball Backboard and Hoop

[HTH HWC ECE **REC** MJSC]

Backboards to attach to roof structure and fold up when not in use. Includes glass backboard, hoop, net and motorized operation.

SECTION 13 2820– Score boards

[HTH HWC ECE **REC** MJSC]

Summary: Electrical scope boards mounted. Show, score, time, shot clock, fouls, time outs and period.

SECTION 13 2830 – Gymnasium Wall Pads

[HTH HWC ECE **REC** MJSC]

Summary: 5' high pads fixed to the walls.

DIVISION 14 – CONVEYING SYSTEMS

SECTION 14 2423 – Hydraulic Passenger Elevator

[HTH HWC ECE **REC** MJSC]

Two stop hydraulic elevator.

Marin City Center for Community Life (MCCFCL)
May 18, 2017

Schematic Design Phase Civil Engineering Summary
CSW|ST2; 4.1203.00

Dry Utilities

Dry utilities, including gas, power and communications, are currently drawn from underground mains and overhead utility lines located along Drake Avenue and Phillips Drive. At the time of Schematic Design, the exact route of the existing infrastructure within Drake Avenue, Phillips Drive and throughout the site, is estimated based on utility features visible at the ground surface and yet to be verified.

Construction of the project will involve replacing overhead power and communication supply to an existing transformer with underground joint trench routing. The transformer will be relocated within the site. New meters and switchgear will be provided at the Gym and Recreation Center, the Health and Wellness Center and the Early Childhood Center. The Senior Center and Harriet Tubman House will continue to use existing meters.

The Senior Center will retain a portion of the existing conduits and gas piping which convey dry utilities to that building. The new site joint trench will connect to those existing conduits to continue to supply the Senior Center. A portion of the existing underground gas piping under the driveway which provides access from Drake Avenue will be replaced as necessary to accommodate proposed grading. Otherwise, all existing gas piping will be removed and replaced with new piping. The Senior Center will continue to draw gas from Drake Avenue. The Health and Wellness building, Rec Center and Gym buildings, Early Childhood Education building and Harriet Tubman House will draw gas from the main under Phillips Drive. Existing connections to be abandoned will be capped and sealed in accordance with PG&E requirements.

Similarly, all existing joint trench conduit throughout the site, aside from the Senior Center conduit to remain, will be removed and new conduit installed. The Senior Center, the Health and Wellness Center and the Rec Center and Gym buildings will draw power and communication from Drake Avenue. The Harriet Tubman House and Early Childhood Education buildings will draw power and communication from the joint trench in Phillips Drive.

Water

The existing Rec Center and Gym and Senior Center draw water from Drake Avenue. The Harriet Tubman House and two existing portables may be drawing water from Phillips Drive. After construction, the Senior Center and the Health and Wellness Center will draw water from the existing connection at Drake Avenue. A new tap to the main on Drake Avenue will supply water to two fire hydrants in the parking lot adjacent to the Senior Center.

New taps to the main along Phillips Drive will be made for the Health and Wellness fire suppression supply, the Rec Center and Gym potable and fire suppression supply, the Early Childhood Education potable and fire suppression supply and the Harriet Tubman House supply. Four new meters will be installed and the Health and Wellness, Rec Center and Gym and Early Childhood Education buildings will be accommodated with Marin Municipal Water District (MMWD) standard backflow, fire department connections and indicator devices as appropriate for their construction. Two hydrants are proposed to draw water from the Phillips Drive main.

New laterals are anticipated to range in size between 2" and 6" diameter. Existing taps to the water main in Phillips Drive are anticipated to be removed and sealed in accordance with MMWD requirements.

Sanitary Sewer

In pre-project conditions the buildings of the community center discharge wastewater to the sanitary sewer main in Phillips Drive. After construction all buildings will continue to discharge wastewater to the sewer main in Phillips Drive.

Drive. Because it is not known where the existing sewer laterals are through the site, it is anticipated that all new sewer laterals for the buildings will be required to be connected to the main.

There may be a sewer lateral through the site between the gym and the Harriet Tubman House which serves the housing development uphill of the project site. If this lateral exists and has not been legally abandoned, it will be required to remain and adjustments made to its configuration to suit the proposed conditions for grading of the site.

New sewer laterals are anticipated to range in size between 4" diameter and 8" diameter. The existing sewer laterals throughout the site will be removed and the connections capped and grout-sealed.

Drainage

In the pre-project condition the site storm drain system also discharges runoff to the storm drain system in Phillips Drive. The storm drain main under Phillips Drive consists of pipes which are 48" to 60" in diameter. The locations of connection are proposed to be field-located under Phillips Drive in order to connect the proposed site storm drain to the existing connection locations. Proposed storm drain pipes for conveyance of runoff through the site are anticipated to range in size between 4" diameter and 12" diameter.

Peak Flow Mitigation and Storm Water Quality Treatment

Under pre- and post-project conditions, the project drainage area remains the same. There is an overall increase in imperviousness in the post-project condition over the pre-project condition. The increase in site imperviousness results in an increase in peak runoff which can potentially impact drainage systems downstream of the project. A pipe detention system is proposed to assist with mitigating post-project peak flow rates of runoff to at or below pre-project condition rates. The detention system holds water back in a storage area while releasing it at slower rate than which it arrives. This helps to attenuate the peak flow. After a storm has ended, the detention system continues to release runoff and eventually empties.

Post-construction BMPs for water quality treatment are proposed to be provided in the form of bioretention areas. The bioretention areas are also called raingardens. They consist of a planted area depressed a minimum of 8" below adjacent grade to allow ponding over a specific, planted soil media. Runoff is discharged to the bioretention areas to filter through the planted soil to remove pollutants and thence into a gravel storage layer where a perforated drain pipe intercepts the water to convey it to a storm drain system.

Stormwater Pollution Prevention Plan (for project sites over 1 acre)

The Stormwater Pollution Prevention Plan (SWPPP) shall be prepared to comply with California's General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (CGP) and the State Water Resources Control Board (SWRCB) Order No. 2009-0009-DWQ for the General Permit. The SWPPP manual is a living document that must be updated, modified and amended through the course of construction in response to changing site conditions, timing and construction practices.

Initial project assessment has assigned the project a Risk Level *(insert Risk Level Number, for SD Phase estimating assume the Risk Level is 2)* determination (see attached Risk Level Assessment). The SWPPP shall be developed in conjunction with the requirements set forth in the CGP for Risk Level *(insert Risk Level Number)* projects, Attachment *(insert CGP Attachment reference)* (attached).

The SWPPP shall be designed to address the following objectives:

- All pollutants and their sources, including sources of sediment associated with construction, construction site erosion and all other activities associated with construction activity, are controlled;

- Where not otherwise required to be under a Regional Water Quality Control Board (RWQCB) permit, all non-stormwater discharges are identified and either eliminated, controlled or treated;
- Site BMPs are effective and result in the reduction or elimination of pollutants in stormwater discharges and authorized non-stormwater discharges from construction activity to the Best Available Technology/Best Control Technology (BAT/BCT) standard;
- Calculations and design details, as well as BMP controls for site run-on, are complete and correct (as needed) and;
- Stabilization BMPs installed to reduce or eliminate pollutants after construction are completed.”
- Identify post-construction BMPs (as required), which are those measures to be installed during construction that are intended to reduce or eliminate pollutants after construction is completed.
- Identify and provide methods to implement BMP inspection, visual monitoring, Rain Event Action Plan (REAP) and Construction Site Monitoring Program (CSMP) requirements to comply with the General Permit.
- Scheduled Plan of Owner Responsibilities (to maintain NPDES compliance)
- The Owner shall take responsibility as the project LRP.

In this capacity, the Owner shall:

- Set up an account on the SMARTS system.
- Submit the e-authorization form to the SWRCB.
- Provide on-line access to the Qualified SWPPP Developer (QSD) to allow preparation of the Permit Registration Documents (PRDs) within the SMARTS system. If the QSP is not the same person as the QSD, the Owner shall provide on-line access to the Qualified SWPPP Practitioner (QSP) to allow reporting as needed during construction. The QSD username is: *(insert QSD's SMARTS system username)* . The QSP username is: *(insert QSP's SMARTS system username)*
- Review and certify the PRDs once the SWPPP manual has been uploaded and the completion check has been performed by the QSD. Fee is to be provided by the contractor.
- Note: As the LRP, the Owner will be notified by e-mail of any changes made to the project SMARTS account.
- At the completion of the project, the LRP shall certify the Notice of Termination (NOT) prepared by the QSD/QSP.
- Scheduled Plan of project tasks (to maintain NPDES compliance)
- Ensure the LRP has completed required tasks and confirm the WDID has been provided by the SWRCB prior to commencing with construction activities.
 - Ensure the project SWPPP manual meets NPDES permit requirements and is prepared by a certified QSD.
 - Ensure annual permit fees are paid on time.
 - Ensure the SWPPP is made available on-site during construction activities.
 - Ensure site BMPs are installed and inspected by or under the direction of a Qualified SWPPP Practitioner (QSP).
 - Ensure SWPPP Best Management Practices (BMPs) are installed per the initial recommendations in the SWPPP manual.
 - Maintain installed BMPs as necessary to maintain permit compliance.
 - Modify or upgrade installed BMPs as necessary in response to changing site conditions and/or rain event actions.
 - Perform required weekly, pre/post rain event and quarterly site inspections as directed in the SWPPP manual. Sampling as required in the SWPPP manual.
 - Prepare and submit the project Annual Report on-line in SMARTS.
 - Prepare and submit the project Notice of Termination (NOT) in SMARTS (to be certified by the LRP when complete).

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Marin City Center for Community Life

Cost Estimation Set – 05/18/2017

Schematic Landscape Architectural Design Narrative

RHAA Landscape Architecture + Planning

LANDSCAPE NARRATIVE

SUMMARY

The proposed Center for Community Life Campus Landscape includes a variety of programming with spatial relationships to existing and proposed architecture as well as flexible community spaces. At the heart of the campus and the front door to the campus is a two-story recreation building that utilizes a flexible open plaza which is framed by terraced planters, integrated seating options and a specialty paving to emphasize the importance of the community gathering space.

The goal of the campus landscape plan is to stitch together new and improved architectural interventions with external spaces defined by material continuity with pedestrian connections throughout the site and to Rocky Graham Park.

To that end, the landscape has been developed to support the following six principles of: (1) extending interior programming to the exterior, (2) expanding agricultural programming, (3) strengthening the connections across the site and to Rocky Graham Park, (4) defining a front porch along Philips Drive, (5) promoting community interaction and (6) celebrating culture and diversity. The new Landscape will further support the following vision:

A dynamic site. Utilizing and leveraging the topography of the site for a variety of user experiences from active recreation to plazas and naturalized storm water treatment areas.

A resilient site. Quality design and attention to detail will allow the new CFCL site to operate with minimal demand on maintenance personnel. It will also incorporate sustainable and local materials where appropriate to respond to the rigorous demands of a public facility. Reducing the demands on storm water infrastructure the site is designed to capture storm water for treatment and handle water flows into treatment areas for water quality improvements.

A community hub. Situated along Phillips Dr., and located directly adjacent to several other public facilities, including Bayside MLK Academy, Rocky Graham Park, Cornerstone Church and the Marin County Public Safety Building, the CFCL site and associated exterior spaces will play an important role in engaging and activating the places and people around it. The integrated site design will also promote a campus approach, tying the new facilities to the existing through a variety of outdoor spaces and gathering areas.

A botanically diverse site. The site will be designed to utilize bio treatment areas, ornamental and drought tolerant planting as well as naturalized edges at the site periphery. The associated irrigation design will compliment this strategy by using xeriscape techniques to reduce water consumption.

EXTERIOR FINISHES

The proposed landscape is composed of a palette of materials that are attuned to the site's setting in Marin City, complimenting architecture where suited, while creating a material palette that unifies the site and buildings together:

- **Paving:**
 - **Plaza Pavement: Stone paving on concrete slab.**
 - **Typical Site Pavement: Acid etched concrete with saw cut joints**

Marin City Center for Community Life

Cost Estimation Set – 05/18/2017

Schematic Landscape Architectural Design Narrative

RHAA Landscape Architecture + Planning

- **Walls:**
 - **Walls adjacent to buildings: Concrete - board formed finish.**
 - **Standard Walls: Concrete - smooth form finish**
 - **Planter Walls: Weathered Steel**
- **Furnishings:**
 - **Exotic Hardwood furniture and decking**
- **Fencing:**
 - **Custom Stainless Steel**
- **Boardwalk**
 - **Exotic Hardwood**
- **Railing:**
 - **Brushed Stainless Steel**

Marin City Center for Community Life

PDP/SD Set – 05/31/2017

Outline Specifications

RHAA Landscape Architecture + Planning

OUTLINE SPECIFICATIONS

SECTION 05 52 13 Tube Railings

Summary: Brushed Stainless Steel safety railings

SECTION 05 70 05 Landscape Metalwork

Summary: Custom Stainless-steel fencing and handrails, weathered steel planter walls

SECTION 06 20 15 Site Carpentry (IPE)

Summary: Exotic hardwood decking, raised boardwalk and custom site seating

SECTION 11 68 00 Play Equipment

Summary: Manufactured play equipment

SECTION 31 10 01 Plant Protection

Summary: Protection of existing trees and plants to remain

SECTION 32 12 16 Pruning

Summary: Pruning of plant materials

SECTION 32 12 16 Asphalt Paving

Summary: Parking lots and drive isles

SECTION 32 13 12 Site Concrete

Summary: Slab on grade (acid etched), seat walls (board formed and smooth form), concrete stairs

SECTION 32 14 40 Stone Paving

Summary: Stone Plaza Pavement

SECTION 32 18 13 Synthetic Grass Surfacing

Summary: Synthetic turf for plaza and steps

SECTION 32 18 16 Playground Surfacing - Poured

Marin City Center for Community Life

PDP/SD Set – 05/31/2017

Outline Specifications

RHAA Landscape Architecture + Planning

Summary: Resilient matting for playground surfacing

SECTION 32 33 00 Site Furnishings

Summary: Trash Cans, drinking fountains, bike racks

SECTION 32 33 00 Site Furnishings

Summary: Trash Cans, drinking fountains, bike racks

SECTION 32 84 00 Irrigation

Summary: Landscape irrigation

SECTION 32 90 00 Planting

Summary: Landscape planting, soil requirements, mulch, testing and composting

This report identifies options for structural systems that meet the requirements of the 2016 California Building Code. These potential systems will be used for developing a schematic estimate of construction costs. The structural schemes will be further investigated during the later design phases before finalizing the structural system.

SITE CHARACTERISTICS

The Marin City Center for Community Life will be located at 630 Drake Avenue, on a gently sloping lot located on Phillips Drive in Marin City, California. The site currently houses the Marin City Community Service District, including recreational, educations, health, wellness and cultural services. The project includes replacement of current outdated or modular buildings with new construction from the recreation center building, health clinic, and the early childhood education center and will modify the existing Manzanitas Center. The site is relatively level, sloping up at the rear of the property towards the adjacent lot. Based on the historic Geotechnical Engineering Report titled, "Marin City Community Center Complex- Phase 1," November 28, 2005 by Miller Pacific Engineering Group, the site is underlain with four to ten feet of stiff sandy clay at the northwest end, with six to twenty feet of loose to medium stiff artificial fill and natural soil to the south. The clay and fill are underlain by weathered bedrock, with sand and gravel strata. From exploratory borings, the ground water table was located approximately 6.5 and 15 feet below the existing grade at the two boring locations.

DESIGN AND PERFORMANCE CRITERIA

The 2016 California Building Code (Title 24, Part 2: CBC) categorizes structures with significant public assembly as Occupancy Category III structures and defines this group as "High Occupancy."

Buildings designed to the requirements for CBC Occupancy Category III are capable of responding to the Design Earthquake, which represents two thirds of the Maximum Considered Earthquake (MCE) ground motion, at the Life-Safety performance level, which is the code requirement. At the Life-Safety level, significant structural and nonstructural damage may occur. The structure may lose substantial amounts of its original lateral stiffness and strength, but will maintain a significant margin against collapse. The structure may have permanent lateral offset and some elements of the seismic force-resisting system may exhibit substantial cracking, spalling, yielding and buckling.

BUILDING DESCRIPTION

The Marin City Center for Community Life is envisioned as a tall 8,600 square foot single story gymnasium, with an adjacent two story Recreation Center with a plan area of approximately 6,100 square feet. A shorter one story kitchen and storage structure connects the new gymnasium to the existing Manzanitas Center. The building rooflines are consistently around 30 feet, with the exception of the kitchen and storage areas, which are roughly 12 feet above grade. The Early Childhood Education Building is located to the northeast along Phillips Drive, a single story building approximately 4300 square feet plan area. The Health and Wellness Center is on the opposite side of the site near the corner of Phillips and Drake, a single story building with approximately 4000 square feet plan area.

The building shapes are fairly regular in plan with the gymnasium building forming an overall L-shape made up by the two portions. The other buildings are rectangular. The buildings do not fall into the "irregular" category, as defined by the CBC, as the roof diaphragms are expected to consist of flexible metal decks. The Geotechnical report prepared by Miller Pacific Engineering

Group does not contain the earthquake spectra required for Response Spectra Analysis, which would be required by an irregular building, and the building will be designed using the Equivalent Lateral Force method.

KEY STRUCTURAL FEATURES

- Long Open Spans in the Gymnasium, with acoustic metal deck over steel trusses with Buckling Restrained Braced Frame lateral system.
- Cantilevered balconies constructed with steel beams, wood second story, and glass storefronts at the Recreation Center. Timber shear wall lateral system with bearing walls.
- Exposed architectural scissor trusses above the three classrooms in the Early Childhood Education Building. Timber shear wall lateral system with bearing walls.
- Mechanical well located near the center of the Recreation Center and Early Childhood Education Building. Timber shear wall lateral system with bearing walls.

SITE SEISMICITY

The site is located approximately 18 kilometers from the San Andreas fault, it's closest earthquake fault. Latitude and longitude for the site are 37.8730278 degrees and -122.5146489 degrees. For the design, seismicity is based on the CBC hazard maps using the following parameters based on information obtained from the historic Miller Pacific Engineering Group geotechnical report.

Site Class:	D
Seismic Design Category:	D
Occupancy Category:	III
Seismic Importance Factor:	I = 1.0
Short Period MCE spectral response acceleration:	$S_s = 1.503 \text{ g}$
One Second Period MCE spectral response acceleration:	$S_1 = 0.673 \text{ g}$
Response Modification Coefficient:	8 for Buckling Restrained Frame
Response Modification Coefficient:	7 for Light Framed Timber with Shear Walls

BUILDING CONFIGURATION

Foundation Systems Option (Based on Recommendations from Historic 2005 Geotechnical Report)

1. Schematic foundation system is based on recommendations from the 2005 geotechnical report by Miller Pacific Engineering Group. Geotech report updates are expected in September, 2017 and are may include modified foundation recommendations. The foundation system included in this narrative is preliminary and may substantially change with the upcoming report.
2. Site is underlain by expansive soils and is recommended to be mitigated by proper site preparation. See Civil narrative for site preparation, back fill, and/or treatment of expansive soils.
3. Water table was previously observed 6.5 to 15 feet from the ground surface. Miller Pacific noted that this high water table may complicate site preparation and foundation construction.

4. Building pad for the gymnasium building is susceptible to differential settlement. The geotechnical report recommends a deep pile foundation system with pile caps to mitigate the settlement. Piles are 18 inches in diameter minimum. For estimating purposes, assume (110) 18 inch diameter piles, with an average length of 20 feet below grade. Deep grade beams may be required under lateral force elements. Foundation concrete will utilize High Volume Fly Ash(HVFA).

As an add alternate, the geotechnical report discusses the potential use of rammed aggregate piers (RAP) to improve the soil and recommends further study prior to implementation. Installation of the RAP system may be difficult to implement due to the high water table. If this system is recommended as feasible in the future geotechnical report, the foundation system will consist of shallow perimeter and isolated spread footings bearing on the improved soil, without interconnecting grade beams at gravity columns.

5. 5-inch Slab-on-grade supported off of a minimum of four inches of washed, crushed, and compacted rock to provide a uniform support is recommended due to the potential, expansive soils. This slab depth may change pending receipt of the updated geotechnical report. See civil narrative for fill preparation.
6. Foundation systems for the Early Childhood and Health and Wellness buildings will consist of strip and isolated, spread footings.
7. Potential for liquefaction at the site is not expected and will be verified in the future geotechnical report.

Structural System – Timber Construction

Gravity System Option – See Attached Framing Plans

1. *Main Gymnasium Roof:* EPIC METALS™ bare metal 2.5" deck on 48-inch deep open-web steel joists spanning to steel W24 wide flange beam girders. The roof will have supplemental steel beams to support heavy equipment. The roof will also support pre-fabricated stanchions for future solar panels mounted on the roof.
1. *Recreation Center Roof:* 1/2" plywood sheathing blocked diaphragms on 16-inch deep TJI joists spanning up to 36 feet. The joists frame to bearing walls, parallam strand lumber (PSL) and steel beams supported on steel posts with saddles to accommodate the large spans and loading from the mechanical well.
2. *Early Childhood Education Center Roof:* 1/2" plywood sheathing diaphragms over 3x6 T&G wood framing, supported by architectural exposed scissor trusses at 8' 0" O.C spanning 23', over the classrooms. Over the office spaces, 1/2" plywood blocked diaphragms with pre-manufactured trusses at 24" O.C. spanning 24' are used. At the mechanical well, 16-inch deep TJI joists are required. The trusses and roof joists frame to 2x6 bearing walls.
3. *Health & Wellness Center Roof:* 1/2" plywood blocked diaphragms with pre-manufactured trusses at 24" O.C spanning 38'. The trusses frame to bearing walls and parallam strand lumber (PSL) supported on steel posts with saddles to accommodate the large truss spans.
4. *Ground Floor of all Buildings:* 5" normal weight concrete slab-on-grade with thickened slab edge.

Lateral System Options – See Attached Framing Plans

1. *Main Gymnasium:* Buckling Restrained Braced Frames (Unbonded Braces): The structural system utilizes conventional steel framing with buckling restrained braced

frames (BRBF). The BRBF is system that uses yielding cores to balance the tension and compression capacity of the braces. This provides a more ductile system and allows the design force to be slightly reduced. The braced frames will be located to minimize disruption to the architectural space, typically at bays which avoid windows. The concentration of seismic resistance at these “cores” will result in substantial foundations under the cores. This option lowers steel costs, but requires detailed planning to integrate the bracing elements with design.

2. *Two-story Recreation Center portion, Early Childhood Education, and Health & Wellness Building:* Plywood sheathed shear walls with hold downs are required and will be located in the bearing walls shown in the attached diagrams.

In the Recreation Center, we estimate that a minimum of 75 feet of plywood shear wall will be required in each direction at the second story, with 120 feet of plywood shear wall in each direction at the first story. In the Early Childhood Education Center, we estimate that a minimum of 40 feet of plywood shear wall will be required in each direction. In the Health & Planning Building, we estimate that a minimum of 35 feet of plywood shear wall will be required in each direction.

Although minimum lengths of shear wall are provided for estimation purposes, we recommend that as much of the walls be plywood sheathed to better distribute the lateral resistance. The greater length of plywood walls will simplify construction by distributing the lateral resistance, may result in the elimination of shear wall hold downs and will minimize the strip footing sizes.

The Recreation Center building has glass store front walls at multiple locations, which will require the perimeter PSL girders to also serve as collectors. These collectors will be interconnected with metal straps or hold downs.

This schematic design narrative describes the potential seismic deficiencies for the Tubman House and strategies for seismic retrofit. Because the physical condition of the Tubman House is poor, replacement of damaged materials is required. Finishes were not removed for our study and future assessment is needed to quantify the extent of damage.

SITE CHARACTERISTICS

The Harriet Tubman House is located at 650 Drake Avenue in Sausalito, California. This historic house is part of the Marin City Community Service District's community facilities and is being considered for renovation and seismic retrofit as part of the Marin City Center for Community Life Master Plan.

SEISMIC EVALUATION CRITERIA

We performed a seismic evaluation of the Tubman House in accordance with the Tier 1 procedures defined in *ASCE 41-13 Seismic Evaluation and Retrofit of Existing Buildings* considering a Life Safety Performance Objective.

The Tier 1 procedure is a rapid evaluation and screening intended to provide a first opinion about the expected seismic performance of the building and define potentially deficient areas for additional study. Tier 1 procedures consist primarily of hand calculations.

The *Life-Safety* building performance level is defined in ASCE 41-13 as the following:

“...the post-earthquake damage state in which a structure has damaged components but retains a margin against the onset of partial or total collapse.”

The building was classified as a Building Type W1-*Wood Light Frames* in accordance with ASCE 41-13.

BUILDING DESCRIPTION

The Harriet Tubman House was constructed in the early 20th century and is assumed to be designed and built in a manner that was typical for timber structures for that time period. Building record drawings are not available. The house is a two story, multi-level L-shaped building. Both floors contain split levels with a three-step stair separating the two levels. The overall plan dimensions are approximately 45' in the east-west direction and 39' in the north-south direction. The stem of the “L” is approximately 29' in the north-south direction on the first floor and 14' in the north-south direction on the second floor. The building is approximately 21'-9” at the roof high point with a typical floor to floor height of 11'-11”. The building gravity system consists of 2x6 floor framing at 16” O.C. and 2x6 ceiling joists at 16” O.C. spanning between exterior and interior, wood framed bearing walls. The bearing walls consist of 2x6 studs at 16” O.C. The walls are supported on concrete strip footings. The lateral system consists of wood stud walls at the exterior and wire lath and plaster at the interior of the building.

SITE SEISMICITY

The building is located in a region of high seismicity as defined by ASCE 41-13 and an earthquake with a 20% chance of exceedance in 50 years is specified for the evaluation and retrofit, which represents a 225-year return event. The related spectral acceleration was developed from the USGS maps with an S_{XS} value of 100%g and an S_{X1} value of 58%g for Site Class D, corresponding to a BSE-1E hazard level for existing buildings. The BSE-1E seismic hazard is the criteria used for evaluation of buildings and is less than the seismic hazard used for new buildings. The seismic evaluation in this report was based on a spectral acceleration, S_a , (unreduced) value of 100%g adjusted for this site. A 2005 geotechnical report for the Marin City Community Center Project was used to classify the site as Site Class D.

BUILDING CONDITION

The building has not been used for many years and is currently unoccupied. Marin City has been using the building as a storage facility for supplies. Specific conditions that we observed included the following:

- The exterior is a textured stucco and appeared to be in good condition with little cracking.
- The exterior wood balconies and stairs were in poor condition and should be replaced.
- The exterior windows were damaged and boarded up and do not provide a weather tight barrier.
- There was plant growth at the interior of the building, extending from the exterior.
- There was a strong moldy odor throughout the building. In the upstairs Bedroom 02 there was significant mold growth on the walls and we observed water intrusion from the roof collecting on the 2nd floor.
- The lack of a weather tight enclosure and the evidence of water infiltration within the building indicates the potential for hidden damage to the wood framing in the form of rot. There was some wood rot observed underneath the entry stairs. Because the framing is covered with finishes, the condition and extent of damage could not be observed or determined. The remaining first floor framing appeared to be in good and dry condition, as observed from the mechanical well.
- There is a fireplace in the Living Room. The chimney could not be accessed and we are uncertain of the construction of the chimney. Unreinforced brick chimneys are a seismic hazard and should be verified during the retrofit project.

SEISMIC EVALUATION FINDINGS

Based on our review in accordance with the ASCE 41-13 Tier 1 procedure for the *Life-Safety* building performance objective, there are several potentially deficient items.

- *Load Path* – Based on review, the structure does not have a well-defined load path due to lack of connections for seismic uplift and lack of sill plate anchorage at the foundation. We recommend the addition of sill bolts, at 48-inch maximum spacing, to provide positive connection to the foundation. We also recommend the addition of new timber shear walls.

- *Shear Wall Stress Check* – This is a multi-story building using lath and plaster shear walls throughout the entire height of the building. These types of walls are not typically relied upon for seismic resistance and require special detailing, which is unlikely for a building of this vintage. The overall seismic demands on the shear walls are high and could result in excessive damage to the walls. Removal of the plaster and replacement with plywood on the building exterior and key interior walls is recommended.
- *Cripple Walls* – Cripple walls below first floor level shear walls are not sheathed with plywood or structural wood panels to facilitate load transfer to the foundation. We recommend removal of the exterior finish and the addition of plywood.
- *Narrow Wood Shear Walls* – There is a single instance where the aspect ratio of a wall is greater than 2-to-1. This wall will require plywood and new hold downs.
- *Walls Connected Through Floors* – Due to the period of construction, it is likely that the shear walls have limited interconnection between stories to transfer overturning and shear forces through between floor levels. We recommend the addition of hold downs to tie the upper stories to the lower stories and for the lower stories to the foundation.
- *Wood Posts* – Support of wood post depend on bearing only. There are no positive connections between wood posts and the foundation. We recommend new hold downs to connect the post to the foundations.
- *Girder/Column Connection* – There are no positive connections between timber girders and columns, girders sit directly on columns with no apparent connection. We recommend new metal straps or fitting to connect the girders to the columns.
- *Diaphragm Continuity* – Floor diaphragms are split levels and are not likely detailed for load transfer. We recommend the removal of the floor plywood and the addition of plywood and metal straps to transfer the seismic loads.
- *Roof Chord Continuity* – It is assumed that roof chord elements are not continuous. Further investigation is needed to confirm this assumption. Possible retrofit is accomplished by adding metal straps to the sides of the roof chords at all joints.
- *Non-compliant Diaphragm Spans* – Max diaphragm span without wood structural panels or diagonal sheathing is greater than 24 feet and are unblocked. We recommend new 3/4" plywood over the roof and floors with typical nailing and blocking.

Conclusions and Recommendations

Based on the limited Tier 1 screening evaluation per the provisions of ASCE 41-13 supplemented by our hand calculations and our site visit, there are potential deficiencies that prevent the buildings from satisfying the *Life Safety* performance objective. The potential retrofits are noted above.

We also recommend that an investigation be conducted to determine the condition and damage of the wood framing from the wood rot, such that a replacement percentage could be estimated and included in the cost of renovation and retrofit. Similarly, the construction of the chimney needs to be confirmed by locally removing finishes.



April 12, 2017

Mr. Vance Stoner
Group 4 Architecture, Research + Planning
211 Linden Avenue
South San Francisco, California 94080

Reference: **Seismic Evaluation
Marin City Community Service District
Harriet Tubman House
650 Drake Avenue
Sausalito, California
[Degenkolb Job Number B6206009.00]**

Dear Vance:

Marin City has requested a seismic evaluation of the Harriet Tubman House at 650 Drake Avenue in Sausalito, California. This historic house is part of the Marin City Community Service District's community facilities and is being considered for renovation as part of the Marin City Center for Community Life Master Plan. The city would like to understand any seismic vulnerabilities of the building. We have performed a seismic evaluation of the Harriet Tubman House in accordance with ASCE 41-13, *Seismic Evaluation of Existing Buildings*. This letter presents the findings of the Tier 1 evaluation.

General Building Overview

The Harriet Tubman House was constructed in the early 20th century and is assumed to be designed and built in a manner that was typical for timber structures for that time period. Building record drawings are not available. We visited the site on February 28, 2017 to review the current condition of the structure and determine the framing system. The Harriet Tubman House is a two story, multi-level L-shaped building with a more pronounced L-shape on second floor. Both floors contain two, split levels with a three-step stair separating the two levels. The overall plan dimensions are approximately 44'-10" in the east-west direction and 38'-10" in the north-south direction. The stem of the "L" is approximately 28'-11" in the north-south direction on the first floor and 13'-11" in the north-south direction on the second floor. The building is approximately 21'-9" at the roof high point with a typical floor to floor height of 11'-11". The building gravity system consists of 2x6 floor framing at 16" O.C. and 2x6 ceiling joists at 16" O.C. spanning between exterior and interior, wood framed bearing walls. The bearing walls consist of 2x6 studs at 16" O.C. The walls are supported on concrete strip footings. The lateral system consists of wood stud walls at the exterior and wire lath and plaster at the interior of the building.

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Site Description and Seismic Hazard

The building is located in a region of high seismicity as defined by ASCE 41-13 and an earthquake with a 20% chance of exceedance in 50 years is specified for the evaluation, which represents a 225-year return event. The related spectral acceleration was developed from the USGS maps with an S_{XS} value of 100%g and an S_{X1} value of 58%g for Site Class D, corresponding to a BSE-1E hazard level for existing buildings. The BSE-1E seismic hazard is the criteria used for evaluation of buildings and is less than the seismic hazard used for new buildings. The seismic evaluation in this report was based on a spectral acceleration, S_a , (unreduced) value of 100%g adjusted for this site. A 2005 geotechnical report for the Marin City Community Center Project was used to classify the site as Site Class D.

Seismic Evaluation Criteria

Our evaluation is based on a site visit to observe the general condition of the structure and simple hand calculations on the seismic system. The seismic evaluation is based on visual observations supplemented by architectural floor plans prepared by Group 4.

We performed a seismic evaluation of the building in accordance with the Tier 1 procedures defined in ASCE 41-13, *Seismic Evaluation and Retrofit of Existing Buildings* and looked at one seismic performance level: *Life Safety*, which is the desired performance for this building.

The Tier 1 procedure is a rapid evaluation and screening procedure intended to provide a first opinion about the expected seismic performance of the building and define potentially deficient areas for additional study. Tier 1 procedures consist primarily of hand calculations. Tier 2 procedures may be recommended for a second, more detailed level of analysis to assess the extent of the deficiencies.

The *Life-Safety* building performance level is defined in ASCE 41-13 as the following:

“...the post-earthquake damage state in which a structure has damaged components but retains a margin against the onset of partial or total collapse.”

The building was classified as a Building Type W1-*Wood Light Frames* in accordance with ASCE 41-13.

Seismic Evaluation of Building

This building is not considered a benchmark building in accordance with the definitions set forth in ASCE 41-13 due to its construction type and assumed year of construction. Benchmark buildings are deemed to meet Life-Safety and/or Immediate Occupancy standards based on the code used for design or retrofit. Because of this classification, Tier 1 checklists were completed for the building.

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Site Visit

We visited the site to observe the building, determine the type of construction and general structural layout, and note any potential Tier 1 deficiencies. Our review of the building was visual in nature. Many of the structural and nonstructural elements were concealed by building finishes. No materials testing or destructive testing was performed.

Building Condition

We observed the general condition of the structure during our site visit. The building has not been used for many years and is unoccupied. The city has been using the building as a storage facility for supplies and such. Specific conditions that we observed included the following:

- The exterior is a textured stucco and appeared to be in good condition with little cracking.
- The exterior wood balconies and stairs were in poor condition and should be replaced.
- The exterior windows were damaged and boarded up and do not provide a weather tight barrier.
- There was plant growth at the interior of the building, extending from the exterior.
- There was a strong moldy odor throughout the facility. In the upstairs Bedroom 02 there was significant mold growth on the walls and we observed water intrusion from the roof and collecting on the 2nd floor.
- The lack of a weather tight enclosure and the evidence of water within the building indicates the potential for hidden damage to the wood framing in the form of rot. There was some wood rot observed underneath the entry stairs. Because the framing is covered with finishes, the condition and extent of damage could not be observed. The remaining first floor framing appeared to be in good and dry condition, as observed from the mechanical well.
- There is a fireplace in the Living Room. The chimney could not be accessed and we are uncertain of the construction of the chimney. Unreinforced brick chimneys are a seismic hazard and should be verified in future studies.

Tier 1 Evaluation - Structural

Based on our review in accordance with the ASCE 41-13 Tier 1 procedure for the *Life-Safety* building performance objective, there are several potentially deficient items. We have listed these items on the following page:

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- *Load Path* – Based on review, the structure does not have a well-defined load path due to lack of connections for seismic uplift and lack of sill plate anchorage at the foundation.
- *Ties Between Foundation Elements* – Based on our review of the structural drawings, there did not appear to be any connection between the strip footings and the slab-on-grade tying the foundation elements together. Epoxy dowels may be required to connect the foundation elements.
- *Shear Stress Check* – The overall demand on the timber shear walls are high. This could result in excessive damage to the walls. Further study is recommended. Removal of the plaster and replacement with plywood is recommended.
- *Gypsum Wallboard or Plaster Shear Walls* – This is a multi-story building using lath and plaster shear walls throughout the entire height of the building. These types of walls are not typically relied upon for seismic resistance and require special detailing, which is unlikely for a building of this vintage.
- *Narrow Wood Shear Walls* – There is a single instance where the aspect ratio of a wall is greater than 2-to-1.
- *Walls Connected Through Floors* – Due to the period of construction, it is likely that the shear walls have limited interconnection between stories to transfer overturning and shear forces through between floor levels.
- *Cripple Walls* – Cripple walls below first floor level shear walls are not sheathed with plywood or structural wood panels to facilitate load transfer to the foundation.
- *Wood Posts* – Support of wood post depend on bearing only. There are no positive connections between wood posts and the foundation.
- *Wood Sill Bolts* – Wood sills are not bolted to the foundation.
- *Girder/Column Connection* – There are no positive connections between girders and columns, girders sit directly on columns with no apparent connection.
- *Diaphragm Continuity* – Floor diaphragms are split levels and are not likely detailed for load transfer.
- *Roof Chord Continuity* – It is assumed that roof chord elements are not continuous. Further investigation is needed to confirm this assumption.
- *Spans* – Max diaphragm span without wood structural panels or diagonal sheathing is greater than 24 feet.
- *Unblocked Diaphragms* – A condition exists where diaphragms have horizontal spans greater than 40 feet.



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Conclusions and Recommendations

Based on the limited Tier 1 screening evaluation per the provisions of ASCE 41-13 supplemented by our hand calculations and our site visit, there are potential deficiencies that prevent the buildings from satisfying the *Life Safety* performance objective. We recommend that a Tier 2 “deficiency only” ASCE 41-13 study be performed to clearly define the extent of seismic retrofit.

We also recommend that an investigation be conducted to determine the condition and damage of the wood framing from the wood rot, such that a replacement percentage could be estimated and included in the cost of renovation and retrofit. Similarly, the construction of the chimney needs to be confirmed by locally removing finishes.

Please contact us if you have questions regarding any of the items discussed here.

Very truly yours,

DEGENKOLB ENGINEERS

Holly J. Razzano
Principal, SE 4107

Wayne A. Low
Principal, S.E. 3933



Figure 1: Site Plan

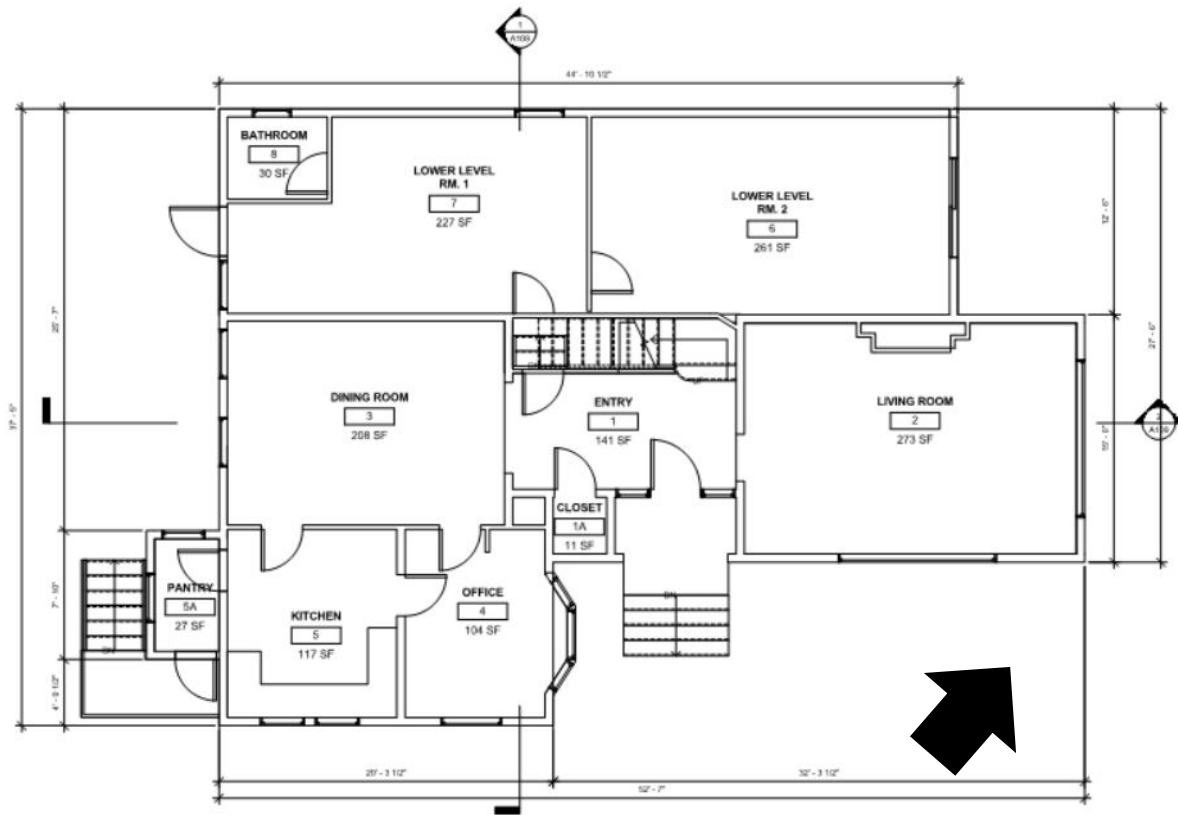


Figure 2: First Floor Plan

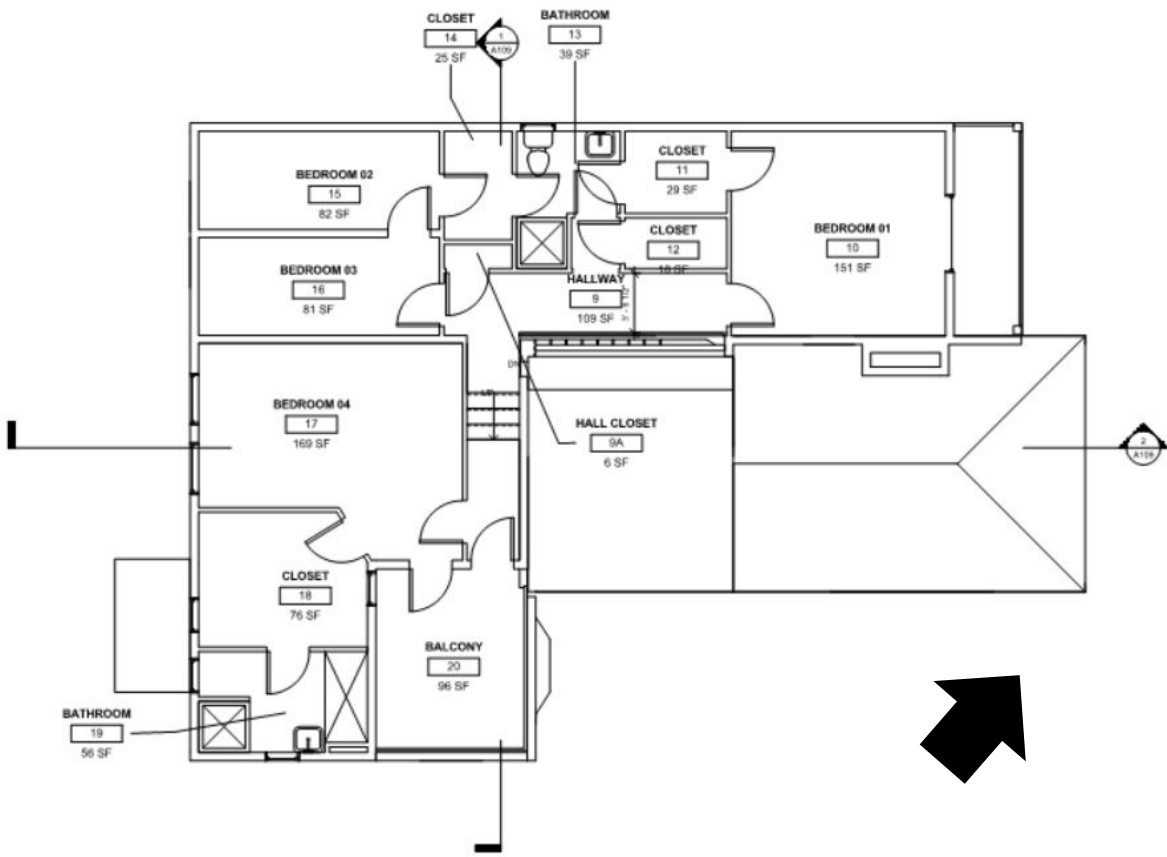


Figure 3: Second Floor Plan

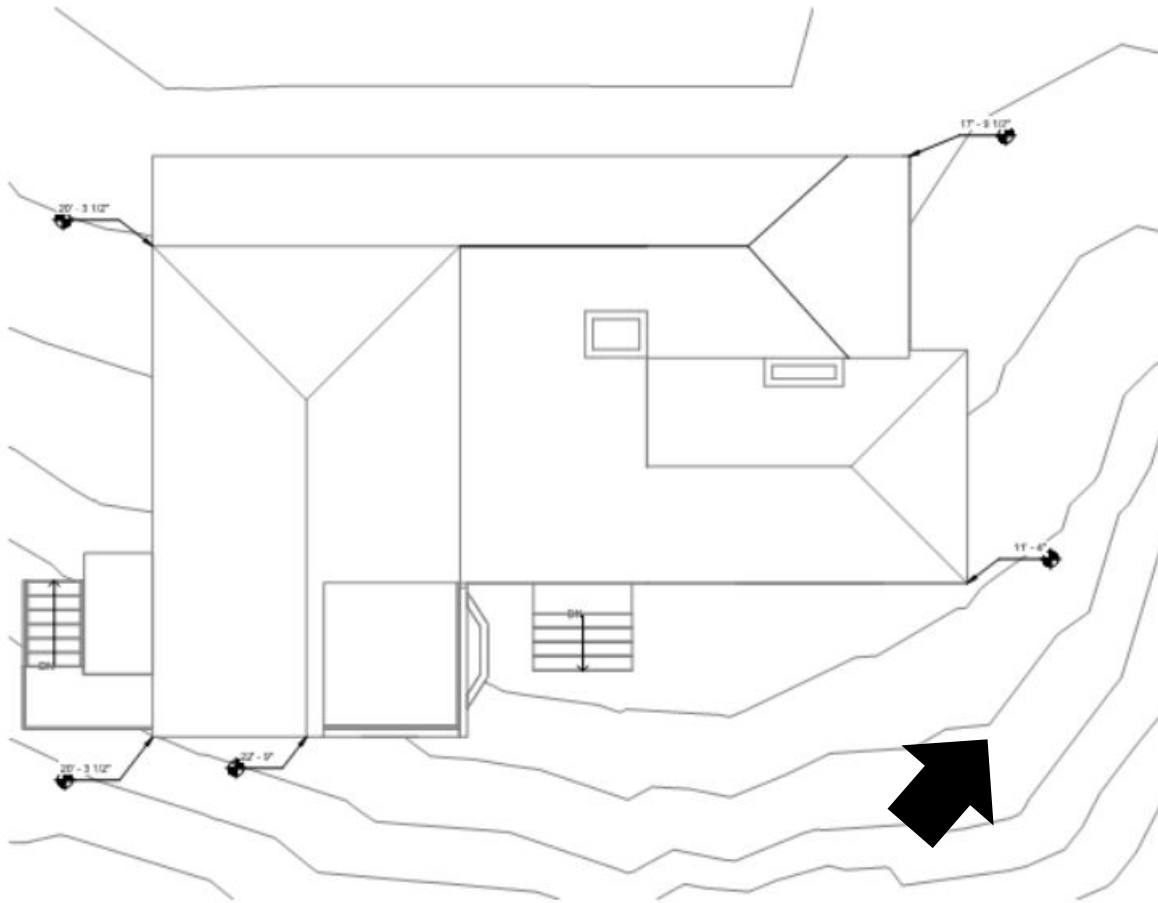


Figure 4: Roof Floor Plan



Figure 5: House South Partial Elevation



Figure 6: House South and West Partial Elevations



Figure 7: House East Partial Elevation



Figure 8: First Floor Framing from Crawlspace

Appendix A

ASCE 41-13 Checklists

Building Name: Harriet Tubman Bldg Date: _____
 Building Address: 650 Drake Marin City, CA Page: 1 of 1
 Job Number: B6206009.00 Job Name: Marin City Center for Community Life By: _____ Checked: _____

ASCE 41-13 TIER 1 SUMMARY DATA SHEET

BUILDING DATA

Latitude: _____ Longitude: _____
 Year Built: 1920s or 1930s Year(s) Remodeled: _____ Original Design Code: NA
 Area (sf): _____ Length (ft): 52' ± Width (ft): 40'
 No. Stories: 2 Story Height: _____ Total Height: _____

USE Industrial Office Warehouse Hospital Residential Educational Other: _____

CONSTRUCTION DATA

Gravity Load Structural System: Wood bearing walls, post & beam
 Exterior Transverse Walls: Wood w/straight Sheathing Openings?: Yes
 Exterior Longitudinal Walls: Wood w/straight Sheathing Openings?: Yes
 Roof Materials/Framing: Straight sheathing, clay tile
 Intermediate Floors/Framing: Wood joists
 Ground Floor: Wood joists
 Columns: Wood posts Foundation: Conc shallow foundation
 General Condition of Structure: Not weather tight, water damage and mold.
 Levels Below Grade?: 0 mold
 Special Features and Comments: _____

LATERAL-FORCE-RESISTING SYSTEM

	Longitudinal	Transverse
System:	_____	_____
Vertical Elements:	<u>Straight sheathing and stucco</u>	_____
Diaphragms:	<u>Straight sheathing</u>	_____
Connections:	_____	_____

EVALUATION DATA

Soil Factors: Class= _____ F_a = _____ F_v = _____
 BSE-1E Spectral Response Accelerations: S_{xs} = _____ S_{x1} = _____
 Level of Seismicity: _____ Performance Level: Life Safety
 Building Period: T = _____
 Spectral Acceleration: S_a = _____
 Modification Factor: C = _____ Building Weight: W = _____
 Pseudo Lateral Force: $V=CS_aW$ = _____

BUILDING CLASSIFICATION:

REQUIRED TIER 1 CHECKLISTS

	YES	NO
Basic Configuration Checklist	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Building Type ____ Structural Checklist	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Nonstructural Component Checklist	<input type="checkbox"/>	<input checked="" type="checkbox"/>

FURTHER EVALUATION REQUIREMENTS:

Building Name: Harriet Tubman Bldg Date: _____
 Building Address: 650 Drake Marin City, CA Page: 1 of 2
 Job Number: B6206009.00 Job Name: Marin City Center for Community Life By: _____ Checked: _____

ASCE 41-13 Life Safety Basic Configuration Checklist

C NC N/A U
Comments

LOW SEISMICITY

BUILDING SYSTEM

- | | | | | | |
|--------------------------|-------------------------------------|-------------------------------------|--------------------------|--|---|
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | LOAD PATH: The structure shall contain a complete, well-defined load path, including structural elements and connections, that serves to transfer the inertial forces associated with the mass of all elements of the building to the foundation. (Commentary: Sec. A.2.1.1. Tier 2: Sec. 5.4.1.1) | No connectors for uplift, sills not anchored |
| <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | ADJACENT BUILDINGS: The clear distance between the building being evaluated and any adjacent building is greater than 4 percent of the height of the shorter building. This statement shall not apply to the following building types: W1, W1A, and W2. (Commentary: Sec. A.2.1.2. Tier 2: Sec. 5.4.1.2) | |
| <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | MEZZANINES: Interior mezzanine levels are braced independently from the main structure, or are anchored to the seismic-force-resisting elements of the main structure. (Commentary: Sec. A.2.1.3. Tier 2: Sec. 5.4.1.3) | |

BUILDING CONFIGURATION

- | | | | | | |
|-------------------------------------|--------------------------|-------------------------------------|--------------------------|--|--|
| <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | WEAK STORY: The sum of the shear strengths of the seismic-force-resisting system in any story in each direction is not less than 80% of the strength in the adjacent story above. (Commentary: Sec. A.2.2.2. Tier 2: Sec. 5.4.2.1) | |
| <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | SOFT STORY: The stiffness of the seismic-force-resisting system in any story is not less than 70% of the seismic-force-resisting system stiffness in an adjacent story above or less than 80% of the average seismic-force-resisting system stiffness of the three stories above. (Commentary: Sec. A.2.2.3. Tier 2: Sec. 5.4.2.2) | |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VERTICAL IRREGULARITIES: All vertical elements in the seismic-force-resisting system are continuous to the foundation. (Commentary: Sec. A.2.2.4. Tier 2: Sec. 5.4.2.3) | |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | GEOMETRY: There are no changes in the net horizontal dimension of the seismic-force-resisting system of more than 30% in a story relative to adjacent stories, excluding one-story penthouses and mezzanines. (Commentary: Sec. A.2.2.5. Tier 2: Sec. 5.4.2.4) | |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | MASS: There is no change in effective mass more than 50% from one story to the next. Light roofs, penthouses and mezzanines need not be considered. (Commentary: Sec. A.2.2.6. Tier 2: Sec. 5.4.2.5) | |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | TORSION: The estimated distance between the story center of mass and the story center of rigidity is less than 20% of the building width in either plan dimension. (Commentary: Sec. A.2.2.7. Tier 2: Sec. 5.4.2.6) | |

MODERATE SEISMICITY (Complete the following items in addition to the items for Low Seismicity)

GEOLOGIC SITE HAZARDS

- | | | | | | |
|--------------------------|--------------------------|-------------------------------------|--------------------------|--|--|
| <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | LIQUEFACTION: Liquefaction-susceptible, saturated, loose granular soils that could jeopardize the building's seismic performance shall not exist in the foundation soils at depths within 50 feet under the building. (Commentary: Sec. A.6.1.1) | |
|--------------------------|--------------------------|-------------------------------------|--------------------------|--|--|

Building Name: Harriet Tubman Bldg Date: _____

Building Address: 650 Drake Marin City, CA Page: 2 of 2

Job Number: B6206009.00 Job Name: Marin City Center for Community Life By: _____ Checked: _____

ASCE 41-13 Life Safety Basic Configuration Checklist

C	NC	N/A	U	Comments
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SLOPE FAILURE: The building site is sufficiently remote from potential earthquake-induced slope failures or rockfalls to be unaffected by such failures or is capable of accommodating any predicted movements without failure. (Commentary: Sec. A.6.1.2))

SURFACE FAULT RUPTURE: Surface fault rupture and surface displacement at the building site is not anticipated. (Commentary: Sec. A.6.1.3)

HIGH SEISMICITY (Complete the following items in addition to the items for Low and Moderate Seismicity)

FOUNDATION CONFIGURATION

OVERTURNING: The ratio of the least horizontal dimension of the seismic-force-resisting system at the foundation level to the building height (base/height) is greater than $0.6S_a$. (Commentary: Sec. A.6.2.1 Tier 2: Sec. 5.4.3.3)

TIES BETWEEN FOUNDATION ELEMENTS: The foundation has ties adequate to resist seismic forces where footings, piles, and piers are not restrained by beams, slabs, or soils classified as Site Class A, B, or C. (Commentary: Sec. A.6.2.2. Tier 2: Sec. 5.4.3.4)

Building Name: Harriet Tubman Bldg Date: _____
 Building Address: 650 Drake Marin City, CA Page: 1 of 2
 Job Number: B6206009.00 Job Name: Marin City Center for Community Life By: _____ Checked: _____

ASCE 41-13 Life Safety Structural Checklist for Building Type W1: Wood Light Frames and W1A: Multi-Story, Multi-Unit Residential Wood Frame

C NC N/A U **Comments**

LOW AND MODERATE SEISMICITY

Seismic-Force-Resisting System

- REDUNDANCY: The number of lines of shear walls in each principal direction is greater than or equal to 2. (Commentary: Sec. A.3.2.1.1. Tier 2: Sec. 5.5.1.1)
- SHEAR STRESS CHECK: The shear stress in the shear walls, calculated using the Quick Check procedure of Section 4.5.3.3, is less than the following values: **NC**
 (Commentary: Sec. A.3.2.7.1. Tier 2: Sec. 5.5.3.1.1)
 - Structural panel sheathing: 1,000 plf
 - Diagonal sheathing: 700 plf
 - Straight sheathing: 100 plf
 - All other conditions: 100 plf
- STUCCO (EXTERIOR PLASTER) SHEAR WALLS: Multi-story buildings do not rely on exterior stucco walls as the primary seismic force-resisting system. (Commentary: Sec. A.3.2.7.2. Tier 2: Sec. 5.5.3.6.1)
- GYPSUM WALLBOARD OR PLASTER SHEAR WALLS: Interior plaster or gypsum wallboard are not used as shear walls on buildings over one story in height with the exception of the uppermost level of a multi-story building. (Commentary: Sec. A.3.2.7.3. Tier 2: Sec. 5.5.3.6.1)
- NARROW WOOD SHEAR WALLS: Narrow wood shear walls with an aspect ratio greater than 2-to-1 are not used to resist seismic forces. (Commentary: Sec. A.3.2.7.4. Tier 2: Sec. 5.5.3.6.1)
- WALLS CONNECTED THROUGH FLOORS: Shear walls have an interconnection between stories to transfer overturning and shear forces through the floor. (Commentary: Sec. A.3.2.7.5. Tier 2: Sec. 5.5.4.6.2)
- HILLSIDE SITE: For structures that are taller on at least one side by more than one-half story due to a sloping site, all shear walls on the downhill slope have an aspect ratio less than 1-to-1. (Commentary: Sec. A.3.2.7.6. Tier 2: Sec. 5.5.3.6.3)
- CRIPPLE WALLS: Cripple walls below first-floor-level shear walls are braced to the foundation with wood structural panels. (Commentary: Sec. A.3.2.7.7. Tier 2: Sec. 5.5.3.6.4)
- OPENINGS: Walls with openings greater than 80 percent of the length are braced with wood structural panel shear walls with aspect ratios of not more than 1.5-to-1 or are supported by adjacent construction through positive ties capable of transferring the seismic forces. (Commentary: Sec. A.3.2.7.8. Tier 2 Sec. 5.5.3.6.5)

Connections

- WOOD POSTS: There is a positive connection of wood posts to the foundation. (Commentary: Sec. A.5.3.3. Tier 2: Sec. 5.7.3.3)

Building Name: Harriet Tubman Bldg Date: _____
 Building Address: 650 Drake Marin City, CA Page: 2 of 2
 Job Number: B6206009.00 Job Name: Marin City Center for Community Life By: _____ Checked: _____

ASCE 41-13 Life Safety Structural Checklist for Building Type W1: Wood Light Frames and W1A: Multi-Story, Multi-Unit Residential Wood Frame

C
NC
N/A
U
Comments

LOW AND MODERATE SEISMICITY

- WOOD SILLS: All wood sills are bolted to the foundation. (Commentary: Sec. A.5.4.3.4. Tier 2: Sec. 5.7.3.3)
- GIRDER/COLUMN CONNECTION: There is a positive connection utilizing plates, connection hardware, or straps between the girder and the column support. (Commentary: Sec. A.5.4.1. Tier 2: Sec. 5.7.4.1)

HIGH SEISMICITY (Complete the following items in addition to the items for Low and Moderate Seismicity)

Connections

- WOOD SILL BOLTS: Sill bolts are spaced at 6 feet or less with proper edge and end distance provided for wood and concrete. (Commentary: Sec. A.5.3.7 Tier 2: Sec. 5.7.3.3)

Diaphragms

- DIAPHRAGM CONTINUITY: The diaphragms are not composed of split-level floors and do not have expansion joints. (Commentary: Sec. A.4.1.1. Tier 2: Sec. 5.6.1.1)
- ROOF CHORD CONTINUITY: All chord elements are continuous, regardless of changes in roof elevation. (Commentary: Sec. A.4.1.3 Tier 2: Sec. 5.6.1.1)
- STRAIGHT SHEATHING: All straight sheathed diaphragms have aspect ratios less than 2-to-1 in the direction being considered. (Commentary: Sec. A.4.2.1. Tier 2: Sec. 5.6.1)
- SPANS: All wood diaphragms with spans greater than 24 feet consist of wood structural panels or diagonal sheathing. (Commentary: Sec. A.4.2.2. Tier 2: Sec. 5.6.2)
- UNBLOCKED DIAPHRAGMS: All diagonally sheathed or unblocked wood structural panel diaphragms have horizontal spans less than 40 feet and shall have aspect ratios less than or equal to 4-to-1. (Commentary: Sec. A.4.2.3. Tier 2: Sec. 5.6.2)
- OTHER DIAPHRAGMS: The diaphragms do not consist of a system other than wood, metal deck, concrete, or horizontal bracing. (Commentary: Sec. A.4.7.1. Tier 2: Sec. 5.6.5)

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ASCE 41-13 Life Safety - High Seismicity - Nonstructural Checklist

C	NC	N/A	U		Comments
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LIFE SAFETY SYSTEMS

- FIRE SUPPRESSION PIPING: Fire suppression piping is anchored and braced in accordance with NFPA-13. (Commentary: Sec. A.7.13.1. Tier 2: Sec. 13.7.4)
- FLEXIBLE COUPLINGS: Fire suppression piping has flexible couplings in accordance with NFPA-13. (Commentary: Sec. A.7.13.2. Tier 2: Sec. 13.7.4)
- STAIR AND SMOKE DUCTS: Stair pressurization and smoke control ducts are braced and have flexible connections at seismic joints. (Commentary: Sec. A7.14.1. Tier 2: Sec. 13.7.6.1)
- SPRINKLER CEILING CLEARANCE: Penetrations through panelized ceilings for fire suppression devices provide clearances in accordance with NFPA-13. (Commentary: Sec. A7.13.3. Tier 2: Sec. 13.7.4)

HAZARDOUS MATERIALS

- HAZARDOUS MATERIAL EQUIPMENT: Equipment mounted on vibration isolators and containing hazardous material is equipped with restraints or snubbers. (Commentary: Sec.A.7.12.2 Tier 2: Sec. 13.7.1)
- HAZARDOUS MATERIAL STORAGE: Breakable containers that hold hazardous material, including gas cylinders, are restrained by latched doors, shelf lips, wires, or other methods. (Commentary: Sec. A7.15, Tier 2: Sec. 13.8.4)
- HAZARDOUS MATERIAL DISTRIBUTION: Piping or ductwork conveying hazardous materials is braced or otherwise protected from damage that would allow hazardous material release. (Commentary: Sec. A.7.13.4. Tier 2: Sec. 13.7.3 and 13.7.5)
- SHUT-OFF VALVES: Pipingcontaining hazardous material, including natural gas, has shut-off valves or other devices to limit spills or leaks. (Commentary: Sec. A7.13.3. Tier 2: Sec. 13.7.3 and 13.7.5)
- FLEXIBLE COUPLINGS: Hazardous material ductwork and piping, including natural gas piping, has flexible couplings. (Commentary: Sec. A15.3.4, Tier2: Sec.13.7.3 and 13.7.5)
- PIPING OR DUCTS CROSSING SEISMIC JOINTS: Piping or ductwork carrying hazardous material that either crosses seismic joints or isolation planes or is connected to independent structures has couplings or other details to accommodate the relative seismic displacements. (Commentary: Sec. A.7.13.6. Tier 2: Sec.13.7.3, 13.7.5, and 13.7.6)

PARTITIONS

- UNREINFORCED MASONRY: Unreinforced masonry or hollow clay tile partitions are braced at a spacing of at most 10 feet in areas of Low or Moderate seismicity, or at most 6 feet in areas or High seismicity. (Commentary: Sec. A.7.1.1. Tier 2: Sec. 13.6.2)
- HEAVY PARTITIONS SUPPORTED BY CEILINGS: The tops of masonry or hollow clay tile partitions are not laterally supported by an integrated ceiling system. (Commentary: Sec. A.7.2.1. Tier 2: Sec. 13.6.2)

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C NC N/A U **Comments**

CEILINGS

- SUSPENDED LATH AND PLASTER: Suspended lath and plaster ceilings have attachments that resist seismic forces for every 12 square feet of area. (Commentary: Sec. A.7.2.4. Tier 2: Sec. 13.6.4)
- SUSPENDED GYPSUM BOARD: Suspended gypsum board ceilings have attachments that resist seismic forces for every 12 square feet of area. (Commentary: Sec. A.7.2.4. Tier 2: Sec. 13.6.4)

LIGHT FIXTURES

- INDEPENDENT SUPPORT: Light fixtures that weigh more per square foot than the ceiling they penetrate are supported independent of the grid ceiling suspension system by a minimum of two wires at diagonally opposite corners of each fixture. (Commentary: Sec. A.7.3.2. Tier 2: Sec. 13.6.4 and 13.7.9)

CLADDING AND GLAZING

- CLADDING ANCHORS: Cladding components weighing more than 10 psf are mechanically anchored to the structure at a spacing equal to or less than the following: for Life Safety in areas of Moderate seismicity, 6 feet; for Life Safety in areas of High seismicity and for Position Retention in any area, 4 feet. (Commentary: Sec. A.7.4.1. Tier 2: Sec. 13.6.1)
- CLADDING ISOLATION: For steel or concrete moment frame buildings, panel connections are detailed to accommodate a story drift ratio of at least the following: for Life Safety in areas of Moderate seismicity, 0.01; for Life Safety in areas of High seismicity and for Position Retention in any area, 0.02. (Commentary: Sec. A.7.4.3. Tier 2: Section 13.6.1)
- MULTI-STORY PANELS: For multi-story panels attached at more than one floor level, panel connections are detailed to accommodate a story drift ratio of at least the following: for Life Safety in areas of Moderate seismicity, 0.01; for Life Safety in areas of High seismicity and for Position Retention in any area, 0.02. (Commentary: Sec. A.7.4.4. Tier 2: Sec. 13.6.1)
- PANEL CONNECTIONS: Cladding panels are anchored out-of-plane with a minimum number of connections for each wall panel, as follows: for Life Safety in areas of Moderate seismicity, 2 connections; for Life Safety in areas of High seismicity and for Position Retention in any area, 4 connections. (Commentary: Sec. A.7.4.5. Tier 2: Sec. 13.6.1.4)
- BEARING CONNECTIONS: Where bearing connections are used, there are a minimum of two bearing connections for each cladding panel. (Commentary: Sec. A.7.4.6. Tier 2: Sec. 13.6.1.4)
- INSERTS: Where concrete cladding components use inserts, the inserts have positive anchorage or are anchored to reinforcing steel. (Commentary: Sec. A.7.4.7. Tier 2: Sec. 13.6.1.4)
- OVERHEAD GLAZING: Glazing panes of any size in curtain walls and individual interior or exterior panes over 16 square feet in area are laminated annealed or laminated heat-strengthened glass and are detailed to remain in the frame when cracked. (Commentary: Sec. A.7.4.8. Tier 2: Sec. 13.6.1.5)

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MASONRY VENEER

- TIES: Masonry veneer is connected to the back- up with corrosion-resistant ties. There is a minimum of one tie for every 2-2/3 square feet, and the ties have spacing no greater than the following: for Life Safety in areas of Low or Moderate seismicity, 36 inches; for Life Safety in areas of High seismicity and for Position Retention in any area, 24 inches. (Commentary: Sec. A.7.5.1. Tier 2: Sec. 13.6.1.2)
- SHELF ANGLES: Masonry veneer is supported by shelf angles or other elements at each floor above the ground floor. (Commentary: Sec. A.7.5.2. Tier 2: Sec. 13.6.1.2)
- WEAKENED PLANES: Masonry veneer is anchored to the back-up adjacent to weakened planes, such as at the locations of the flashing. (Commentary: Sec. A.7.5.2. Tier 2: Sec. 13.6.1.2)
- URM BACK-UP: There is no unreinforced masonry back-up (Commentary: Sec. A.7.7.2. Tier 2: Section 13.6.1.1 and 13.6.1.2)
- STUD TRACKS: For veneer with metal stud back- up, stud tracks are fastened to the structure at a spacing equal to or less than 24 inches on center. (Commentary: Sec. A.7.6:1. Tier 2: Section 13.6.1.1 and 13.6.1.2)
- ANCHORAGE: For veneer with concrete block or masonry back-up, the back-up is positively anchored to the structure at a horizontal spacing equal to or less than 4 feet along the floors and roof. (Commentary: Sec. A.7.7.1. Tier 2: Section 13.6.1.1 and 13.6.1.2)

PARAPETS, CORNICES, ORNAMENTATION, AND APPENDAGES

- URM PARAPETS OR CORNICES: Laterally unsupported unreinforced masonry parapets or cornices have height- to-thickness ratios no greater than the following: for Life Safety in areas of Low or Moderate seismicity, 2.5; for Life Safety in areas of High seismicity and for Position Retention in any area, 1.5. (Commentary: Sec. A.7.8.1. Tier2: Sec. 13.6.5)
- CANOPIES: Canopies at building exits are anchored to the structure at a spacing no greater than the following: for Life Safety in areas of Low or Moderate seismicity, 10 feet; for Life Safety in areas of High seismicity and for Position Retention in any area, 6 feet. (Commentary: Sec.A.7.8.2. Tier 2: Sec. 13.6.6)
- CONCRETE PARAPETS: Concrete parapets with height-to-thickness ratios greater than 2.5 have vertical reinforcement. (Commentary: Sec.A.7.8.3. Tier 2: Sec. 13.6.5)
- APPENDAGES: Cornices, parapets, signs, and other ornamentation or appendages that extend above the highest point of anchorage to the structure or cantilever from components are reinforced and anchored to the structural system at a spacing equal to or less than 6 feet. This checklist item does not apply to parapets or cornices covered by other checklist items. (Commentary: Sec. A.7.8.4. Tier 2: Sec. 13.6.6)

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C	NC	N/A	U		Comments
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MASONRY CHIMNEYS

- | | | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|---|----------------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | URM CHIMNEYS: Unreinforced masonry chimneys extend above the roof surface no more than the following: for Life Safety in areas of Low or Moderate seismicity, 3 times the least dimension of the chimney; for Life Safety in areas of High seismicity and for Position Retention in any area, 2 times the least dimension of the chimney.
(Commentary: Sec. A.7.9.1. Tier 2: 13.6.7) | Not sure of chimney construction |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | ANCHORAGE: Masonry chimneys are anchored at each floor level, at the topmost ceiling level, and at the roof.
(Commentary: Sec. A.7.9.2. Tier 2: 13.6.7) | Not sure of chimney construction |

STAIRS

- | | | | | | |
|--------------------------|--------------------------|-------------------------------------|--------------------------|---|--|
| <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | STAIR ENCLOSURES: Hollow clay tile or unreinforced masonry walls around stair enclosures are restrained out-of-plane and have height-to-thickness ratios not greater than the following: for Life Safety in areas of Low or Moderate seismicity, 15-to-1; for Life Safety in areas of High seismicity and for Position Retention in any area, 12-to-1.
(Commentary: Sec. A.7.10.1. Tier 2: Sec. 13.6.2 and 13.6.8) | |
| <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | STAIR DETAILS: In moment frame structures, the connection between the stairs and the structure does not rely on shallow anchors in concrete. Alternatively, the stair details are capable of accommodating the drift calculated using the Quick Check procedure of Section 4.5.3.1 without including any lateral stiffness contribution from the stairs.
(Commentary: Sec. A.7.10.2. Tier 2: Sec.13.6.8) | |

CONTENTS AND FURNISHINGS

- | | | | | | |
|--------------------------|--------------------------|-------------------------------------|--------------------------|--|--|
| <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | INDUSTRIAL STORAGE RACKS: Industrial storage racks or pallet racks over 12 feet in height meet the requirements of ANSVMH 16.1 as modified by ASCE 7 Chapter 15. (Commentary: Sec. A.7.11.1. Tier 2: Sec. 13.8.1) | |
| <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | TALL NARROW CONTENTS: Contents over 6 feet in height with a height-to-depth or height-to-width ratio greater than 3-to-1 are anchored to the structure or to each other. (Commentary: Sec A.7.11.2. Tier 2: Sec. 13.8.1) | |

MECHANICAL AND ELECTRICAL EQUIPEMENT

- | | | | | | |
|--------------------------|--------------------------|-------------------------------------|--------------------------|---|--|
| <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | FALL-PRONE EQUIPMENT: Equipment weighing over 20 lb whose center of mass is more than 4 feet above the adjacent floor level, and which is not in-line equipment, is braced. (Commentary: A.7.12.4. Tier 2: 13.7.1) | |
| <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | IN-LINE EQUIPMENT: Equipment installed in-line with a duct or piping system, with operating weight over 75 lb, is supported and laterally braced independent of the duct or piping system.
(Commentary: Sec.A.7.12.5. Tier 2: Sec. 13.7.1) | |

ELEVATORS

- | | | | | | |
|--------------------------|--------------------------|-------------------------------------|--------------------------|---|--|
| <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | RETAINER GUARDS: Sheaves and drums have cable retainer guards.
(Commentary: Sec. A.7.16.1. Tier 2: 13.8.6) | |
| <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | RETAINER PLATE: A retainer plate is present at the top and bottom of both car and counterweight. (Commentary: Sec. A.7.16.2. Tier2: 13.8.6) | |

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Marin City Center for Community Life

May 16, 2017

The following outlines our preliminary thoughts about the mechanical systems for the various buildings in the phase 1 portion of this project.

- A. Health and Wellness Building: This is a new building, approximately 4050 square feet.
1. Plumbing: The building will contain two new restrooms and various sinks and equipment that require plumbing. The building will require a new 2 inch water service and a 4 inch sewer service. Hot water would be provided by a new instantaneous water heater. A new gas service and meter will also be required for the building.
 2. Fire Sprinklers: A new 4 inch fire service will be required to serve the building. A new fire sprinkler riser and sprinkler distribution systems will be installed.
 3. HVAC: The building will be heated and air conditioned. The proposed HVAC system is a VRV system with the heat recovery type condensing unit located either in the attic or on the ground in a fenced area. The anticipated capacity is 16 tons. Refrigerant piping will connect to five separate heat pump fan coil units, one to serve each of the exposures and one to serve the interior office area. Separate exhaust fans would serve each restroom and possibly some of the lab rooms. Outside air would be pulled through outside air intake hoods on the roof.
 4. The building's temperature controls will consist of programmable thermostats that are tied to the VRV system.
- B. Main Recreation Building: This is a new building. The total building area is about 21,000 square feet which includes an 8,500 square foot gymnasium.
1. Plumbing: The building will contain two large restrooms, a commercial kitchen, and miscellaneous other fixtures that require plumbing. The building will require a new 3 inch water service and a 4 inch sewer service. A new gas service will be required for the building to feed a new storage type gas water heater.

2. Fire Sprinklers: A new 6 inch fire service will be required to serve the building. A new fire sprinkler riser and sprinkler distribution systems will be installed.
 3. HVAC: The building will be heated and air conditioned except the gymnasium which will be heated and ventilated only. The proposed HVAC system for all areas except the gym is a VRV system with the heat recovery type condensing unit in the mechanical well. The anticipated capacity is 35 tons. Refrigerant piping will connect to multiple separate heat pump fan coil units throughout the building. Most rooms would be served by individual fan coil units in order to provide zoning. Outside air will be pulled through outside air intake hoods on the roof or wall mounted louvers. The gym will be heated and ventilated by gas fired air handling units with economizers and outdoor louvers. These units will each be sized for about 5,000 cfm and will be located up tight to the structure. The gym will also have two large exhaust fans. The commercial kitchen is anticipated to have a grease hood with a new exhaust and make up air system. A new roof mounted exhaust fan would serve the restrooms. A new gas fired boiler would provide heating hot water to heat the gym.
 4. The building's temperature controls will consist of programmable thermostats for the gymnasium and programmable thermostats that are tied to the VRV system.
- C. Existing Community Center/Gym Building: Portions of this building will be demolished. The main gym, lobby, bathrooms, and kitchen will remain.
1. Plumbing: No plumbing modifications are anticipated for this building. The gas service appears to run through the existing Health and Wellness building that is scheduled for removal and replacement. The gas service to the Gym building will need to be modified and preserved.
 2. Fire Sprinklers: This building does not have fire sprinklers. No fire sprinkler work is anticipated.
 3. HVAC: The HVAC systems that feed the classroom and boxing/fitness rooms will be demolished. No other mechanical system modifications are anticipated for this building.
- D. Early Childhood Education Building: This is a new building, approximately 4,300 square feet.
1. Plumbing: The building will contain four new restrooms and various sinks that require plumbing. The building will require a new 2 inch water service and a 4 inch sewer service. Hot water will be provided by a new

instantaneous gas fired water heater. A new gas service would be required for the building.

2. Fire Sprinklers: A new 4 inch fire service will be required to serve the building. A new fire sprinkler riser and sprinkler distribution systems will be installed.
3. HVAC: The building will be heated and air conditioned. The proposed HVAC system is a VRV system with the heat recovery type condensing unit on the flat roof. The anticipated capacity is 16 tons. Refrigerant piping will connect to four separate heat pump fan coil units, one to serve each of the three class rooms and one to serve the office area. Separate exhaust fans would serve each restroom. Outside air would be pulled through either openable windows or outside air intake hoods on the roof.

E. Senior Multi-Purpose Building: This is an existing building, approximately 4,300 square feet.

1. Plumbing: The existing building contains two bathrooms and a commercial kitchen. The existing plumbing services are likely sized appropriately. However, the condition of the water and sewer services is unknown at this time. We do not expect that a new gas service and meter will be required for this building. The kitchen is being remodeled so plumbing work will be required for that area. No modifications are anticipated for the bathrooms. A new gas fired water heater will be required for the kitchen.
2. Fire Sprinklers: This building does not have fire sprinklers. No fire sprinkler work is anticipated.
3. HVAC: This building has an existing heating system that is said to have some problems. The existing heating systems consist of three gas fired furnaces. The furnaces were installed in the 80's and are at or near the end of their useful lives. The building does not have air conditioning and a new air conditioning system is not anticipated. The kitchen area has an existing roof mounted exhaust fan and a make-up air hood. After the proposed kitchen area modifications, a new grease exhaust hood, exhaust fan, and heated forced air make up air system will be required. Due to the proposed modifications to the kitchen, adjacent rooms, and two offices, we anticipate that the furnaces will be replaced with new high efficiency equipment and a few duct modifications will be done. This will allow the required ventilation and make up air systems to be brought up to current code for the kitchen. Outside air would be pulled through the existing outside air intake hood on the roof.

- F. Harriet Tubman House: This is an existing building, approximately 2,600 square feet.
1. Plumbing: The existing building contains multiple small restrooms and a kitchen. The remodeled building will have two bathroom and two breakroom sinks. The existing plumbing services are likely sized appropriately but may need to be replaced due to their age. The existing water heater will be replaced with a new gas water heater. A new gas service and meter may be required for the building.
 2. Fire Sprinklers: A new 4 inch fire service will be required to serve the building. A new fire sprinkler riser and sprinkler distribution systems will be installed.
 3. HVAC: The building will be heated only, air conditioning is not anticipated. The proposed heating system is a new high efficiency gas fired boiler with heating hot water piped throughout the building to feed individual hot water fan coil units in each room. New PVC flue and combustion air pipes will run through the roof. The boiler would likely be located in the basement mechanical room. Separate exhaust fans would be installed to serve each restroom. A new hood would be installed in the kitchen. Outside air would be pulled through either openable windows or outside air intake ducts either though the walls or roof.

MJL:lc

/Marin City Center for Community Life Scoping Document

SECTION 26 0000 - ELECTRICAL OUTLINE SPECIFICATION

PART 1 - GENERAL

1.1 GENERAL

- A. All electrical systems shall be designed in accordance with all applicable regulations, codes and standards, including the latest edition of the National Electrical Code, State of California Titles 19 and 24, and local municipal codes and regulations. Refer to electrical schematic drawings for additional scope of work.
- B. The scope of the electrical work shall include all materials, labor, equipment, services and incidentals necessary to install the electrical work complete, including but not limited to the following:
 - 1. Removal of existing electrical utility services, including exterior pad-mounted transformer, main switchboard, panelboards, feeders, branch circuit wiring, devices, lighting fixtures, switches, etc., as required for demolition work.
 - 2. New electric utility service, including:
 - a. Underground utility high voltage power service raceways to a new exterior pad-mounted transformer or modification to the existing underground high voltage service.
 - b. Transformer pad and associated grounding (for transformer by utility company).
 - c. Underground utility company service conduits from the new transformer to a new main switchboard and meter as indicated on the drawings.
 - 3. New 277/480 Volt main switchboard.
 - 4. Distribution System: distribution boards, branch circuit panelboards, feeders, branch circuit wiring, wiring devices and connections to all equipment requiring electrical service.
 - 5. Lighting branch circuit panelboards, feeders, branch circuit wiring, wiring devices and connections to all lighting equipment.
 - 6. Lighting fixtures completely lamped.
 - 7. Lighting Controls (Title 24 Compliant).
 - 8. Emergency and exit lighting as required by code.
 - 9. Re-connection of existing Gymnasium to new main switchboard.
 - 10. New telephone and Cable TV services as indicated on the electrical site plan.

11. Telephone and data wiring systems, outlets, patch panels, and equipment racks.
12. Mechanical equipment power connections, including starters, fuses, and motor rated switches and disconnects.
13. New fire alarm system in each building, including sprinkler monitoring and off-site reporting.
14. Exterior lighting.
15. New power and telephone services to the relocated modular buildings.
16. Electric Vehicle Chargers as indicated on the electrical site plans.
17. Title 24 metering system of Lighting systems, HVAC Systems, Plug Loads, Elevators, and other miscellaneous loads as indicated on the power single line diagram.

C. Electric service and distribution equipment:

1. A new 277/480 Volt, 3-Phase, 4-Wire electric service shall be obtained to serve the buildings as indicated on the power single line diagram. This new service will replace the existing electrical service.
2. A new Main switchboard shall be installed as indicated on the drawings. The Main Switchboard shall be provided with an incoming underground pull/meter/main sections, and a full-height distribution sections. The main switchboard and all devices in the main switchboard shall be braced for and rated to interrupt the available utility company fault current at the point of service (to be determined by the utility company). The switchboard shall be provided with lugs for future PV system integration as indicated on the power single line diagram.
3. All switchgear and distribution equipment throughout the project shall be seismically braced.
4. Lighting shall be fed from a lighting branch panelboard, via the lighting control system.
5. Grounding shall be provided at each building: System grounding shall include UFER type grounding cable in the new foundation slab, supplementary ground rod(s) at the main service entrance, connection to building steel and cold-water service entrance, and ground wires in all feeders and branch circuit conduits throughout the project. Conduits shall not be used for equipment grounding path.

D. Lighting:

1. General:
 - a. Lighting systems shall meet or exceed current California Title 24, Part 6, and requirements for energy efficiency in non-residential buildings.
 - b. Lighting systems shall provide maintained illumination levels as recommended

by the Illuminating Engineering Society of North America (IESNA), unless otherwise noted. A maintenance factor shall be applied to the illuminance calculations to ensure that the system will meet target illumination levels after initial commissioning.

- c. Lighting fixtures shall be LED type.
- d. Lighting budget costs:
 - (1). All costs listed below include estimates for light fixtures, installation, labor, and misc. hardware, and branch wiring back to other fixtures or back to panelboards or lighting control relay panels. These estimated square foot costs DO NOT include lighting branch panels or feeders, light switches, wall dimmers and lighting control systems or wiring.

<u>BUILDING</u>	<u>COST / S. F.</u>
New Rec Center	\$22.00/s.f.
New Health & Wellness	\$20.00/s.f.
New Early Childhood Education	\$15.00/s.f.
Harriet Tubman House	\$20.00/s.f.
Senior Center Remodel Areas	\$15.00/s.f.

Emergency Inverter's: See power single line for quantity and sizes.

Miscellaneous Exterior Building Mounted Lighting \$25,000.

Parking Lot Pole Mounted Light Fixtures: See electrical site plan for proposed budget costs and quantities.

- (2). All costs noted above are estimated Electrical Contractor Net Pricing' need to add electrician overhead, profit & General Contractor mark-up.
- 2. Lighting Controls: will be comprised of multiple Sub-Systems and Components as required to meet the Facility's specific functional/operational requirements, as well as the extensive list of criteria stipulated by California's Title 24 Energy Standards.

Include a budget of \$7.00 per square foot for lighting controls.

- a. A programmable low voltage relay switching system shall be provided for control of all lighting systems (interior and exterior) at the facility.
 - (1). The system shall include networked relay panels, master low voltage switch station at the main counter, local low voltage switches in designated rooms, and 365-day astro-dial, electronic, multi-channel time clock.
- b. Local wall and ceiling mounted occupancy sensors shall be utilized in all restrooms, storage rooms, janitor closets, and other transitory rooms to maximize energy efficiency.

- (1). Loads on occupancy sensors shall not be controlled by the relay control system. Electric, telephone, and mechanical closets shall not utilize occupancy sensors to avoid inadvertent “off” cycles while personnel are working in the spaces.
- c. Automatic Daylight Harvesting Control System.
 - (1). Automatic Daylight-Harvesting Dimming Controls shall be provided at all rooms and/or spaces with one or more day lit zones.
 - (2). Daylight Dimming at private offices, conference rooms, breakrooms, copy rooms etc., will be accomplished with daylight sensors, dimming control, and occupancy control utilizing room controllers. The room controllers will also control designated receptacles in accordance with Title 24.
 - (3). Daylight dimming at Large areas will utilize local, multi-zone Daylight Dimming Control Panels, with input from remote Photo Sensors in the space.
- d. Title 24 Demand Response:
 - (1). Demand response control including control wiring integrated into the lighting control system shall be provided to reduce the lighting power by at least 15% per Title 24.
3. Emergency lighting and exit signs:
 - a. Central inverter systems shall be provide for the emergency lighting systems in each building. Refer to power single line diagram for ratings of each inverter.
- E. Power and Signal:
 1. Floor Outlet Boxes:
 - a. A system of flush mounted floor power and signal boxes shall be installed throughout the facility to provide power, telephone, and data needs. The boxes will be concealed service type with 120Volt outlets and telephone/data outlets.
 2. Branch Circuits:
 - a. All lighting loads shall be connected to circuit breakers in the lighting branch circuit panelboard via the lighting control relay panels.
 - b. All convenience power loads shall be connected to circuit breakers in the 120/208V branch circuit panelboard.
 - c. All computer power loads shall be connected to circuit breakers in the 120/208V “clean” power branch circuit panelboards (with TVSS protection).
 - d. Branch circuit conductors shall be minimum #12. Minimum conduit size shall be

3/4".

3. Fire Alarm System:
 - a. A new facility fire alarm system shall be provided for the new buildings and shall be State and Local Fire Marshal approved, fully addressable, class B wiring throughout, with emergency battery backup as required by code to provide sixty hour power back up supply while under load. A new master central Fire Alarm panel shall be provided in the New Rec Building. The Health and Wellness building, Early Childhood Education building, and the Harriet Tubman building will be provided with fire alarm panels which will be connected to the main fire alarm panel in the Rec Center via fiber optic cabling as indicated on the site plan.
 - b. Duct detectors shall be provided for supply fans 2,000 CFM and above.
 - c. Ceiling mounted smoke detectors shall be provided in storage rooms, electrical rooms, and telecom rooms. Ceiling mounted heat detectors shall be provided in the mechanical rooms. All device coverage to be per NFPA guidelines.
 - d. Connections for fire sprinkler flow switches, valve supervisory switches, and P.I.V. valves shall be provided.
 - e. Provide a central station connection for off-site monitoring and a remote annunciator mounted at the main entrance. Provide and install U. L. listed Communicator with two (2) dedicated Analog telephone lines. The lines shall be used for notification of the City Security / Fire Monitoring Vendor.
 - f. All fire alarm system wiring shall be in conduit.
 - g. Wall mounted horn/strobes or speaker/strobes shall be installed throughout the facility as required by code to provide both audible and visual alarm notification.
 - h. Wall mounted manual pull stations shall be installed at all exits as required by code.
 - i. Fire/Smoke dampers shall be provided with integral duct detectors by and have stand-alone control.
4. Misc. Systems and Electrical requirements:
 - a. Power circuits to medical equipment and dental X-Ray equipment.
 - b. Electric hand dryers.
 - c. Power wiring and connections to overhead projectors and motorized projection screens.
 - d. Copy Room: copiers and misc. equipment.

- e. Administrative Work Space: Photocopier and fax machines, etc.
 - f. Staff Lounge: Refrigerator, Microwave, garbage disposal, vending machines.
 - g. Electric door openers for automatic doors at main entrances.
 - h. Wiring to express checkout machines.
 - i. Exterior weatherproof buildings mounted outlets for outdoor functions.
 - j. Window Shades.
 - k. Gym equipment.
 - l. Basketball equipment and scoreboards.
- F. Telephone/Data and Cable TV Wiring Systems:
- 1. Each building shall be provided with new telephone/data wiring system including equipment racks, patch panels, punch down blocks, patch cords, and cable trays.
 - 2. Provide inter building fiber optic cabling and copper cabling as indicated on the electrical site plans.
 - 3. Cat 6 outlets shall be provided throughout each building with Cat 6 cabling homerun to the MDF or IDF's.
 - 4. Cat 6 cabling shall be provided to wireless access points throughout each building.
 - 5. Cable TV outlets and coax wiring shall be provided to outlets in each building.

PART 2 - PRODUCTS

2.1 General:

A. Switchgear and Panelboards:

- 1. As manufactured by Cuttler-Hammer, Square D, General Electric, Siemens, IEM, or equal. Surface mounted in unfinished locations, flush mounted in finished and occupied spaces.
- 2. Enclosures: code gauge galvanized sheet steel with welded full flange end pieces; stretcher- leveled steel trim, back pan and door. All surface mounted panels to have enclosures painted in gray enamel. All flush mounted panels to have cover painted to match adjacent surface.
- 3. Phase and ground bussing of copper with silver-plated contact surfaces.
- 4. Trims on surface-mounted cabinets secured with nickel-plated screws with cup washers, bottom of all trims to have lugs for resting on cabinet flange.

5. Panels shall be 20 inches minimum in width, provided with approved gutter space, barriers and adjustable supports. Doors mounted with concealed hinges provided with combination spring latch and lock. Doors and trims and surface mounted cabinets primed and finished with one coat baked on gray enamel.
 6. Breakers on same phase to be aligned horizontally.
 7. Each branch circuit of panel boards to have a permanently fixed number with directory mounted under celluloid on inside of cabinet door, showing circuit numbers and typewritten description of outlets controlled by breakers.
 8. Each panel shall be equipped with a copper ground bus.
 9. All panels shall be fully bussed to accept future circuit breakers.
- B. Circuit Breakers:
1. Circuit breakers shall be molded case-rated 240 volt or 480 volt rated, multiple or single pole with amperage ratings as required for loads. All breakers to be bolt on, manually operated with "de-ion" arc chutes. Plug-in breakers are not acceptable.
 2. Main switchboard circuit breakers shall be rated to interrupt the available short circuit current (to be verified).
 3. Where mechanical equipment is U.L. listed for over current protection with fuses or HACR type circuit breakers, provide fuses where a fused switch is provided. Where the over current protection is a circuit breaker provide HACR type breaker.
- C. Raceways: Only the raceways specified below shall be utilized on this project. Substitutions shall be pre-approved in writing:
1. Rigid Type - hot dip galvanized or sherardized steel, use on all exterior locations, below grade or in concrete slab, and to 18" on either side of structural expansion joints in floor slabs (see item "o" below), with completely watertight, threaded fittings throughout.
 - a. All rigid steel conduit couplings and elbows in soil or concrete or under membrane to be ½ lap wrapped with Scotch #50 tape and threaded ends coated with T&B #S.C.40 rust inhibitor prior to installation of couplings.
 - b. ½ lap wrap all rigid steel conduit stub-ups from slab or grade to 6" above finished grade level with Scotch #50 tape.
 2. In lieu of rigid steel conduit for power and control raceways and branch circuit conduits in soil or concrete slabs, "Schedule 40" PVC with Schedule 80-PVC conduit elbows and stub-ups may be used with code size (minimum No. 12) ground wire. A "stub-up" is considered to terminate 6" above the finished surface.
 - a. Schedule 80-PVC conduit shall be used in all concrete footings or foundations and to 18" of either side of footings or foundation walls.

- b. Schedule 80-PVC conduit shall be used in all concrete masonry unit (CMU) walls or columns.
 - c. All conduit runs in concrete floor slabs (where allowed) shall be installed to comply with all applicable UBC and structural codes to maintain the structural integrity of the floor slab. Where conflicts occur, alternate routing shall be provided at no additional cost to the City. The intent is to run all feeders through the under-floor system and not in the slab.
3. Intermediate metal conduit shall be used in all exposed interior locations, except that electrical metallic tubing may be used in some locations as noted below. Utilize steel compression type fittings for all exposed conduit runs, unless otherwise noted. Cast fittings are unacceptable.
4. Electrical metallic tubing may be used exposed in electrical and mechanical rooms and in unfinished spaces and in concealed and furred spaces, made up with steel watertight compression fittings. Cast fittings are unacceptable.
5. Use flexible conduit for all motor, transformer and recessed fixture connections (minimum ½"). Use "Seal-tite" type outdoors in all wet locations, provided with code sized (minimum No. 12) bare ground wire
6. Conceal conduits in ceilings, floors, and walls of all areas where possible. All conduits, exposed or concealed, shall be installed parallel to building members.
7. Fasten conduits securely to boxes with locknuts and bushings to provide good electrical continuity.
8. Provide chrome escutcheon plates at all exposed wall, ceiling and floor conduit penetrations.
9. Support individual suspended conduits with heavy malleable strap or rod hangers; supports for ½ inch or ¾ inch conduit placed on maximum 7-foot centers; maximum 10-foot centers on conduits 1 inch or larger.
10. Support multiple conduit runs (at ceilings or under floors) from or on Kindorf B907 channels with C-105 and C-106 straps.
11. Conduit bends - long radius.
12. Flash conduits through roof, using approved roof jack; coordinate with General Contractor.
13. To facilitate pulling of feeder conductors, install junction boxes as shown or required.
14. All empty conduits shall be provided with a pull wire. All empty telephone and data conduits shall be provided with pull ropes.
15. Where conduits pass through structural expansion joints in floor slab, rigid galvanized conduit shall be used 18" on either side of joint, complete with Appleton expansion

couplings and bonding jumpers, or equal. All above grade expansion joint crossings shall also utilize expansion joint couplings or flex conduit transitions as required for each particular installation. No solid conduits shall be allowed to cross expansion joints without proper provisions for building and seismic movement.

16. Minimum cover of conduits in ground outside of building - 36 inches, unless otherwise noted.
 17. Provide and install exterior wall conduit seals and cable seals in the locations listed below. Coordinate installation and scheduling with other trades:
 - a. Conduit seals through exterior wall or slab (below grade): O.Z. Gedney series "FSK" in new cast in concrete locations, series "CSM" in cored locations.
 - b. Conduit seals through exterior wall or slab (above grade): O.Z. Gedney series "CSML."
 - c. Cable seals at first interior conduit termination after entry through exterior wall or slab: O.Z. Gedney series "CSBI." Coordinate quantity of conductors at each location.
- D. Outlet Boxes and Junction Boxes:
1. One-piece steel knockout type drawn boxes, unless otherwise required, sized as required for conditions at each outlet or device.
 2. Flush-mounted boxes equipped with galvanized steel raised covers for device mounting flush with finished surface. Provide extension rings as required on all acoustical or additional wall treatment areas to bring top of cover flush with finished surface (coordinate with architectural conditions). Devices shall be capable of being tightly mounted to boxes without distorting or bending device or mounting hardware.
 3. Boxes for fixture outlets: 4-inch octagon or larger as required.
 4. Switch and receptacle outlets - not smaller than 4-inch-square in furred walls, with raised cover for single device; ganged where required.
 5. Outlet and switch boxes for wet locations, cast aluminum FS or FD type with cast aluminum gasket spring lid cover. Weatherproof "Bell" type boxes are not acceptable.
 6. All connectors from conduit to junction or outlet boxes shall have insulated throats. Connectors shall be manufactured with insulated throats as integral part. Insertable insulated throats are not acceptable.
 7. Outlet boxes for cable TV, telephone, and data, 4" square or larger, multi-ganged for telephone, data, and other services as required.
 8. Conduit Bodies: Malleable iron type, with lubricated spring steel clips over edge of conduit body, O-Z/Gedney type EW, or equal.
- E. Wire and Cable:

1. 600-volt class, insulation color-coded, minimum No. 12 awg for branch circuits, No. 14 for control circuits.
2. All conductors shall be copper.
3. Insulation type:
 - a. Standard locations: #12 to #1 AWG: THWN for wet locations and THHN for dry locations. #1/0 through #4/0 AWG: XHHW (55 Mils). 250MCM and larger: XHHW (65 Mils). All wire sizes used shall be based on a 75-degree insulation rating, unless specifically used with 90 degree rated breakers and devices.
 - b. High temperature and non-standard locations: Provide wire type and insulation category suitable for area of use as defined in NEC table 310-13.
4. Conductors No. 8 and larger and as otherwise noted on drawings shall be stranded. Conductors No. 10 and smaller shall be solid.
5. Install all wiring (low voltage and line voltage) in conduit unless noted otherwise in the drawings, but do not pull into conduit until plastering and taping have been completed and conduits and outlets have been thoroughly cleaned and swabbed as necessary to remove water and debris.
6. Approximately balance branch circuits about the neutral conductors in panels.
7. Connections to devices from "thru-feed" branch circuit conductors to be made with pigtails, with no interruption of the branch circuit conductors.
8. Neutral conductor identified by white outer braid, with different tracers of "EZ" numbering tags used where more than one neutral conductor is contained in a single raceway.
9. Neatly arrange and "marlin" wires in panels and distribution panelboards with "T and B Ty-rap" or approved equal plastic type strapping.
10. All wire and cable shall bear the Underwriters' Label, brought to the job in unbroken packages; wire color-coded as follows:

Voltage	Phasing	A	B	C	N
277/480	3PH4W	Brown	Orange	Yellow	White
480	3PH3W	Brown	Orange	Yellow	
120/208	3PH4W	Black	Red	Blue	White
208	3PH3W	Black	Red	Blue	--

11. The equipment-grounding conductor shall be insulated copper; where it is insulated, the insulation shall be colored green.

12. Label each wire of each electrical system in each pull box, junction box, outlet box, terminal cabinet, and panelboard in which it appears with "EZ" numbering tags indicating the connected circuit numbers.
 13. Install feeder cables in one continuous section unless splices are approved. Exercise care in pulling to avoid damage or disarrangement of conductors, using approved grips. No cable shall be bent to smaller radius than the spool on which it was delivered from the manufacturer. Color code feeder cables at terminals. Provide identifying linen tags in each pull box.
- F. Switches: Model numbers are Leviton, color to be selected by architect, unless otherwise noted:
1. Single Pole - No. 1221-2
 2. Three Way - No. 1223-2
 3. Momentary contact - No. 1257-I
 4. Momentary contact, keyed, - No. 1257-LI
- G. Receptacles: Mounting straps and contacts shall be one-piece design, (no rivets), constructed of minimum .050" solid brass. Base shall be high strength, glass reinforced nylon. Device shall accept up to #10 wire. Model numbers are Leviton, color to be selected by architect, unless otherwise noted:
1. 20A 3PG 125-volt duplex - No. 5362A
 2. 20A 3PG 125-volt ground fault interrupter receptacle. Through wiring to down stream GFI designated receptacles is not acceptable.
- H. Plates: Leviton, or equal, except as noted:
1. For flush outlet boxes, for switches, and receptacles: nylon, color to be selected by architect, unless otherwise noted.
 2. Plates for surface-mounted outlets: galvanized steel unless otherwise noted.
 3. Weatherproof duplex receptacle plates for exterior locations with ground fault interrupter receptacles in type FS or FD boxes - Leviton #6196-V or Hubbell #WPFS26.
 4. Locking plates for weatherproof duplex receptacles for exterior locations with ground fault interrupter receptacles in type FS or FD boxes - Pass & Seymour #WP26-L
 5. Plates for flush telephone / data boxes: white nylon or as otherwise directed - provide and install at each telephone /data outlet plate to match duplex power outlet plate, for jack installation by others. Where the power and telephone / data outlet boxes are shared the plate shall be continuous in multi-gang locations.

- I. Equipment Disconnects: All disconnects shall be located to allow proper code required clearance in each area. Locations shown on drawings are diagrammatic only. The contractor shall coordinate exact locations in the field (with other trades) prior to rough in to insure proper clearances.
 - 1. Motor Disconnect Switches and Safety Switches: General Electric Company Heavy Duty Type "THD", cover interlocked with operating handle so that cover cannot be opened with switch in closed position and switch cannot be closed with cover in open position. 240V rating, single or multi-pole as required or as noted on drawings, in Nema 1 enclosure indoors or Nema 3R enclosure outdoors unless otherwise noted. Provide dual element motor circuit fuses sized as recommended by equipment manufacturer (for final equipment actually installed).
 - 2. Code required disconnects: Provide a local disconnect in addition to the branch circuit protection device for all equipment as required by code (whether shown or not). Disconnects shall consist of a motor rated switch (or disconnect) for all motor loads less than 3/4HP or other suitable disconnect sized to match branch circuit conductors and load current of equipment, with number of poles as required.

- J. Magnetic starters: shall be rated in accordance with latest published NEMA standards for size and horsepower rating, Westinghouse A-200 series or equal. Provide with overload sensor in each phase, hand-off-auto switch, red "run" pilot-light, in NEMA 1, NEMA 4X, or NEMA 3R enclosure or in motor control center where indicated. Coil shall be rated 120 VAC. Starters shall be across-the-line non-reversing unless otherwise noted.
 - 1. Contacts: Across-the-line magnetic starters shall be equipped with double break silver alloy contacts. All contacts shall be replaceable without removing power wiring or removing starter from panel. The starter must have straight-through wiring.
 - 2. Coils: Coils shall be of molded construction. All coils shall be replaceable from the front without removing the starter from the panel.
 - 3. Overload Relays and Thermal Units: Overload relays shall be the melting alloy type with a replaceable control circuit module. Thermal units shall be of one-piece construction and interchangeable. The starter shall be inoperative if the thermal unit is removed.

- K. Lugs and Connectors: Thomas and Betts "lock-tite", for No. 4 and larger wire; "Scotchlock" fixed spring type with insulator for No. 6 and smaller wire.
 - 1. All splices made up with wire nut connectors shall be solidly twisted together with electricians pliers before connector is installed to ensure a proper connection in the event of wire nut failure. No exceptions.
 - 2. Connectors listed or labeled for "no wire twisting required" are not an acceptable substitute for actual wire twisting.
 - 3. Utilize porcelain type connectors in all high temperature environments (above 105 degrees Celsius).

- L. Splice Insulation: "Scotch" electrical tape with vinyl plastic backing or rubber tape with protective friction tape for interior work.

1. Provide watertight cast splices for all conductors in site pullboxes or wet locations.
- M. Firestopping: as manufactured by 3M Fire Protection Products or equal.
1. Fire-rated and smoke barrier construction: Maintain barrier and structural floor fire and smoke resistance ratings including resistance to cold smoke at all penetrations, connections with other surfaces or types of construction, at separations required to permit building movement and sound vibration absorption, and at other construction gaps.
 2. Systems or devices listed in the UL Fire Resistance Directory under categories XHCR and XHEZ may be used, providing that it conforms to the construction type, penetration type, annular space requirements and fire rating involved in each separate instance, and that the system be symmetrical for wall penetrations. Systems or devices must be asbestos free.
- N. Fire Alarm; Fire alarm system panels shall be as manufactured by Notifier, Siemens, Simplex, or equal. Fire alarm system devices shall be as manufactured by the system panel manufacturer, Wheelock, Gentex, System Sensor or equal.

PART 3 - EXECUTION

3.1 General:

- A. All work shall be neatly installed. Raceways, fittings, and all equipment shall be level, plumb and straight and all connectors, locknuts, clamps, and joints shall be made up tightly.
- B. Conduits and raceways shall be installed in new ceiling spaces and furred-out walls or under floors throughout the building.
- C. Conduit, outlets, and equipment shall be installed to clear beams or obstructions and shall be run in concealed spaces wherever possible. Cutting or reducing the size of any load-carrying member without approval will not be allowed.
- D. All junction boxes, electrical connection points, and splices shall be accessible upon completion. Access panels shall be provided in special locations as required and coordinated with the Architect.
- E. Floor mounted equipment shall be bolted down.
- F. All equipment and fixtures shall have seismic bracing as required by code.

3.2 Installation - Raceways:

- A. Conduit shall be installed in new concrete slabs parallel to principal reinforcing steel. Maximum size raceway permitted in structural concrete, 3/4" trade size or as directed.
- B. Exposed raceways shall be run parallel or at right angles to building walls or ceiling.

- C. Penetrations through concrete walls and footings shall be sleeved and sealed.
- D. Penetrations through fire-rated walls and floors shall be properly sealed using a U.L. listed assembly, to maintain fire ratings.

3.3 Identification:

- A. Panelboards, timeclocks, motor disconnect switches, starters, and other apparatus used for operation of or control of circuits, appliances or equipment, shall be properly identified by means of engraved plastic nameplates mounted on apparatus using stainless steel screws.

3.4 Testing and Adjusting:

- A. All labor and test equipment required shall be furnished.
- B. Panels and circuits shall be tested for grounds and shorts with mains disconnected from feeders, branch circuits connected, circuit breakers closed, all fixtures in place, permanently connected, and grounding jumper to neutral lifted.
- C. Each individual circuit shall be tested at all panels, with equipment connected for proper operation.
- D. Upon completion of work, final inspection shall be made and all equipment shall be operated under normal conditions to the satisfaction of Architect and the City.
- E. At completion of work, written certification that all systems are functioning properly without defect shall be provided.
- F. Contractor shall provide lighting control systems training and programming. Systems check out shall be performed by an authorized factory representative.
- G. Contractor shall adjust (focus) all adjustable lighting fixtures as directed by the Architect or Engineer. Adjustment to occur at night and/or after hours. Contractor shall provide necessary equipment to access adjustable lighting fixtures.

3.5 Warranty:

- A. Provide one-year guarantee on all equipment and installations.

END OF SECTION

AUDIOVISUAL NARRATIVE

A. Reference Standards

1. American National Standards Institute (ANSI)
 - a. ANSI/TIA-568-C.0, Generic Telecommunications Cabling for Customer Premises, 2009
 - b. ANSI/TIA-568-C.1, Commercial Building Telecommunications Cabling Standard, 2009
 - c. ANSI/TIA-568-C.2, Balanced Twisted-Pair Telecommunication Cabling and Components Standard, published 2009
 - d. ANSI/TIA-568-C.3, Optical Fiber Cabling Components Standard, published 2008, plus errata issued in October, 2008.
 - e. ANSI/TIA-569-C (2012) Telecommunications Pathways and Spaces
 - f. ANSI/TIA-606-B-2012, Administration Standard Telecommunications Infrastructure.
 - g. ANSI S1.4-1983 (R2001) American National Standard Specification for Sound Level Meters
 - h. ANSI S1.11-1986 (R2001) American National Standard Specification for Octave-Band and Fractional Octave-Band Analog and Digital Filters
 - i. ANSI S1.42-1986 (R2001) American National Standard Design Response of Weighting Networks for Acoustical Measurements
2. Audio Engineering Society Incorporated (AES)
 - a. AES2-1984 (r1997) AES Recommended Practice Specification of Loudspeaker Components Used in Professional Audio and Sound Reinforcement
 - b. AES5-1998 (Revision of AES5-1984) AER recommended practice for professional digital audio – Preferred sampling frequencies for applications employing pulse-code modulation
 - c. AES14-1992 (r1998) AES standard for professional audio equipment – Application of connectors, part 1, XLR-type polarity and gender
 - d. AES20-1996 AES recommended practice for professional audio – Subjective evaluation of loudspeakers
 - e. AES26-2001 Revision of AES26-1995 AES recommended practice for professional audio interconnections – Conservation of the polarity of audio signals
 - f. AES-R2-1998 AES project report for articles on professional audio and for equipment specifications – Notations for expressing levels
3. Electronic Industries Association of America (EIA)
 - a. EIA-160 Sound Systems
 - b. EIA-310-E Racks, Panels and Associated Equipment
 - c. EIA-101-A Amplifiers for Sound Equipment
 - d. SE-103 Speakers for Sound Equipment
 - e. SE-104 Engineering Specifications for Amplifiers for Sound Equipment
4. Infocomm International
 - a. ANSI/Infocomm 1M-2009 - Audio Coverage Uniformity in Enclosed Listener Areas.
5. International Electrotechnical Commission (IEC)
 - a. IEC 268-3 (1988) Sound system equipment – Part 3: Amplifiers
 - b. IEC 268-5 (1989) Sound system equipment – Part 5: Loudspeakers
 - c. IEC 268-12 (1987) Sound system equipment – Part 12: Application of Connectors for Broadcast and Similar Use
 - d. IEC 651 (1979) Sound level meters

B. Broadband System (Cable Television)

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1. Using the cable-television service provided through the Entrance Facilities, provide distribution, within and among the buildings, of franchise cable television services.
2. Typical areas to receive broadband television signal are displays and audiovisual equipment racks, including:
 - a. Main Recreation Building
 - i. Teen Lounge Display
 - ii. Teen Classroom Audiovisual Rack
 - iii. Gymnasium Audiovisual Rack
 - iv. Boxing and Fitness Display(s)
 - b. Health & Wellness
 - i. Conference Room Audiovisual Rack
 - ii. Waiting Room Display
 - c. Early Childhood Education
 - i. Classroom Audiovisual Racks
 - d. Senior Center
 - i. Multipurpose Room Audiovisual Rack
 - ii. Lounge Display(s)
 - iii. Meeting Room Audiovisual Rack
 - iv. Conference Room Audiovisual Rack

C. Public Address System

1. Provide multi-zone public address system allowing call origination from VOIP telephone system and/or dedicated microphones, using zone-selection or similar to assign the page to the appropriate output, zone-paging controller, amplification, wiring and permanently installed ceiling-mounted distributed loudspeakers. Assumed zones required to include:
 - a. Main Recreation Building
 - i. General Circulation Areas: Corridors, Restrooms, Stairwells
 - ii. Functional Areas: Gymnasium, Teen Lounge, Art Studio, Boxing/Fitness Studio, Dance Studio, Kitchen
 - b. Health & Wellness
 - i. General Circulation Areas: Corridors, Restrooms, Waiting Room
 - c. Early Childhood Education
 - i. General Circulation Areas: Corridors, Restrooms, Kitchen
 - d. Senior Center
 - i. General Circulation Areas: Corridors, Restrooms, Kitchen
 - ii. Multipurpose Room
 - e. Exterior Areas

D. Audiovisual Systems and Equipment by Space

1. Provide infrastructure, wiring, pathways, devices, programming, commissioning, and end-user training for audiovisual systems and equipment in the following:
 - a. **Main Recreation Building**
 - i. Teen Lounge
 - a) Flush in wall large capacity audiovisual flat panel wall box
 - b) 55" diagonal commercial grade flat panel display with integral tuner
 - c) Soundbar type stereo loudspeaker at display, or integral

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- ii. d) Wall-mounted pushbutton control panel for channel selection and volume
 - ii. Teen Classroom
 - a) Undercounter/credenza swing-out 4-post audiovisual equipment rack
 - b) ATSC Tuner
 - c) Presentation AV Switch
 - d) AV Controller
 - e) Flip-top touch control panel and cable cubby in instructor's lectern surface
 - f) Ceiling/pole mounted HD hi-lumens projector
 - g) Ceiling/wall mounted motorized retractable tab-tensioned 16:10 aspect ratio projection screen
 - h) BluRay/DVD/CD media player
 - i) Wall-mounted front-firing full-range loudspeakers
 - j) Flush in ceiling 70v distributed audio loudspeakers
 - k) Assistive Listening Transmitter and Antenna
 - iii. Gymnasium
 - a) Full-height Zone 4 rated AV equipment rack
 - b) Shelf-mounted HD hi-lumens projector
 - c) Ceiling/wall mounted motorized retractable tab-tensioned projection screen
 - d) BluRay/DVD/CD media player
 - e) Wireless microphone(s) and receivers
 - f) Large-capacity AV floorboxes at side court locations with XLR microphone inputs
 - g) AV modular matrix switch
 - h) Digital Signal Processor (DSP)
 - i) Gooseneck/handheld microphones (corded)
 - j) Power amplifiers
 - k) AV Controller
 - l) Wall-mounted touch-panel control interfaces
 - m) Wall-mounted HDMI/VGA/audio Media input plates
 - n) Pendant/ceiling mounted 70v distributed audio loudspeakers
 - o) Assistive Listening Transmitter and Antennae
 - iv. Boxing and Fitness
 - a) Undercounter/credenza swing-out 4-post audiovisual equipment rack
 - b) ATSC Tuner
 - c) Presentation AV Switch
 - d) AV Controller
 - e) BluRay/DVD/CD media player
 - f) Ceiling/pole mounted 55" flat panel displays
 - g) Wall-mounted touch-panel control interface(s)
 - h) Wall-mounted HDMI/VGA/audio Media input plates
 - i) Pendant/ceiling mounted 70v distributed audio loudspeakers
 - j) Assistive Listening Transmitter and Antennae
 - v. Dance Studio
 - a) Undercounter/credenza swing-out 4-post audiovisual equipment rack
 - b) Presentation AV Switch
 - c) AV Controller
 - d) Wall-mounted touch-panel control interface(s)
-

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- e) Wall-mounted HDMI/VGA/audio Media input plates
 - f) Pendant/ceiling mounted 70v distributed audio loudspeakers
 - g) Assistive Listening Transmitter and Antennae
 - b. **Health & Wellness**
 - i. Conference Room
 - a) Undercounter/credenza swing-out 4-post audiovisual equipment rack
 - b) ATSC Tuner
 - c) Presentation AV Switch
 - d) AV Controller
 - e) Flip-top touch control panel and HDMI/VGA/audio cable cubby in conference table surface
 - f) Large capacity AV floorbox below conference table
 - g) Large capacity AV flat panel wall box
 - h) 80" diagonal HD flat panel display with integral audio
 - i) BluRay/DVD/CD media player
 - j) Wall-mounted front-firing full-range loudspeakers
 - k) Assistive Listening Transmitter and Antenna
 - ii. Waiting Room
 - a) Ceiling/Pole mounted 40" flat panel display with integral tuner and audio
 - c. **Early Childhood Education**
 - i. Typical Classroom
 - a) Undercounter/credenza swing-out 4-post audiovisual equipment rack
 - b) ATSC Tuner
 - c) Presentation AV Switch
 - d) AV Controller
 - e) Flip-top touch control panel and cable cubby in instructor's lectern surface
 - f) Ceiling/pole mounted HD hi-lumens projector
 - g) Ceiling/wall mounted motorized retractable tab-tensioned 16:10 aspect ratio projection screen
 - h) BluRay/DVD/CD media player
 - i) Wall-mounted front-firing full-range loudspeakers
 - j) Flush in ceiling 70v distributed audio loudspeakers
 - k) Assistive Listening Transmitter and Antenna
 - d. **Senior Center**
 - i. Multipurpose Room
 - a) Undercounter/credenza height AV equipment rack
 - b) Shelf-mounted HD hi-lumens projector
 - c) Ceiling/wall mounted motorized retractable tab-tensioned projection screen
 - d) BluRay/DVD/CD media player
 - e) Wireless microphone(s) and receivers
 - f) AV Presentation Switch
 - g) Handheld microphones (corded)
 - h) Power amplifiers
 - i) AV Controller
 - j) Wall-mounted touch-panel control interfaces
 - k) Wall-mounted HDMI/VGA/audio Media input plates
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- l) Front-firing wall-mounted loudspeakers
- m) Pendant/ceiling mounted 70v distributed audio loudspeakers
- n) Assistive Listening Transmitter and Antennae
- ii. Lounge
 - a) Ceiling/Pole mounted 40" flat panel display with integral tuner and audio
- iii. Meeting Room
 - a) Undercounter/credenza swing-out 4-post audiovisual equipment rack
 - b) ATSC Tuner
 - c) Presentation AV Switch
 - d) AV Controller
 - e) Flip-top touch control panel and HDMI/VGA/audio cable cubby in conference table surface
 - f) Large capacity AV floorbox below conference table
 - g) Large capacity AV flat panel wall box
 - h) 80" diagonal HD flat panel display with integral audio
 - i) BluRay/DVD/CD media player
 - j) Wall-mounted front-firing full-range loudspeakers
 - k) Assistive Listening Transmitter and Antenna
- iv. Conference Room
 - a) Undercounter/credenza swing-out 4-post audiovisual equipment rack
 - b) ATSC Tuner
 - c) Presentation AV Switch
 - d) AV Controller
 - e) Flip-top touch control panel and HDMI/VGA/audio cable cubby in conference table surface
 - f) Large capacity AV floorbox below conference table
 - g) Large capacity AV flat panel wall box
 - h) 80" diagonal HD flat panel display with integral audio
 - i) BluRay/DVD/CD media player
 - j) Wall-mounted front-firing full-range loudspeakers
 - k) Assistive Listening Transmitter and Antenna

ELECTRONIC SECURITY SYSTEMS NARRATIVE

1. Access Control Systems

- a. Work of the project will install an enterprise access control system at Health & Wellness, Main Recreation Building, Early Childhood Education and Harriet Tubman House. The City is evaluating options but it is anticipated that it will be similar to Tyco Software House C-Cure, AMAG Symmetry or Lenel OnGuard system in widespread commercial use.
- b. Location of the access control server is to be determined.
- c. Access Control
 - i. Smartcard (iClass) compatible card Readers with ability to function in conjunction with both standard access control cards and fobs, and smartphone app based authentication means (equivalent to HID iCLASS SE and multiCLASS SE® mobile-enabled readers)
 - ii. Access control panels for this project will interface to the server across the City MAN/WAN connection.
 - iii. It is anticipated that the means of connection between the controlled doors and the controllers will be wired, as opposed to wireless.
 - iv. It is to be determined whether the system will use central access panels or distributed head-of-door local controllers (typically POE).
- d. Provide card reader access control at:
 - i. Exterior entrances.
 - ii. Telecommunications rooms.
 - iii. Public/Patron and Staff separation doors.
- e. Provide door position switches/contacts supplemented by request to exit detectors at:
 - i. Exterior perimeter doors not otherwise provisioned with card reader access control.
- f. Hatch switches
 - i. Roof hatches.

2. Intrusion Detection

- a. The buildings to be provisioned with Intrusion Detection facilities using either the access control system (if UL 1076 capable) or via separate burglar alarm panels.
- b. Glass Break detectors will be installed at all ground floor areas with accessible exterior windows.
- c. Motion detectors will be installed in hallways and rest rooms.
- d. Typical monitoring to address:
 - i. Doors or hatches forced or left open
 - ii. Windows broken.
- e. Building alarms will be reported to a centralized alarm bureau for escalation and police response if required.

3. Video Surveillance Systems

- a. Work of the project to implement a TCP/IP camera video surveillance system at Health & Wellness, Main Recreation Building, Early Childhood Education and Harriet Tubman House. The City is evaluating video management systems similar to Genetec Omnicast or OnSSI Occularis.
- b. Video surveillance system to cover:
 - i. Building entries

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- ii. Building Perimeter
- c. System to utilize fixed view IP CCTV cameras to maximize utility of recorded imagery.
 - i. At exterior locations with minimal night lighting, cameras to be selected with integral IR illuminators.
 - ii. At interior locations facing exterior glass doors, cameras to provide automatic contrast adjustment to maintain usability of recorded imagery. Design basis cameras to be based on Axis or Avigilon hardware in widespread commercial use and providing an ONVIF vendor neutral standards compliant interface.
- d. System intended for use in evidence gathering, in addition to real time monitoring.
- e. Video recording period and storage is to be determined.



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