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Project Goal

Establish a combined program for existing senior center services, youth drop-in day services, & overnight young adult shelter. Generate concept level plans & establish aesthetic direction of the project.

Workshops

The design team held (3) team meetings/workshops with project stakeholders to define the needs of this project & begin concept design. The contents of this package summarize this effort & capture the goals of the City of Tacoma related to the Senior, Youth, and Young Adult Services.

SITE

Existing building at 415 S 13th St, Tacoma, WA 98402

PROGRAM

Ground floor renovation of approximately 12,000 SF to be used as a Senior Center and Youth & Young Adults Homeless Shelter and Drop-In Center. Project includes (2) separate entrances one for seniors and one for youth programs. Scope includes interior and exterior improvements.

Scope Of Work

- **Minimum Option:** Minimum program - to utilize the existing footprint more efficiently with minor envelope expansion as necessary. The proposed modifications need to consider future build out and expansion. Basis of design to accommodate 25-30 overnight youth, 35-50 young adult day-use, and 55 senior day use. Two accessible entries are required to meet the program needs.

- **Medium Option:** This program includes extended envelope/footprint expansion to accommodate the two programs comfortably. It will build off of the basic scope program by accommodating 50 overnight young adult, 50 youth day-use, and 55 senior day use with potential for growth.

- **Optimal Option:** This program assumes that the existing building will be demolished, and a new building will be built on the existing site. Provide a single entry for all programs with parking below grade off of S. Court D. Street.
In the 2017 programming effort the team studied the following projects with similar programs to understand key programmatic elements, sizes & adjacencies. These findings were validated in this effort and remain relevant to the design effort.
PRECEDED STUDIES: Y2Y SHELTER - CAMBRIDGE, MA

Key Features:
- Great use of limited space
- Modern hostel/college dorm feel
- Flexible space & custom furnishing
- Student run overnight shelter (30-day max stay)
- Trauma informed approach
- Gender inclusive
- Interior remodel

$\pm 4,725$ SF

Floor Plan

Not to scale
PRECEDENT STUDIES: WOMEN’S SHELTER - EUGENE, OR

Key Features

• CLEAR SPACE DELINEATION (public - private)
• EFFICIENT USE OF SPACE on site
• LAYERS OF ACCESS FOR SECURITY
• abundant daylight in day use area

+/- 12,000 SF

HOMELESS SHELTER FOR WOMEN
PROVIDES SHELTER, FOOD, COUNSELING, LIFE-CHANGE PROGRAM
GROUND UP CONSTRUCTION

ANKROM MOISAN ARCHITECTS | BEACON CENTER
DESIGN STUDY

FLOOR PLAN
NOT TO SCALE
Key Features

- CLEAR VERTICAL DELINEATION OF PROGRAMS
- INVITING, UTILITARIAN, DURABLE SPACES
- SEPARATE ENTRANCES FOR EACH PROGRAM
- ABUNDANT DAYLIGHT
- OUTDOOR AMENITIES

+/- 19,000 SF SHELTER PROGRAM AREA

EMERGENCY SHELTER+DAY CENTER+ HOUSING

ANKROM MOISAN ARCHITECTS | BEACON CENTER
DESIGN STUDY

PRECEDENT STUDIES: BUD CLARK COMMONS - I
PRECEDENT STUDIES: SHELTER HOME - NAVARRE, SPAIN

ANKROM MOISAN ARCHITECTS | BEACON CENTER
DESIGN STUDY

Key Features
- EFFICIENT use of space
- TENANT INVOLVE IN DAILY MAINTENANCE
- CENTRALIZED SERVICE CORE

Ground Floor Plan
- +/- 10,700 SF on 2 LEVELS
- +/- 6,500 SF FOOT PRINT
- PROVIDE SHELTER, FOOD, OCCUPATIONAL WORKSHOPS
- GROUND UP CONSTRUCTION

2nd Floor Plan
- +/- 10,700 SF on 2 LEVELS
- +/- 6,500 SF FOOT PRINT
- PROVIDE SHELTER, FOOD, OCCUPATIONAL WORKSHOPS
- GROUND UP CONSTRUCTION

Service Infrastructures
- ENTRY
- ELEVATOR
- MECHANICAL
- OFFICES
- UTILITY
- STORAGE

Service Media Estancia
- ENTRY
- ELEVATOR
- RECEPTION
- CLASSROOM
- OFFICES
- KITCHEN

Design Study
- ENTRY
- ELEVATOR
- RECEPTION
- CLASSROOM
- OFFICES
- KITCHEN

Utility
- UTILITY
- STAIR
- OFFICE
- MECHANICAL
- STORAGE

Private Suite
- PRIVATE SUITE
- BATHROOM
- STORAGE

Private Garden
- PRIVATE GARDEN
- UTILITY
- STAIR
- OFFICE
- MECHANICAL

Private Dorm
- PRIVATE DORM
- BATHROOM
- STORAGE

Private Classroom
- PRIVATE CLASSROOM
- OFFICE
- MECHANICAL
- STORAGE

Private Kitchen
- PRIVATE KITCHEN
- OFFICE
- MECHANICAL
- STORAGE

Private Office
- PRIVATE OFFICE
- MECHANICAL
- STORAGE

Private Bathroom
- PRIVATE BATHROOM
- UTILITY
- STAIR
- OFFICE
- MECHANICAL

Private Storage
- PRIVATE STORAGE
- UTILITY
- STAIR
- OFFICE
- MECHANICAL

Private Utility
- PRIVATE UTILITY
- STAIR
- OFFICE
- MECHANICAL
- STORAGE

Private Stair
- PRIVATE STAIR
- UTILITY
- STAIR
- OFFICE
- MECHANICAL
DEFINING THE PROJECT

Building off of the program that was developed in 2017 for the Youth and Young Adult services. The team worked to validate and expand on the projects goals and challenges as they apply to the Beacon Center Site and the inclusion of the Senior Center Services.
SMALL KITCHEN

NICE & CLEAN

VENTILATION & PRIVACY
ARTISTIC & COLORFUL

COZY WARM SAFE

COOL & TRENDY

FLEXIBLE & MULTIPURPOSE
YOUTH DAY USE DROP-IN REQUIREMENTS

**MUST HAVE**
- Queueing Area
- Reception/Check in
- Storage/Lockers
- Intake/Counseling
- Clothing Closet
- Food Pantry
- Dining for 50/Multipurpose
- Chair/Table Storage
- Kitchen/Storage
- Learning Kitchen
- Delivery Area
- Quiet Activity/Classroom
- Library/Computer
- Showers - Gender Neutral
- Restrooms - Gender Neutral

**LIKE TO HAVE**
- Self Serve Laundry
- Game/Living RM
- TV/Movie RM
- Staff Offices
- Conference RM
- Bike Racks
- Smoking Area

**ADDITIONAL COUNSELING RM**
**RESOURCE CENTER**
**SKILLS CENTER**

---

**Diagram:**
- Field Trips
- Scheduled Advisor
- Counseling
- Games
- Clothing Closet

**Schedule:**
- 7:30PM Snack
- 4:30PM Dinner Buffet Style
- 5:30PM Dinner Over
- 6:00PM Dinner Second
- 7:00PM-9:30PM Dinner Buffet Style
- 4:00PM Mon-Fri Check In
- 8:45 PM Check Out
- 10:00PM Sat-Sun Check In

**Notes:**
The diagram is documenting existing schedule. The goal is for the Beacon Center to be available to provide these youth services throughout the day until check out at 8:45PM.
YOUNG ADULT OVERNIGHT REQUIREMENTS

**MUST HAVE**
- Queueing area
- Reception/Check in
- Storage/Lockers
- Intake/Counseling
- Kitchenette
- Activity/Media RM
- Staff Area
- Restroom
- Showers
- Staff Laundry
- Self Serve Laundry
- Clean Soiled Storage
- Sleeping for 25-30
- Bike Racks
- Smoking Area

**LIKE TO HAVE**
- Staff Office
- Additional Sleeping Total of 50

The diagram is documenting existing schedule. The goal is for the Beacon Center to be available to provide these services to young adults 24 hours.
SMOKING
BIKE RACKS
QUEUEING
CHECK
LOCKERS/IN STORAGE

WORK STATION
STAFF OFFICE

RR SELF SERVE
LAUNDRY
SHOWERS

KITCHENETTE
ACTIVITY/MEDIA
QUIET AREA

STAFF LAUNDRY
CLEAN/SOILED STOR

SLEEPING
25 BEDS
25 OVERFLOW BEDS
SENIOR CENTER REQUIREMENTS

MUST HAVE
RECEPTION/CHECK IN STORAGE
FOOD PANTRY
DINING FOR 55
GAME RM
COMMERCIAL KITCHEN
CRAFT RM/STORAGE
FITNESS CENTER
2 STAFF OFFICE
RESTROOM
LIBRARY/COMPUTER RM
TV RM
PARKING
SMOKING AREA

LIKE TO HAVE
GARDEN
CONFERENCE RM
STAFF OFFICE
ADDITIONAL DINING SPACE
ADDITIONAL PARKING

THE DIAGRAM IS DOCUMENTING EXISTING SCHEDULE.
MINIMUM OPTION: COMBINED PROGRAM

SENIORS
- Staff Office
- Staff Office
- Entry
- Craft/Storage
- Computer/Library
- Food Pantry
- Dining for 55/Multipurpose
- Restrooms

SHARED
- Kitchen/Queueing
- Staging/Storage
- Utility
- Fitness

YOUTH
- Entry/Queueing
- Staff Office
- Clean/Soil
- Intake/Wet
- Multipurpose/Classroom/Storage
- Multipurpose/TV/Staff Work Area
- Dining 35-50
- 6 Single-Use Restrooms/Shower
- Sleeping 25-30

ANKROM MOISAN ARCHITECTS | BEACON CENTER
DESIGN STUDY
SITE DISCOVERY

Understanding the Beacon Center located at 415 S 13th St, Tacoma, WA 98402
Parcels 2011090120, 2011090121

District: DCC Downtown Commercial Core

Min Lot Area: None
Maximum Height Limit: 400 ft
Front, Rear, Side Yard Setback: None
Maximum Setback: None
FAR: 3:1 for Residential and Non-Residential Uses
Note: FAR maybe increased through incorporation of design features
Allowable Uses: Live/Work, Transient Accommodations
No Parking Requirement for Existing Development
Not designated as a Primary Pedestrian Street
CHAPTER 3 USE AND OCCUPANCY CLASSIFICATION

- 303.1 AMENITY SPACES (WITH OCCUPANT LOADS OVER 50): ASSEMBLY GROUP A
- 303.1.1 SMALL BUILDINGS AND TENANT SPACES USED FOR ASSEMBLY PURPOSES (WITH OCCUPANT LOADS LESS THAN 50): GROUP B
- 303.1.2 SMALL ASSEMBLY SPACES (LESS THAN 750 SF AND OCCUPANT LOADS LESS THAN 50): GROUP B OR THE SAME AS THE OCCUPANCY GROUP TO WHICH IT IS ACCESSORY
- 303.3 DINING AREAS: ASSEMBLY GROUP A-2
- 303.4 COMMUNITY HALLS: ASSEMBLY GROUP A-3
- 304.1 ADMIN OFFICES, COMMERCIAL KITCHENS, COUNSELING AREAS: BUSINESS GROUP B
- 310.4 RESIDENTIAL GROUP R-2: OCCUPANCIES CONTAINING SLEEPING UNITS OR MORE THAN 2 DWELLING UNITS: DORMITORIES. SEE DEFINITION FOR DORMITORY.
- 311.1 SMALL STORAGE ROOMS (LESS THAN 100 SF): THE SAME AS THE OCCUPANCY GROUP TO WHICH IT IS ACCESSORY
- 311.2 STORAGE ROOMS, LAUNDRY ROOM, MECHANICAL AND ELECTRICAL ROOMS: LOW HAZARD STORAGE GROUP S-2

CHAPTER 4 SPECIAL DETAILED REQUIREMENTS BASED ON USE AND OCCUPANCY

- 420 GROUPS R-2
- 420.2 WALLS SEPARATING DWELLING UNITS FROM OTHER OCCUPANCIES IN THE SAME BUILDING MUST BE CONSTRUCTED IN ACCORDANCE TO 708. SEE EXCEPTIONS FOR TYPE VB CONSTRUCTION.
- 420.5 [F] SPRINKLER SYSTEM IS REQUIRED
- 420.6 [F] FIRE ALARM SYSTEM IS REQUIRED

504 BUILDING HEIGHT AND NUMBER OF STORIES

- 509 BOILER ROOM, LAUNDRY ROOM OVER 100 SF, TRANSFORMERS (OTHER THAN MAIN SERVICE); SPRINKLER SYSTEM
CHAPTER 6 TYPES OF CONSTRUCTION

• T 601 TYPE VB CONSTRUCTION
• PRIMARY STRUCTURAL FRAME: 0 HR
• BEARING WALLS: 0 HR
• FLOOR CONSTRUCTION: 0 HR
• ROOF CONSTRUCTION: 0 HR
• NON-BEARING EXTERIOR WALLS: 0 HR

CHAPTER 7 FIRE AND SMOKE PROTECTION FEATURES

• T 705.8 MAXIMUM AREA OF EXTERIOR WALL OPENINGS BASED ON FIRE SEPARATION DISTANCE
• 708 FIRE PARTITIONS
• 708.3 REQUIRED FOR RESIDENTIAL UNIT SEPARATION WALLS; CORRIDOR WALLS; TENANT SPACE SEPARATION WALLS: 1-HR FIRE-RATED CONSTRUCTION REQUIRED FOR ELEVATOR MACHINE OR CONTROL ROOMS: 2-HR FIRE-RATED CONSTRUCTION TO MATCH HOISTWAY RATING (3020.4.3)
• 708.6 OPENING PROTECTIVES: 3/4 HR TYPICALLY; 1/3 HR AT CORRIDORS; 1 1/2 HR AT ELEVATOR EQUIPMENT/CONTROL ROOMS (T 716.5)

CHAPTER 8 ACCESSIBLE MEANS OF EGRESS

• 1009 ACCESSIBLE MEANS OF EGRESS
• 1009.1 ACCESSIBLE MEANS OF EGRESS WITHIN PARKING AREAS ARE ONLY REQUIRED WHERE ACCESSIBLE PARKING SPACES ARE PROVIDED
• 1009.3 EXC. 2 48" STAIRWAY WIDTH IS NOT REQUIRED BETWEEN HANDRAILS (SPRINKLERED BUILDING) EXC. SAREA OF REFUGE IS NOT REQUIRED (SPRINKLERED BUILDING)

CHAPTER 10 MEANS OF EGRESS

• 1003.2 MINIMUM HEADROOM IN MEANS OF EGRESS: 7'-6"
• 1003.5 ELEVATION CHANGES OF LESS THAN 12 INCHES MUST BE ACCOMMODATED THROUGH SLOPED SURFACE OR RAMP
• 1003.5 EXCEPTIONS: SINGLE STEP OR STEPS MAY BE PERMITTED IF THE EGRESS IS NOT REQUIRED TO BE ACCESSIBLE
• 1004 OCCUPANT LOADS
• T 1004.12 REFER TO FLS PLANS FOR INDIVIDUAL OCCUPANT LOADS FOR EACH FUNCTION

CHAPTER 29 PLUMBING FIXTURE CALCULATIONS

PLUMBING FIXTURES AS CALCULATED IN THE IBC COMMENTARY. SEE CODE SECTION 2902.11 "FOR CALCULATIONS INVOLVING MULTIPLE OCCUPANCIES, SUCH FRACTIONAL NUMBERS FOR EACH OCCUPANCY SHALL FIRST BE SUMMED AND THEN ROUNDED UP TO THE NEXT WHOLE NUMBER." ALL NEW AND EXISTING FIXTURES TO MAKE ACCESSIBLE TO MAXIMUM EXTENT FEASIBLE (GOVERNMENT FACILITIES)
EXISTING BUILDING CONDITIONS

The design team toured the building and with the help of the City of Tacoma staff were able to identify existing building conditions and deficiencies.
ARCHITECTURAL

The Beacon Center building was originally constructed in 1941 with a minor remodel in 1980’s. There has been no Major remodel or renovations. It is approximately 12,000 SF constructed on a single floor with mechanical services located in a portion in the lower level. It currently serves as a Senior Center during the day and a Drop-In Youth Center in the evening and weekends. It also serves as a temporary shelter for the Young Adult Overnight Program.

Site

- The building is located on a steeply sloping site with concrete stairs up to the front entry on 13th street. There is one accessible entry from Fawcett Avenue with accessible street parking adjacent to the entry.
- The site has 5 dedicated parking spaces entering off of S. Court D Street.
- The exterior property line at the sides and rear is enclosed with a chain link fence and metal railing. There is a dedicated smoking patio for the youth, but not for the seniors.
- Van drop-off and pick-up is located at the curb.
- Landscape is minimal; mostly ground cover and some bushes.
- A stone retaining wall is located on the lower side of the property along S. Court D.

Exterior

- The roof has both a flat roof with a built-up membrane and a sloped roof with a 3-tab composite shingle. They have reached the end of their life and will need to be replaced.
- Due to proposed mechanical upgrades the two brick chimneys are no longer used and will be demo’d and the roof and floor openings infilled.
- The building was clad with a vinyl siding over the existing lap siding and is in poor condition. The vinyl siding will be removed and replaced with a cementitious lap siding.
- The windows are original single pane, operable double hung and some fixed panes.
- The main accessible entry is not covered.

Interior

- The interior partitions are a combination of wood studs with gypsum boards and plaster and a variety of temporary enclosures covered with paneling.
- The floor covering is VCT and maple wood flooring in the open activity.
- The number of restrooms is not adequate to serve the number of visitors and are not water efficient. They currently do not meet accessible codes.
- The windows are fitted with horizontal mini-blinds.
- Storage areas are full, and more area is needed to support the programs storage needs.
- The large, open activity area is constructed with a tall, double volume area with exposed roof rafters. Its is equipped with a stage at one end which is no longer used.
- The remaining area has a hard lid ceiling attached directly to the roof framing with exposed piping and conduit.
EXISTING CONDITIONS: MEP + STRUCTURAL

MECHANICAL

Applicable Codes
- International Building Code (IBC)
- Washington State Energy Code
- International Fire Code (IFC)
- International Mechanical Code (IMC)
- Uniform Plumbing Code (UPC)
- National Fire Protection Agency (NFPA 13)
- ADA (Americans with Disability Act)

Standards
- Underwriters Laboratories (UL)
- ASHRAE Standard 52.1 – HVAC Filtration, Performance & Testing
- ASHRAE 55: Thermal Environmental Conditions for Human Occupancy
- ASHRAE 62.1: Ventilation for Acceptable Indoor Air Quality
- AMCA: Air Moving & Conditioning Association standards
- SMACNA: Sheet Metal & Air Conditioning Contractors National Association

Existing Conditions
- Heating is provided through the use of a combination of systems. There are steam radiators located throughout the small perimeter spaces. An overhead fan coil unit with a steam heating coil serves the dining area. Two fan coil units with steam heat are located under the stage to serve the gym. The relief air for the gym is handled through the use of two propeller exhaust fans mounted high on the wall. The spaces served by fan coil units appear to have mechanical ventilation as well, however the remainder of the spaces require windows to be opened in order to provide ventilation air. Air conditioning is not provided.
- The boiler for heating the building is located in the basement and is an original 1957 vintage steam boiler.
- Domestic water is produced with a gas fired 120 gallon water heater located adjacent to the steam boiler.
- Fire sprinkler system is equipped with old bimetallic type sprinkler heads.

ELECTRICAL

Applicable Codes
- 2015 International Building Code (IBC) with State Adopted Amendments
- 2015 International Fire Code (IFC) with State Adopted Amendments
- 2017 National Electrical Code (NEC) with State Adopted Amendments
- 2015 Washington State Energy Code (WSEC) with City Adopted Amendments
- Washington Administrative Code (WAC)
- Revised Code of Washington (RCW)
- Tacoma Municipal Code
- NFPA 70E
- American Disabilities Act
- IEEE 1584

Standards
- Underwriters Laboratories (UL)
- National Electrical Manufacturers Association (NEMA)
- National Electrical Contractors Association (NECA)
- Institute of Electrical and Electronics Engineers (IEEE)

Existing Conditions
- The existing Beacon Building is served from a pad-mounted transformer underground service. There is a 600A 240V 1-phase switchboard in the Boiler Room with (5) service disconnects and another spare service disconnect. Most panels are in good condition with the exception of the kitchen panel. Most panels seem to be manufactured by Cutler Hammer with what assumed to be Cutler Hammer breakers installed.
- The lighting consists of fluorescent fixtures utilizing bugeyes for egress lighting. The gym area fixtures seem to be updated compared to the rest of the facility. Lighting control is provided by standard line-voltage toggle switches.
- There are (4) existing speakers in the cafeteria area and additional speakers in the gymnasium and kitchen.
- Fire Alarm appears to have been updated recently. It is anticipated that for either option the Fire Alarm Control Panel will be retained and the existing devices are to be replaced with new.
- Smoke detectors and carbon monoxide detection systems to be provided in sleeping areas.

STRUCTURAL

The Tacoma Beacon Center was constructed in 1941, and consists of an existing 11,700-square foot, wood framed one-story structure with crawl space below.

The review includes structural ramifications of two proposed modification options:
- A “minimum” option, which revises the layout of uses and rebuilding entries at 3 locations.
- A “medium” option, which adds a loft / mezzanine level in the auditorium, a 2nd story addition over the existing garage, and provides an addition between the “bump-out” wings at the south end of the building, in addition to the revisions in the “minimum” option above.
- A “optimum” option, which d

Upgrades and new construction will be provided to meet the criteria outlined in this report and be coordinated with the architecture and other building systems. The existing structure, and structural revisions for each option are outlined below.

Our recommendations and comments are based on observations made during a site walk completed August 31st, 2018 and a review of the report provided by the city of Tacoma and prepared by PCS Structural Solutions dated 07-24-09.

Basic System – Existing Structure
The primary structure of the existing building consists of wood roof framing, heavy timbers trusses in the auditorium space, and board sheathing throughout the structure. Wood framed shear walls are present – likely with straight shiplap sheathing. The floor structure is wood framed with a crawl space below. The floor framing sits on concrete pads down to assumed concrete spread footings. The change in floor level up to the stage / platform area has taller posts to allow for this elevation change. There is a partial basement on the south east end of the building utilizing concrete walls and slab on grade to house the boiler and miscellaneous mechanical equipment.

Existing foundations are assumed to be continuous strip footings around the perimeter and isolated spread footings at interior columns. The assumed soil bearing capacity of 1,500 PSF is based on code minimum. We recommend that this assumption be confirmed by a licensed geotechnical engineer.
PROGRAM DESIGN OPTIONS

Minimum Option: Minimal Renovation to Combine Senior Center with Youth/Young Adult Drop-in and Young Adult Over Night

Medium Option: Expansion to Combine Senior Center with Youth/Young Adult Drop-in and Young Adult Over Night

Optimal Option: Complete Building Replacement for Ideal Function and Use
### Minimum: Program

#### Program Requirements

**Project:** Tacoma Beacon Center  
**Project No.:** #182600

<table>
<thead>
<tr>
<th>Room Name</th>
<th>Room Function</th>
<th>Room Net Area</th>
<th>Number of Units</th>
<th>Total Area Provided</th>
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<tr>
<td><strong>Senior Program</strong></td>
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<td><strong>RECEPTION</strong></td>
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<td>Check-in</td>
<td>Area for receptionist</td>
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<td>Entry Lobby</td>
<td>Waiting Area</td>
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<td>Check in Storage</td>
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<tr>
<td><strong>ACTIVITY SPACE</strong></td>
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<td>Dining/Common area</td>
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<td>Fitness Room</td>
<td>Exercise</td>
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<td>Computer Library</td>
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<td>Craft Activity Room / Storage</td>
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<td><strong>Staff/Service Provider Space</strong></td>
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<td>Staff Office</td>
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<td>Executive Director Office</td>
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<td>Bulk Storage</td>
<td>Supplies</td>
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<td>Restrooms</td>
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<td><strong>CIRCULATION</strong></td>
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<td><strong>TOTAL SENIOR SF:</strong></td>
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#### Youth Program

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<th>Room Net Area</th>
<th>Number of Units</th>
<th>Total Area Provided</th>
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<td><strong>DROP-IN/CENTER</strong></td>
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<td>Drop-in Check-in</td>
<td>Welcome desk</td>
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<td>Queueing</td>
<td>Waiting Area</td>
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<td>Intake</td>
<td>Screening / Counseling</td>
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<td>Lockers/Personal Storage</td>
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<tr>
<td><strong>ACTIVITY SPACE</strong></td>
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<td></td>
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<tr>
<td>Dining/ Multi-purpose</td>
<td>Multi-Function</td>
<td>2200</td>
<td>1</td>
<td>2200</td>
</tr>
<tr>
<td>TV / Game Room</td>
<td>Lounge / Living Space</td>
<td>185</td>
<td>1</td>
<td>185</td>
</tr>
<tr>
<td>Clothes Pantry</td>
<td>Youth closet</td>
<td>100</td>
<td>1</td>
<td>100</td>
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<td>Multi-purpose/Activity / Classroom</td>
<td>Meetings</td>
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<tr>
<td>Table Chair Mat Storage</td>
<td>Closet Storage</td>
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<td><strong>STAFF/SERVICE / HYGIENE PROVIDER SPACE</strong></td>
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<tr>
<td>Staff Workroom/ Supplies</td>
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<tr>
<td>RA / Shower</td>
<td>combined</td>
<td>65</td>
<td>3</td>
<td>195</td>
</tr>
</tbody>
</table>

---

**Total Combined Program:**  
6565SF

**Total Combined/Support Program:**  
12200SF

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[38] Anikro Moisan Architects | Beacon Center Design Study
MINIMUM: ELEVATIONS + VIEW DIAGRAM
Minimum: The goal is to improve the existing building as required to accommodate both the Youth and Senior programs with minimal cost and impact. The following scope outlines the Minimum Improvements.

**Exterior**
- Construct new Youth entry and expand building as shown. Bridge on grade a new path across the the sloping site to the new covered entry with lighting. Construct new matching covered entry at Senior entry with lighting. See exterior elevations.
- Replace existing vinyl and wood lap siding with new weather barrier and cementitous lap siding and trim. Paint with main color and 2 accent colors.
- Replace or construct (2) new wood entry doors with glass view panels, sidelights, controlled by auto door operators. All other existing doors to remain, paint.
- Existing windows to remain, repair dry rot at sills where required. Paint.
- Install double glazed, fixed pane windows at expansion area, style to match existing.
- Replace flat roof with new built-up roof, add R-38 tapered insulation to drains. Re roof the sloped ceiling with new 3-tab shingles.
- Exterior landscape and site amenities to remain as is.
- No modifications to the parking spaces or van drop-off areas.

**Interior**
- Existing flooring to remain except at newly constructed areas. New sheet vinyl flooring and base to be installed at all new and existing restrooms.
- Commercial kitchen hood to remain. A $25,000 allowance for shelving and equipment replacement. Expand the server area for better flow and expanded work area to accommodate increased meal preparation.
- New interior partitions are 2x4 wood studs at 16" oc w/ 5/8" gyp board each side and acoustic batt insulation, painted.
- Existing doors to remain. New doors to be 3’x7’ solid core wood with ADA lever hardware.
- Existing ceiling and lighting to remain except at remodeled or expanded areas. Paint ceilings.
- Demolish interior stair to the basement and infill with framing and decking to be level with surrounding surfaces.
- Install new accessible passenger lift at building elevation change - approx 3’. Construct wood stairs at each end of upper level.
- Install a new 42” guardrail at upper level to surround sleeping area.
- Casework at new Flex space to be plastic laminate uppers/ lowers/ and countertops.
- See Plumbing for new fixtures and accessories.

The structural scope of work for the minimum option is as follows:

**New Construction**
- Two new awnings on the west side of the building – north and south entrances – will be added. Assumed construction will be steel framing and metal deck with tie rods back to the existing building face.
- To accommodate the grade change at the revised entrance at the north west corner of the building, a retaining wall with slab on grade will be provided. These foundation elements will tie into the existing foundation where applicable.
- The north west entrance will be revised and reframed with wood roof framing on wood framed bearing and shear walls. The elevated wood framed floor will be supported on concrete stem walls on strip footings.
- New, exterior wood framed stairs will replace the existing stairs at the north east entrance.
- New, interior wood framed stairs will be located at both sides of the stage / platform area.
- New, raised wood framed platform steps will be located adjacent to the stage / platform area.
- Structure will be added to support a 3ft lift at the stage / platform area. The extent of additional support is dependent on the lift selected and may consist of wood framing and concrete foundations.

**Existing Building Modifications**
There are several triggers in the International Existing Building Code that would require seismic upgrades. Mandatory seismic updated are typically required with substantial alterations. The possible causes that may be encountered with this project include:

1. Extending the useful physical and/or economic life of a building. If the modifications take a large portion of the existing footprint or the cost of the upgrades reach a certain point, the work may be considered a substantial alteration.
2. A change in occupancy to a more hazardous level or structural alterations which exceed a prescribed amount of the original building footprint. The addition of the sleeping quarters, as well as the other area modifications to the program of the site may be considered a substantial alteration by the building official and will need to be reviewed with the City of Tacoma.
M I M I N U M :  S T R U C T U R A L

STRUCTURAL NARRATIVE CONTINUED

Based on the previous engineering report provided by the City of Tacoma and our limited visual observations, we have the following recommendations:

- Based on the age of construction, the exterior wall sheathing is predicted to be straight shiplap sheathing. The lateral shear strength of the building would be improved by the addition of plywood sheathing to the exterior and some interior walls that extend to the roof. Additional verification and analysis of the existing building is recommended to identify the need for supplemental shear walls.
- Supplemental mechanical connections between support posts in crawlspace and the wood floor framing.
- The roof diaphragm has not been verified. Typical construction during the 1940’s used T&G decking, which does not meet current lateral code requirements. Often roof sheathing is added during reroofing projects. Having no information to the contrary, we would recommend plywood sheathing is added to increase the roof diaphragm capacity and the ability to transfer lateral forces to the shear walls during reroofing operations.
- The south side “bump-out” areas of the building have lots of windows and appear to only be laterally supported on three sides. Additional verification and analysis may be used to determine how best to improve the lateral performance of these areas.

MECHANICAL NARRATIVE

Mechanically, the minimum option is a minimum level of operation and comfort design renovation with the intent of providing services for both a senior center and overnight youth program. Mechanical systems required for this work include labor, materials, equipment, and services necessary to complete installation as indicated in the following narrative. Among the items required are:

Fire Protection System

- The existing fire sprinkler system will be extended and modified as required to provide coverage for the revised building layout.
- The piping mains will be black steel with grooved fittings. The branch fittings to each fire suppression head shall be threaded black steel, with flexible piping for heads located in ceilings.
- Fire sprinkler heads shall all be replaced with new quick response type.

Heating, Ventilating & Air Conditioning System

GENERAL

- It is recommended to replace the entire HVAC system and replace it with a VRF type system that will provide heating, cooling, and mechanical ventilation to all of the spaces. A combination of ductless and ducted units will be utilized and spaces will be zoned to share thermostats for cost efficiency.
- Energy recovery units will be utilized to provide the spaces with ventilation air.
- Shower rooms will be equipped with exhaust fans that operate based on space humidity.

DUCTED VRF FAN COIL UNITS

- Five zones of ducted fan coil units will be utilized to serve a combination of the following zones:
  - Kitchen and adjacent shared office spaces
  - Arts/crafts and the computer/library area
  - Group restrooms and shower rooms
  - Fitness, Multipurpose and self serve commercial space
  - Counseling, office, intake/wet, soils and individual restrooms

- Two zones of wall mounted split VRF systems will be utilized to serve the following zones:
  - Dining/Multipurpose area located adjacent the kitchen. By mounting them on the wall it eliminates the chances of food and debris falling into floor mounted diffusers.
  - Large Dining/Multipurpose area (old gym). By mounting them on the wall it eliminates the chances of food and debris falling into floor mounted diffusers. Overhead large diameter destratification fans will be provided

Plumbing Systems

DOMESTIC WATER SERVICE

- The water service header shall consist of a reduced pressure backflow assembly, pressure reducing valves, gauges, water hammer arrester and bypass valves for the pressure reducing valves. The drain for the backflow assembly shall be piped to a floor sink. The backflow assembly shall eliminate the possibility for any cross contamination of the potable water supply from the outside utility.
- Water piping main shall be copper type L.

DOMESTIC WATER SYSTEM

- New condensing gas fired water with mixing valve will be provided.
- Hot water recirculation loop and recirculation pump will be added to maintain hot water temperatures at each fixture.
- Water piping shall be copper, Type L for sizes 1-1/2” and larger with PEX for sizes less than 1-1/2”. All domestic piping shall be insulated per the Washington State Energy Code.
- All plumbing fixtures will be low flow fixtures
  - Water closets – 1.28 gpf
  - Urinals – 0.125 gpf
  - Showers – 1.75 gpm
  - Lavatory faucets – 0.5 gpm
  - Kitchen faucets – 1.75 gpm

SANITARY WASTE & VENT, AND STORM PIPING

- Waste piping shall be cast-iron with no hub fittings.
- Vent piping shall be solid core PVC.
- Floor drains shall be provided in all group restrooms and shower rooms.
- Automatic trap primers shall be provided to maintain a water seal in all traps.
KITCHEN
• Existing Type 1 hood, exhaust, and make-up air system shall remain.

DISTRIBUTION SYSTEM
• In general ductwork and fan coil units shall be located in the crawl space where possible, in order to maximize ceiling space.
• Low pressure galvanized steel ductwork shall be utilized all duct systems. Ductwork shall be galvanized steel.
• Ductwork shall be insulated in accordance with the Washington State Energy Code.

CONTROL SYSTEM
• DDC System
  • The VRF HVAC system will be provided with DDC controls that are capable of being centrally monitored.
  • Central domestic hot water system shall be controlled via DDC for temperature and the recirculation system.
  • Sample features included in the DDC:
    • Programmable times
    • Building Temperature Control
    • Building Ventilation Control
    • Occupied / Unoccupied Scheduling
    • Time Override into Occupied Mode
    • On-Site Computer for Local Operator Interface
    • On-Site System Communication to Off-Site Operator Stations
    • Optimum Equipment Start Control for Occupied Periods
    • Remote sending for alarms to email
    • Trend Logging of Controlled and Monitored Points
    • Air Handling System Emergency Shutdown
    • Web Based Interface
    • Monitor outside air temperature

ELECTRICAL NARRATIVE

Electically, the minimum option is a code-only driven renovation with the intent of providing services for both a senior center and overnight youth program. Electrical systems required for this work include labor, materials, equipment, and services necessary to complete installation of electrical work as indicated in the following narrative. Among the items required are:

SITE UTILITIES
• Coordinate site telecom utility requirements with Comcast (Xfinity), CenturyLink, Click TV

ELECTRICAL UTILITY SERVICE
• Coordinate site electrical utility requirements with Tacoma Power. Load calculations to be provided to determine whether existing service is sufficient or existing electrical service is required to be upgraded.

ELECTRICAL BUILDING DISTRIBUTION
• Existing 240V, 1-phase 3-wire system service and 600A main switchboard to be maintained unless load calculations deem the service and switchboard to be insufficient.
• Panel A and Panel B will be demolished as part of this project based on current programming layout for this option.
• Panel K and Panel P will remain as part of this project based on current programming layout for this option.
• Add 100A 240V 1-Phase Panel A to serve North Dining Area. Utilize existing breaker.
• Add 150A 240V 1-Phase Panel B to serve South Dining Area. Utilize existing breaker.
• Branch Panelboards shall be minimum 22,000 AIC.
• New Branch Panelboards shall contain Door-in-Door trim covers.
• Surge Protective Devices (SPDs) shall be installed in all Lighting Panelboards and Panelboards supplying sensitive electronic/computer loads.
• Calculations are based on copper conductors and bussing. Aluminum conductors and bussing will be accepted, provided calculations are done by contractor for the aluminum substitution.

MECHANICAL EQUIPMENT ELECTRICAL CONNECTIONS
• Disconnects, starters, and equipment connections as required for complete operation of mechanical equipment to be provided.
• Fire Alarm duct smoke detectors, fan shutdown relays, and connections for all HVAC units supplying 2,000 or greater cfm to be provided.
• Connections for all combination fire-smoke dampers per mechanical to be provided.

ELECTRICAL EQUIPMENT ELECTRICAL CONNECTIONS
• Controlled receptacles to be provided where required by Washington State Energy Code and to be controlled via the same manner as the light fixtures serving the area.
• Refer to architectural and mechanical plan to determine electrical loads and location of building electrical equipment and mechanical equipment that require electrical connection.

EGRESS LIGHTING
• Battery backup to provide egress lighting as required per code minimum levels throughout building in all exit pathways, hallways stairways, public toilets, common spaces, areas that are 1000 or greater square feet, exits, exterior lights at door exits, and etc per Washington Building Code requirements.
• See architect’s plans for building egress pathway.
• Battery backup type emergency unit lighting or emergency lighting with lighting inverter UPS, UL 924 system conforming to NEC code requirement to be provided.

LIGHTING SYSTEM
• Existing lighting fixtures to be reused and relocated as long as Washington State Energy Code is met.
• New LED fixtures to be CRI 80 or higher.
• Interior Building – Existing lighting to remain for the following spaces:
  • Dining/Multipurpose (2433 SF)
  • Arts/Crafts/STO
  • Kitchen
ELECTRICAL NARRATIVE CONTINUED

- Stor (90SF)
- Sto (106SF)
- Dining/Multipurpose (2788SF)

- Interior Building – New LED Lighting to be provided in the following areas:
  - Shared Off (185 SF)
  - Off (Multiple)
  - Fitness
  - Multipurpose
  - Sto (107 SF)
  - Sto (92 SF)
  - Self Serv/Commercial
  - Off/Counseling
  - Entry/Queueing
  - Intake/Wet
  - Soil/Clean
  - RR/SH
  - ADA (MULTIPLE)
  - Staff Work
  - TV

- Exterior lighting – New LED exterior fixtures to be replace existing exterior fixtures. Locate new fixtures at existing and new entrance locations. Provide new exterior lighting as required by code and security.

- Interior and exterior lighting system shall be in compliance with Washington State Energy Code and Architectural design. Lighting density targets are to follow Washington State energy code lighting power allowance requirements.

- Commissioning of all lighting controls including all automatic daylighting and occupancy lighting controls per Washington State energy codes is required.

- Washington State NREC compliance forms per Washington State are required.

LIGHTING CONTROL SYSTEM

- All spaces other than the kitchen will require new controls that meet Washington State energy code as the panels currently serving the building lighting loads are being removed/relocated.
- Building Lighting Control – Comply to Washington State Energy Code requirements.
- Interior and exterior lighting controls in compliance with Washington State Energy Code to be provided.
- Daylighting controls in all daylighting area per Washington State Energy Code to be provided.
- Occupancy/Vacancy sensors in spaces not periodically occupied (i.e. utility rooms, office, public restrooms, storage rooms...etc.) to be provided per Washington State energy code.

DATA COMMUNICATION SYSTEM

- Existing Telephone service located in Boiler Room to be replaced. Coordinate requirements with service providers.
- Provide MDF at Telecom headend in Boiler room.
- Provide ground busbar in MDF closet.
- Provide 2-port data outlets in all offices located per furniture plan.
- Provide data drops in Computer/Library room. Locate per furniture plan.

FIRE ALARM SYSTEM

- Existing Fire Alarm system to remain. New devices to be provided as required by code. Existing devices to be utilized where possible.
# MEDIUM: PROGRAM

## Program Requirements
**Project:** Tacoma Beacon Center  
**Project No.:** #182600

### Room Requirements

<table>
<thead>
<tr>
<th>Room Name</th>
<th>Room Function</th>
<th>Room Net Area</th>
<th>Number of Units</th>
<th>Total Area Provided</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SENIOR PROGRAM</strong></td>
<td></td>
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<tr>
<td>1. RECEPTION</td>
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<tr>
<td>Check-In</td>
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<td>Entry Lobby</td>
<td>Waiting Area</td>
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<td><strong>ACTIVITY SPACE</strong></td>
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<tr>
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<td>Multi-Purpose</td>
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<td>Pantry Storage</td>
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<td>Director’s Office</td>
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<td><strong>YOUTH PROGRAM</strong></td>
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<td><strong>YOUTH PROGRAM</strong></td>
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<tr>
<td><strong>DROP-IN CENTER</strong></td>
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<td>1. RECEPTION/SCREENING</td>
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<td>Screening / Counseling</td>
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<td>Lounge / Living Space</td>
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<td>Classroom / Flex</td>
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<td>Closet Storage</td>
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<td><strong>HYGIENE CENTER</strong></td>
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<tr>
<td>Laundry - Youth</td>
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<td>230</td>
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<td>Restroom</td>
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<td><strong>STAFF/SERVICE PROVIDER SPACE</strong></td>
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<td>Family Meet</td>
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### Program Requirements
**Project:** Tacoma Beacon Center  
**Project No.:** #182600

<table>
<thead>
<tr>
<th>Room Name</th>
<th>Room Function</th>
<th>Room Net Area</th>
<th>Number of Units</th>
<th>Total Area Provided</th>
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<tr>
<td><strong>OVERNIGHT PROGRAM</strong></td>
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<tr>
<td>1. ACTIVITY SPACE</td>
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<tr>
<td>Staff Work Station</td>
<td>Supervision</td>
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<td>2</td>
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<tr>
<td>2. HYGIENE CENTER</td>
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</tr>
<tr>
<td>ADA Shower / Restroom Combo</td>
<td>Restrooms / Shower</td>
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<td>4</td>
<td>240</td>
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<tr>
<td>3. SLEEPING</td>
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<tr>
<td>Sleeping Mezzanine</td>
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<td>Supervision</td>
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<td><strong>YOUTH PROGRAM SF:</strong></td>
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<td><strong>4. Youth Circulation</strong></td>
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### TOTAL COMBINED PROGRAM

<table>
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<tr>
<th>Room Name</th>
<th>Room Function</th>
<th>Room Net Area</th>
<th>Number of Units</th>
<th>Total Area Provided</th>
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<td><strong>COMMON USE / SUPPORT AREAS</strong></td>
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<tr>
<td>Janitor Closet</td>
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<td>FSR / FA Closets</td>
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<td>MEP Closet</td>
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<tr>
<td>Elevator</td>
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<td>Stairs</td>
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<td>Utility (Water Heater, Mech, IT, Elec)</td>
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<td><strong>1150</strong></td>
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<td><strong>2. Common Use Circulation</strong></td>
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<td><strong>TOTAL COMMON USE SF:</strong></td>
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<td><strong>1450</strong></td>
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<tr>
<td><strong>TOTAL COMBINED/SUPPORT PROGRAM</strong></td>
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<td><strong>16074</strong></td>
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</table>
Medium: The goal is to expand and remodel the existing building as required to accommodate both the Youth and Senior programs to be in use at the same time. The following scope outlines the Medium Improvements:

Exterior

- Expand footprint of the existing building along Fawcett Ave which will provide additional space in Commercial Kitchen, larger shared program Library / Computer room, additional Youth classroom and Game / Living rooms. Expansion will include additional SF added for the Youth program area along the rear property line to allow for additional accessible showers and restrooms. Expand the building over the top of the existing Garage for youth flex / lounge space. Infill the building between the two wings facing 13th Street for dedicated Senior programs
- Construct new separate Youth entry. Bridge across sloping site for a new level, accessible path to the covered entry with lighting. Construct new matching covered entry at Senior entry with lighting. See exterior elevations.
- Replace existing vinyl clad and wood lap siding with new weather barrier and cementitious lap siding and trim. Paint with main color and 2 accent colors
- Replace entry doors with new wood entry doors with glass view panels, sidelights, controlled by auto door operators. Replace all other exterior doors with new solid core wood flush doors, and frames, paint.
- Relocate windows will require infilling the wood framed wall and framing
- New doors to be 3'x7' solid core wood, stained and varnished with ADA lever hardware.
- New interior partitions are 2x4 wood studs at 16" oc w/ 5/8" gyp board each side w/ acoustic batt insulation, painted. Finishes in the restrooms will include wainscots at wc, urinals and lavs.
- New ceiling to remain where existing. New gypsum board ceilings will match existing at expanded areas. Paint ceilings. New lighting throughout - see electrical scope.
- Exterior landscape areas to be improved with new planting and small raised garden area near senior entry. Improve outdoor courtyard areas for Youth to be used for smoking and gathering. Enclose for security and privacy with new wood fencing. Include new exterior lighting, around all sides of the building.
- Construct a concrete ramp from Fawcett Ave to the new kitchen door for deliveries. Provide a concrete pad with secure enclosure for trash dumpster and recyclable bins.
- Expand existing parking area to increase 2 spaces - construct low retaining wall along property. Pave with asphalt concrete and stripe.

Interior

- Replace all existing flooring with new LVT, except wood flooring in the open activity area to remain. New sheet vinyl flooring and base to be installed at all new and existing restrooms. Kitchen will have non-slip vinyl flooring.
- Commercial kitchen to be expanded to serve expanded meal prep and service and food storage needs, including a dry stores room, a walk-in cooler and 2-3 freezer. A kitchen consultant will provide additional design criteria. The Class A hood will remain where it currently is.
- New interior partitions are 2x4 wood studs at 16" oc w/ 5/8" gyp board each side w/ acoustic batt insulation, painted. Finishes in the restrooms will include wainscots at wc, urinals and lavs.
- New doors to be 3'x7' solid core wood, stained and varnished with ADA lever hardware.
- Existing hard ceiling to remain where existing. New gypsum board ceilings will match existing at expanded areas. Paint ceilings. New lighting throughout - see electrical scope.
- Relocated windows will require infilling the wood framed wall and framing
- New exterior walls on the south end of the building will be wood framed with weather barrier and cementitous lap siding and trim. Paint with main color and 2 accent colors
- New exterior walls on the south end of the building will be wood framed with weather barrier and cementitous lap siding and trim. Paint with main color and 2 accent colors
- New window clad and wood lap siding with new weather barrier and cementitious lap siding and trim. Paint with main color and 2 accent colors
- New window clad and wood lap siding with new weather barrier and cementitous lap siding and trim. Paint with main color and 2 accent colors
- New window clad and wood lap siding with new weather barrier and cementitous lap siding and trim. Paint with main color and 2 accent colors
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- New window clad and wood lap siding with new weather barrier and cementitous lap siding and trim. Paint with main color and 2 accent colors

Existing Building Modifications

- Relocated windows will require infilling the wood framed wall and framing out new openings in the wall. This may also reduce the lateral capacity of the existing building to a point which would require strengthening the shear wall. The new windows are shown in the architectural drawings, we don’t anticipate reinforcing will be needed due solely to the window relocation.
- The new level 2 sleeping loft / mezzanine area will put increased demand on the lateral system of the auditorium. We anticipate the need for additional shear walls below the mezzanine along the existing auditorium to provide a lateral load path. Depending on the locations of the shear walls, special strapping and collector framing to tie the mezzanine to the existing walls may be required.

In addition to the items listed for the minimum option, structural scope of work for the medium option is as follows:

New Construction

- Addition of a new elevator will require reframing around a new opening in the existing wood framed floor. Depending on the elevator chosen, a concrete pit with sump will need to be provided below grade with wood framed walls enclosing the shaft above grade.
- Revision of stage / platform layout will require cutting back existing framing, providing new supports below the relocated edge, and reframing the infilled portion of the lower crawlspace floor.
- Existing roof framing at the garage/future media lounge will be demolished and replaced with a wood framed second floor, new wood framed walls, and a new wood framed roof.
- New wood columns will be installed to support the Level 2 loft / mezzanine sleeping area. These will require localized demolition of the existing wood flooring and potentially re-framing around new openings in the existing wood framed floor. There will also be new concrete spread footings installed below these columns.
- The new level 2 sleeping area will be a wood framed floor with wood sheathing.
- New wood framed stairs to the lofted sleeping area will be located in two areas.
- New exterior walls on the south east of the building will be wood framed with wood sheathing on concrete stem walls with strip footings that will tie into the existing foundation elements. The wood framed floor will also be supported on the new stem walls.
Mechanically, the medium option advances on the comfort level and construction level with the intent of providing services for both a senior center and overnight youth program. Mechanical systems required for this work include labor, materials, equipment, and services necessary to complete installation as indicated in the following narrative. Among the items required are:

**Plumbing Systems**

**DOMESTIC WATER SERVICE**
- The water service header shall consist of a reduced pressure backflow assembly, pressure reducing valves, gauges, water hammer arrestor and bypass valves for the pressure reducing valves. The drain for the backflow assembly shall be piped to a floor sink. The backflow assembly shall eliminate the possibility for any cross contamination of the potable water supply from the outside utility.
- Water piping main shall be copper type L.

**DOMESTIC WATER SYSTEM**
- New condensing gas fired water with mixing valve will be provided.
- Hot water recirculation loop and recirculation pump will be added to maintain hot water temperatures at each fixture.
- Water piping shall be copper, Type L for sizes 1-1/2" and larger with PEX for sizes less than 1-1/2". All domestic piping shall be insulated per the Washington State Energy Code.
- Freezeproof wall hydrants will be replaced/added around the building with a minimum of one on each side and a minimum placement of every 100'.
- All plumbing fixtures will be low flow fixtures
  - Water closets – 1.28 gpf
  - Urinals – 0.125 gpf
  - Showers – 1.75 gpm
  - Lavatory faucets – 0.5 gpm
  - Kitchen faucets – 1.75 gpm

**SANITARY WASTE & VENT, AND STORM PIPING**
- Waste piping shall be cast-iron with no hub fittings.
- Vent piping shall be solid core PVC.
- Floor drains shall be provided in all group restrooms and shower rooms.
- Automatic trap primers shall be provided to maintain a water seal in all traps.

**Fire Protection System**
- The existing fire sprinkler system main piping will remain. New piping will be provided to provide coverage for the entire building.
- The piping mains will be black steel with grooved fittings. The branch fittings to each fire suppression head shall be threaded black steel, with flexible piping for heads located in ceilings.
- Fire sprinkler heads shall be quick response type.

**Heating, Ventilating & Air Conditioning System**

**GENERAL**
- It is recommended to replace the entire HVAC system and replace it with a VRF type system that will provide heating, cooling, and mechanical ventilation to all of the spaces. A combination of ductless and ducted units will be utilized. Some spaces will be zoned to share thermostats for cost efficiency.
- Energy recovery units will be utilized to provide the spaces with ventilation air.
- Shower rooms will be equipped with exhaust fans that operate based on space humidity.

**DUCTED VRF FAN COIL UNITS**
- Seven zones of ducted fan coil units will be utilized to serve a combination of the following zones
  - Kitchen and Pantry
  - Laundry and cleaning area
  - Group restrooms and shower rooms
  - Single occupancy restrooms and adjacent office/exam room
  - Intake and entry offices
  - Locker rooms, storage and entry
  - 2 offices located near the main entry

- Eight zones of wall mounted split VRF systems will be utilized to serve the following zones:
  - Dining/Multipurpose area located adjacent the kitchen. By mounting them on the wall it eliminates the chances of food and debris falling into floor mounted diffusers.
  - Large Dining/Multipurpose area (old gym). By mounting them on the wall it eliminates the chances of food and debris falling into floor mounted diffusers. Overhead large diameter destratification fans will be provided
  - Medical/Lounge
  - Library
  - Crafts
  - Game
  - Fitness
  - Classroom/Flex

**KITCHEN**
- Existing Type 1 hood, exhaust, and make-up air system shall remain.

**DISTRIBUTION SYSTEM**
- In general ductwork and fan coil units shall be located in the crawl space where possible, in order to maximize ceiling space.
- Low pressure galvanized steel ductwork shall be utilized all duct systems. Ductwork shall be galvanized steel.
- Ductwork shall be insulated in accordance with the Washington State Energy Code.
MECHANICAL NARRATIVE CONTINUED

CONTROL SYSTEM

• DDC System
  - The VRF HVAC system will be provided with DDC controls that are capable of being centrally monitored.
  - Central domestic hot water system shall be controlled via DDC for temperature and the recirculation system.
  - Building Power, gas, and water meters will be provided.
  - Sample features included in the DDC:
    • Programmable times
    • Building Temperature Control
    • Building Ventilation Control
    • Occupied / Unoccupied Scheduling
    • Timed Override into Occupied Mode
    • On-Site Computer for Local Operator Interface
    • On-Site System Communication to Off-Site Operator Stations
    • Optimum Equipment Start Control for Occupied Periods
    • Remote sending for alarms to email
    • Trend Logging of Controlled and Monitored Points
    • Air Handling System Emergency Shutdown
    • Web Based interface
    • Monitor outside air temperature
    • Building level KW, BTU, and water usage monitoring

ELECTRICAL NARRATIVE

Electrical systems required for this work include labor, materials, equipment, and services. Electrically, the medium option is a preferable higher cost renovation with the intent of providing services for both a Senior Center and Overnight Youth program. Electrical systems required for this work include labor, materials, equipment, and services necessary to complete installation of electrical work as indicated in the following narrative:

SITE UTILITIES

• Coordinate site telecom utility requirements with Comcast (Xfinity), CenturyLink, Click TV

ELECTRICAL UTILITY SERVICE

• Coordinate site electrical utility requirements with Tacoma Power. Load calculations to be provided to prove whether existing service is sufficient or existing electrical service is required to be upgraded.

ELECTRICAL BUILDING DISTRIBUTION

• Existing 240V, 1-phase 3-wire system service and 600A main switchboard to be maintained unless load calculations deem the service and switchboard to be insufficient.
• Panel A, Panel B, and Panel C will be demolished as part of this project based on current programming layout for this option.
• Add 150A 240V 1-Phase Panel A to serve North Dining Area and Mezzanine. This will require a new breaker in Main Switchboard.
• Add 150A 240V 1-Phase Panel B to serve South Dining Area. Utilize existing breaker.
• Add 200A 240V 1-Phase Panel K to serve new kitchen. Utilize existing breaker.
• Add 200A 240V 1-Phase Panel P to serve Boiler room and other mechanical loads. This will require a new breaker in Main Switchboard.
• Basis of Design for Distribution Equipment and Panelboards: Cutler Hammer, or approved equal.
• Branch Panelboards shall be minimum 22,000 AIC.
• New Branch Panelboards shall contain Door-in-Door trim covers.
• Surge Protective Devices (SPDs) shall be installed in all Lighting Panelboards and Panelboards supplying sensitive electronic/computer loads.

• Calculations are based on copper conductors and bussing. Aluminum conductors and bussing will be accepted, provided calculations are done by contractor for the aluminum substitution.

MECHANICAL EQUIPMENT ELECTRICAL CONNECTIONS

• Disconnects, starters, and equipment connections as required for complete operation of mechanical equipment to be provided.
• Fire Alarm duct smoke detectors, fan shutdown relays, and connections for all HVAC units supplying 2,000 or greater cfm to be provided.
• Connections for all combination fire-smoke dampers per mechanical to be provided.

ELECTRICAL EQUIPMENT ELECTRICAL CONNECTIONS

• Controlled receptacles to be provided where required by Washington State Energy Code and to be controlled via the same manner as the light fixtures serving the area.
• Refer to architectural and mechanical plan to determine electrical loads and location of building electrical equipment and mechanical equipment that require electrical connection.
• Provide connections to all kitchen equipment as necessary. Coordinate equipment requirements with kitchen consultant. Verify NEMA ratings of all receptacles to serve kitchen equipment. All standard receptacles in kitchen to be GFCI type.

EGRESS LIGHTING

• Battery backup to provide egress lighting as required per code minimum levels throughout building in all exit pathways, hallways stairways, public toilets, commons spaces, areas that is 1000 or greater square feet, exits, exterior lights at door exits, and etc per Washington Building Codes requirements.
• See architect’s plans for building egress pathway.
• Battery backup type emergency unit lighting or emergency lighting with lighting inverter UPS, UL 924 system conforming to NEC code requirement to be provided.

LIGHTING SYSTEM

• Existing light fixtures to be replaced with LED fixtures throughout building and located per new programming layout.
• New LED light fixtures to be provided in Mezzanine.
ELECTRICAL DESIGN NARRATIVE CONTINUED

- New LED fixtures to be CRI 80 or higher.
- Exterior lighting – New LED exterior fixtures to be replace existing exterior fixtures. Locate new fixtures at existing and new entrance locations. Provide new exterior lighting as required by code and security.
- Interior and exterior lighting system shall be in compliance with Washington State Energy Code and Architectural design. Lighting density design targets are to follow Washington State energy code lighting power allowance requirements.
- Commissioning of all lighting controls including all automatic daylighting and occupancy lighting controls per Washington State energy code is required.
- Washington State NREC compliance forms per Washington State are required.

LIGHTING CONTROL SYSTEM

- Low-voltage lighting control system to be provided.
- Provide central networked lighting control system with time clock and sweep-off functionality.
- Building Lighting Control – Comply to Washington State Energy Code requirements.
- Interior and exterior lighting controls in compliance with Washington State Energy code to be provided.
- Automatic Daylighting controls in all daylighting area per Washington State Energy Code to be provided.
- Occupancy/Vacancy sensors in spaces not periodically occupied (i.e. utility rooms, office, public restrooms, storage rooms...etc.) to be provided per Washington State energy code.

DATA COMMUNICATION SYSTEM

- Existing Telephone service located in Boiler Room to be replaced. Coordinate requirements with service providers.
- Provide main data rack in location coordinated with architect on main floor.
- Provide ground busbar in MDF closet.
- Provide 2-port data outlets in all offices located per furniture plan.
- Provide data drops in Computer/Library room. Locate per furniture plan.

FIRE ALARM SYSTEM

- Existing Fire Alarm system to remain. New devices to be provided as required by code. Existing devices to be utilized where possible.

ELEVATOR

- The elevator disconnects and controllers shall be located within the elevator machine room. Elevator shall be installed in accordance with all applicable codes. Light fixtures and GFCI receptacle to be installed in elevator machine room and elevator pit.
<table>
<thead>
<tr>
<th>Room Name</th>
<th>Room Function</th>
<th>Room Net Area</th>
<th>Number of Units</th>
<th>Total Area Provided</th>
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<tr>
<td>SENIOR PROGRAM</td>
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<tr>
<td>1. RECEPTION</td>
<td>Check-In Area for receptionist</td>
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<td>Entry Lobby</td>
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<td>2. COMMON SPACE</td>
<td>Dining/Common area</td>
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<td>TV Room</td>
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<td>Computer/Library</td>
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<td>Closet Pantry</td>
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<td>Fitness Room</td>
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<td>Craft Activity Room/Storage</td>
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<td>3. RESTROOMS</td>
<td>Restrooms</td>
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<tr>
<td>4. STAFF/SERVICE PROVIDER SPACE</td>
<td>Staff Office</td>
<td>private office</td>
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<td></td>
<td>Conference Room</td>
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<td>Counseling Exam Room</td>
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<td>Executive Director Office</td>
<td>private office</td>
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<td>Staff Restroom</td>
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<td>5. CIRCULATION</td>
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<td>6. DROPPED-IN CENTER</td>
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<td>Drop In Reception</td>
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<td>Lobby/Waiting</td>
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<td>Screening/Check In</td>
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<td>Lockers/Personal Storage Area</td>
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<td></td>
<td>Family Visitation</td>
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<td>7. COMMON SPACE</td>
<td>Day Room/Common area</td>
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<td>Living/Study Room</td>
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<td>Dining Room</td>
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<td>1000</td>
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<td>Staff Work Station</td>
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<td>Restrooms</td>
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<td>ADA Showers/Restrooms/Toilet</td>
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<td>Laundry</td>
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<td>9. RECREATION</td>
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<td>Library/Computer</td>
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<tr>
<td></td>
<td>Salon</td>
<td>150</td>
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<td>150</td>
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<tr>
<td></td>
<td>Fitness/Gym</td>
<td>400</td>
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<td>400</td>
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<tr>
<td>10. JOB TRAINING</td>
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</table>

**OVERNIGHT PROGRAM**

10. Overnight Circulation

**OVERNIGHT TOTAL NSF**: 4380

**SHARED PROGRAM SPACE**

11. STAFF/SVC PROVIDER SPACE

**TOTAL SHARED PROGRAM NSF**: 5880

**TOTAL OPTIMAL PROGRAM NSF**: 24185
OPTIMAL: BUBBLE DIAGRAM

ANKROM MOISAN ARCHITECTS | BEACON CENTER
DESIGN STUDY
Optimal Program: This option assumes that the existing Beacon Center building would be vacated and completely demolished with a new building constructed on the site with an optimal program. Based upon the program, this new center scope would entail the following:

• With the existing sloping steeply down toward the east (Court D street), the site could be excavated to construct a concrete below grade parking level with on-grade access from Court D to accommodate approximately 30 cars. Stairs and elevator would extend to this parking level. A secure roll-up entry door would be installed for controlled access.
• Rooms and would be designed at the lower level for mechanical, electrical, fire control, elevator machine room and trash/recycle rooms and staff bicycles.
• The site improvements would include secure fenced areas for outdoor activities, separate designated smoking areas for seniors and youth, bicycle parking, raised landscape garden beds. Street trees with lighting along new sidewalks, accessible curb cuts and signage would be installed.
• A pull out area would be constructed on Fawcett at the main entry for vans, cars and small buses to use to drop-off and pick-up visitors.
• The building would have one central on grade covered accessible entry off of Fawcett Ave. that would lead into a main building lobby. A central information reception station would be part of the lobby to provide guidance and security to visitors.
• The Beacon Center would have separate Youth and Senior program access but the center would also include shared common, public areas as well. The common building core would include an elevator, restrooms, and an EVS room.
• The building would be be constructed with two stories above the parking level. Exposed wood timbers structure would support the floors clad with combination of metal and wood exterior panels. Large energy efficient windows would be used to allow for maximum natural light and views to the City.
• The building would have a modern contemporary architecture, but have a warm welcoming and appeal cross generationally. The design should blend into the context of neighborhood and have a secure feeling.
• Tall floor to floor heights, 13’-14’ would be ideal for the spacious feeling for large meeting rooms and open activity rooms.
• Sound attenuation measures would be incorporated to help with privacy and acoustics in open activity areas.
• Materials and finishes would be attractive, but durable for low maintenance and locally sourced where possible.
• The center will have a flat roof with a mechanical screen to surround any mechanical equipment on the roof for clean sight lines from neighboring buildings.
Optimal Program: This narrative addresses the option of demolishing the existing structure and erecting a completely new 24,000-square foot building in its place. Structural systems will be provided to meet the criteria outlined in this report and be coordinated with the architecture and other building systems.

**Basic System**

The primary structure chosen for this project is a combination of conventional steel framing and cross-laminated timber (CLT). The 2-story steel and CLT structure will sit upon a concrete post-tensioned podium over underground parking. CLT is a relatively new construction material and is becoming more common in the northwest. It is used primarily for its sustainable benefit of sequestering carbon in thick wood planks. Additional structural advantages of CLT construction include the speed of construction, long spans of the planks with relatively thin structure depths and its acceptance as heavy timber construction for fire ratings.

**Structural Components**

- **Foundations:** The building is supported on concrete spread footings under columns, strip footings under walls, and a mat slab footing under the concrete core.
- **Floor slabs:** The lower level parking is supported on a 4" concrete slab on grade.
- **Walls:** The podium slab will be supported on assumed 10" concrete basement walls on three sides. The concrete core is assumed to be 10" concrete retaining walls that extend past the roof level for elevator overrun and a mechanical penthouse.
- **Columns:** Concrete columns will support the podium level floor slab. Above the podium, steel columns will support the second floor and the roof.
- **Special Lateral Elements:** Steel braced frames will be incorporated at 4 locations to work with the concrete core to reduce torsion and resist wind and earthquake forces.
- **Upper Floor and Roof Framing:** CLT is recommended for upper floor and roof framing. Assuming a well-proportioned structure, the roof panels will be 3-ply and the floor panels will be 5-ply. The panels will be supported on glulam beams that run to the steel columns. Both the floor and roof will have plywood sheathing to transfer diaphragm forces. The floor will have 1.5" thick concrete topping slab.
- **Entry Port Cochere:** There will be an entrance canopy on steel columns with glulam beams and wood decking with plywood sheathing.

**Constraints**

- The selection of the individual members of the structural system shall consider the overall structure depth of each floor level and the effect on ceiling cavity and other systems.
- The lateral force-resisting system (currently assumed to be concrete core with exterior braced frames) is located to have the least interference with the openness of the floor plan. This is important to allow for future flexibility as programs change.
- Geotechnical and foundations: We have no information currently on the soil conditions of the site. There is currently an assumed bearing capacity of 1500psf. We recommend conducting a site specific geotechnical report to verify capacities.
- Excavation of the site: The site is surrounded on all sides by adjacent buildings and/or roadways. There will need to be temporary shoring to ensure the adjacent structures and roads are not affected during construction.
- Floor Vibrations: Where a multi-story structure is considered, vibrations and acoustics need to be a factor in structural system selection. The perceptibility of vibrations of structured floor systems is often a concern for selection of a structural system. Vibrations are not an indication of a strength problem within a structure but can be uncomfortable to people using the facility. The design of this facility will need to consider perceptibility of vibrations by occupants as well as noise transmission through the structure.
Mechanically, the optimal option follows similar means to that of the medium option for the completely new building. Mechanical systems required for this work include labor, materials, equipment, and services necessary to complete installation as indicated in the following narrative. Among the items required are:

**Plumbing Systems**

**DOMESTIC WATER SERVICE**
- The water service header shall consist of a reduced pressure backflow assembly, pressure reducing valves, gauges, water hammer arrestor and bypass valves for the pressure reducing valves. The drain for the backflow assembly shall be piped to a floor sink. The backflow assembly shall eliminate the possibility for any cross contamination of the potable water supply from the outside utility.
- Water piping main shall be copper type L.

**DOMESTIC WATER SYSTEM**
- Condensing gas fired water with mixing valve will be provided in the mechanical room.
- Hot water recirculation loop and recirculation pump will be added to maintain hot water temperatures at each fixture.
- Water piping shall be copper, Type L for sizes 1-1/2" and larger with PEX for sizes less than 1-1/2". All domestic piping shall be insulated per the Washington State Energy Code.
- Freezeproof wall hydrants will be replaced/added around the building with a minimum of one on each side and a minimum placement of every 100'.
- All plumbing fixtures will be low flow fixtures
  - Water closets – 1.28 gpf
  - Urinals – 0.125 gpf
  - Showers – 1.75 gpm
  - Lavatory faucets – 0.5 gpm
  - Kitchen faucets – 1.75 gpm

**SANITARY WASTE & VENT, AND STORM PIPING**
- Waste piping shall be cast-iron with no hub fittings.
- Vent piping shall be solid core PVC.
- Floor drains shall be provided in all group restrooms, shower rooms, and kitchen.
- Electronic automatic trap primers shall be provided to maintain a water seal in all traps.
- The parking garage area will be equipped with floor drains piped to an oil/water separator.
- The kitchen will receive a 1500 gallon grease interceptor located exterior to the building.

**Fire Protection System**
- A complete wet pipe fire sprinkler system will be provided to provide coverage for the entire building.
- 6" fire sprinkler main will be provided. The fire sprinkler header will include a double detector check valve assembly, zone valves, flow switches, and fire department connection.
- The piping mains will be black steel with grooved fittings. The branch fittings to each fire suppression head shall be threaded black steel, with flexible piping for heads located in ceilings.
- Fire sprinkler heads shall be quick response type

**Heating, Ventilating & Air Conditioning System**

**GENERAL**
- HVAC system will be a VRF system that will provide heating, cooling, and mechanical ventilation to all of the spaces. The VRF system is extremely energy efficient allowing for the transfer of heat between different zones without the use of extra energy. Ducted style units located in the ceiling space will be utilized.
- Energy recovery units will be utilized to provide the spaces with ventilation air as well as recovering the heat from the exhaust air.
- Shower rooms will be equipped with exhaust fans that operate based on space humidity.
- Spaces with similar uses and exposures will be zoned to share thermostats in compliance with industry standards.
- Large open activity rooms will be equipped with overhead large diameter destratification fans.
- Laundry rooms will be equipped with exhaust fans operating on CT sensors to operate during space usage. Dryers will be ducted directly to the building exterior.

**KITCHEN**
- The kitchen will be equipped with a type 1 hood system complete with fire suppression system and automatic heat detection. A dedicated makeup air system will be provided to maintain space pressure during cooking operations.

**ELEVATOR**
- The elevator machine room shall be equipped with a ductless split system heatpump in order to provide heating and cooling temperature control for the space.

**PARKING GARAGE**
- The parking garage will be equipped with an exhaust ventilation system. The ventilation system will vary the air quantities based on CO2, CO, and NOx sensors located throughout the parking structure.

**DISTRIBUTION SYSTEM**
- In general ductwork and fan coil units shall be located in the above ceiling spaces.
- Low pressure galvanized steel ductwork shall be utilized all duct systems. Ductwork shall be galvanized steel.
- Ductwork shall be insulated in accordance with the Washington State Energy Code.

**CONTROL SYSTEM**
- Ductwork shall be insulated in accordance with the Washington State Energy Code.
MECHANICAL NARRATIVE CONTINUED

CONTROL SYSTEM

DDC System

- The VRF HVAC system will be provided with DDC controls that are capable of being centrally monitored.
- Central domestic hot water system shall be controlled via DDC for temperature and the recirculation system.
- Group spaces and conference rooms will be equipped with CO2 sensors to utilize demand controlled ventilation. The reduction of outside air when not needed will add additional energy savings for the building.
- Building Power, gas, and water meters will be provided
- Sample features included in the DDC:
  - Programmable times
  - Building Temperature Control
  - Building Ventilation Control
  - Occupied / Unoccupied Scheduling
  - Timed Override into Occupied Mode
  - On-Site Computer for Local Operator Interface
  - On-Site System Communication to Off-Site Operator Stations
  - Optimum Equipment Start Control for Occupied Periods
  - Remote sending for alarms to email
  - Trend Logging of Controlled and Monitored Points
  - Air Handling System Emergency Shutdown
  - Web Based Interface
  - Monitor outside air temperature
  - Building level KW, BTU, and water usage monitoring

ELECTRICAL NARRATIVE

Electrically, the optimal option is a new construction with the intent of providing services for both a Senior Center and Overnight Youth program. Electrical systems required for this work include labor, materials, equipment, and services necessary to complete installation of electrical work as indicated in the following narrative:

SITE UTILITIES

- Coordinate site telecom utility requirements with Comcast (Xfinity), CenturyLink, Click TV

ELECTRICAL UTILITY SERVICE

- Coordinate site electrical utility requirements with Tacoma Power.
- Provide connections to all kitchen equipment as necessary. Coordinate equipment requirements with kitchen consultant. Verify NEMA ratings of all receptacles to serve kitchen equipment. All standard receptacles in kitchen to be GFCI type.

ELECTRICAL BUILDING DISTRIBUTION

- A new 240V, 1-phase 3-wire main switchboard to be provided based on load calculations of requirements of programming in new building.
- New panels to be provided for new construction. Number and rating of panels will be determined by programming load density and load calculations.
- Basis of Design for Distribution Equipment and Panelboards: Cutler Hammer, or approved equal.
- Branch Panelboards shall be minimum 22,000 AIC.
- New Branch Panelboards shall contain Door-in-Door trim covers.
- Surge Protective Devices (SPDs) shall be installed in all Lighting Panelboards and Panelboards supplying sensitive electronic/computer loads.
- Calculations are based on copper conductors and bussing. Aluminum conductors and bussing will be accepted, provided calculations are done by contractor for the aluminum substitution.

MECHANICAL EQUIPMENT ELECTRICAL CONNECTIONS

- Disconnects, starters, and equipment connections as required for complete operation of mechanical equipment to be provided. Manufacturer to be same as panelboards.
- Fire Alarm duct smoke detectors, fan shutdown relays, and connections for all HVAC units supplying 2,000 or greater cfm to be provided.
- Connections for all combination fire-smoke dampers per mechanical to be provided.

ELECTRICAL EQUIPMENT ELECTRICAL CONNECTIONS

- Controlled receptacles to be provided where required by Washington State Energy Code and to be controlled via the same manner as the light fixtures serving the area.
- Refer to architectural and mechanical plan to determine electrical loads and location of building electrical equipment and mechanical equipment that require electrical connection.
- Provide connections to all kitchen equipment as necessary. Coordinate equipment requirements with kitchen consultant. Verify NEMA ratings of all receptacles to serve kitchen equipment. All standard receptacles in kitchen to be GFCI type.

EGRESS LIGHTING

- Battery backup to provide egress lighting as required per code minimum levels throughout building in all exit pathways, Hallways, Stairways, Public Toilets, Commons Spaces, areas that are 1000 or greater square feet, exits, exterior lights at door exits per Washington Building Codes requirements.
- See architect’s plans for building egress pathway.
- Battery Backup Emergency lighting will be provided by a UL924 inverter rated for 90 minutes per code.

LIGHTING SYSTEM

- New LED light fixtures to be provided throughout.
- New LED fixtures to be CRI 80 or higher.
- Exterior lighting – New LED exterior fixtures to be provided. Locate new fixtures at existing and new entrance locations. Provide new exterior lighting as required by code and security.
- Interior and exterior lighting system shall be in compliance with Washington State Energy Code and Architectural design. Lighting density design targets are to follow Washington State energy code lighting power allowance requirements.
• Commissioning of all lighting controls including all automatic daylighting and occupancy lighting controls per Washington State energy codes is required.
• Washington State NREC compliance forms per Washington State are required.
• Washington State NREC compliance forms per Washington State are required.

LIGHTING CONTROL SYSTEM

• Low-voltage lighting control system to be provided.
• Provide central networked lighting control system with time clock and sweep-off functionality.
• Building Lighting Control - Comply to Washington State Energy Code requirements.
• Interior and exterior lighting controls in compliance with Washington State Energy code to be provided.
• Automatic Daylighting controls in all daylighting area per Washington State Energy Code to be provided.
• Occupancy/Vacancy sensors in spaces not periodically occupied (i.e. utility rooms, office, public restrooms, storage rooms) to be provided per Washington State energy code.

DATA COMMUNICATION SYSTEM

• Existing Telephone service located in Boiler Room to be replaced. Coordinate requirements with service providers.
• Provide main data rack in location coordinated with architect on main floor.
• Provide ground busbar in MDF closet.
• Provide 2-port data outlets in all offices located per furniture plan.
• Provide data drops in Computer/Library room. Locate per furniture plan.

FIRE ALARM SYSTEM

• New Fire Alarm system to be provided as required by code. Smoke detectors and carbon monoxide detection systems to be provided in sleeping areas.

ELEVATOR

• The elevator disconnects and controllers shall be located within the elevator machine room. Elevator shall be installed in accordance with all applicable codes. Light fixtures and GFCI receptacle to be installed in elevator machine room and elevator pit.
COST ESTIMATES

Construction Cost Estimates Narrative, Comparison and Option Summaries
CONSTRUCTION COST REPORT NARRATIVE

The project comprises cost planning for the Tacoma Youth Center – Concept Study located at 415 South 13th Street Tacoma, WA. The intended design package includes the development of three options at Concept level for an approximately 12,000 SF renovation. The building is currently a senior center known as The Beacon Center, owned by the City of Tacoma. The cost study scope of work includes costing the Concept level documents for three design options. The three design options are as follows:

OPTION 1: MINIMUM
- Minimal renovation to combine Senior Center with Youth/Young Adult drop-in and Young Adult overnight.

OPTION 2: MEDIUM
- Expansion to combine Senior Center with Youth/Young Adult drop-in and Young Adult overnight.

OPTION 3: MEDIUM
- New Construction on existing lot. High level yield study of the site development potential to construct a new building to accommodate the ideal program for these services.

PROJECT DESIGN
The cost report is based on Conceptual Design documents and engineers’ narratives dated October 26, 2018. Also based on discussion with design team, review, and feedback

PROCUREMENT
It is anticipated that the project delivery method be design, bid build, with a minimum of 4 qualified general contractor bidders. These costs are based upon the assumption that the building will be unoccupied during construction.

SITE CONDITIONS AND CONSTRAINTS
The project site is located at 415 S 13th Street in Tacoma Washington. The structure is currently occupied.

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ANKROM MOISAN ARCHITECTS | BEACON CENTER DESIGN STUDY
## Minimum Option: Summary

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### MEDIUM + OPTIMAL OPTION: SUMMARY

#### Medium Summary

<table>
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<tr>
<th>Category</th>
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<td>A10 Foundations</td>
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<td>22,000</td>
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<tr>
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<tr>
<td>A Substructure</td>
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<td>B10 Superstructure</td>
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<td>C30 Interior Finishes</td>
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<tr>
<td>D10 Conveying Systems</td>
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#### Optimal Summary

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<tr>
<td>T Special Construction &amp; Demolition</td>
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