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01 Executive Summary
Project Description

San Mateo County proposes to replace the existing 117-bed Cordilleras Mental Health Center with new facilities that will transform the campus, and enable the San Mateo County Health System, Behavioral Health and Recovery Services (BHRS) to provide state-of-the-art care for the County’s most vulnerable mentally ill residents. The new facility will be a center for client wellness, rehabilitation and recovery in a serene natural setting, that will be designed to encourage the engagement of the larger community in the process of recovery.

Existing Conditions

The Cordilleras Mental Health Center is located on a twenty-acre site at 200 Edmonds Road near Redwood City, on unincorporated County land. The site is wooded and contains a creek that is flanked by steep hills on both sides. The existing building was constructed in 1952, originally serving as a tuberculosis hospital. It was adapted in 1978 for its current use for treatment of people with mental illness. It contains a licensed locked 68-bed Mental Health Rehabilitation Center (MHRC) and a licensed 49-bed Adult Residential Facility serving San Mateo County residents, 18 and older, with long histories of mental illness. The residents of the MHRC are conserved, dependent adults, who meet legal criteria for grave disability, and the majority have been admitted to the program involuntarily. The building itself is maintained at significant annual cost, and its configuration is poorly suited for providing current treatment practices for behavioral health care. A building condition assessment performed in 2014 determined that the building required significant systems upgrades and repairs.

A portion of the site contains a fenced yard used for a variety of outdoor activities in support of the therapeutic program. The site also contains a fire station and the Canyon Oaks Youth Center. There is limited on grade parking, approximately 65 spaces, inadequate to handle peak loads.

New Program Requirements

The County intends to replace the existing facility with multiple new residential facilities that create a smaller scale, homelike setting that will be more conducive to patient treatment and recovery. In multiple, smaller residences treatment can be tailored to address the needs of individual clients in a more natural environment. Each residential unit will be separately licensed and operated independently by a provider with expertise in the population served. The program will consist of the following elements:

- Five MHRC buildings, each housing 16 residents for a total licensed bed capacity of 80. The 16-bed limit per separately licensed building, allows Medicaid reimbursement of 50% of treatment costs, offsetting the increased cost for additional staff and more intensive programming.
- Supported Housing Unit for 57 residents in a single multi-story building that will be an unlicensed facility, but which may contain one or more floors of residential units constructed to MHRC standards.

Campus Center containing a 3,000-sf multipurpose room, art room, chapel, conference rooms, administrative offices, and other support spaces.

A variety of outdoor areas to include multiple secure courtyards at each MHRC, communal gathering spaces, sheltered outdoor seating, community gardens, half-court basketball and other functions.

Program details are provided in this report.

Proposed Concept Plan

The plan for the new Cordilleras campus seeks to preserve the beauty and serenity of the existing natural environment and to protect the existing creek, while providing a safe, attractive setting for patient care and community engagement.

A continuous loop road, wraps around an expansive central green space, and bridges the creek at the west end of the site. Three separate and detached MHRC buildings nestle into the hillside on the south side of the central green, and two MHRCs do the same at the north side. Drop-off is located independently for each MHRC from the loop road. The four-story Supported Housing Unit, containing many of the components of the Campus Center on the first floor, is located at the east end of the site, fronting onto the main road, and connected via a covered walkway to a detached covered walkway to a detached multipurpose room. The multipurpose room, which will often be used for community events,
Project Description (cont’d)

will be expressed architecturally as a welcoming pavilion on the site to convey the County’s desire for a high level of community engagement.

Each MHRCs has three residential wings that splay out at an angle from the rest of the building, pointing towards the central green. Two of the residential wings contain five beds each, and the third wing contains six. Between the splayed wings are fenced courtyards of varying sizes for client use. The rectangular block of the building, located against the hillside, contains communal functions and staff support areas. An open staff station, positioned at the center of a large open activity space, provides clear lines of sight down the living room of each residential wing. The dining room, entered from the open activity space, has views and access to a private courtyard. Entry for clients and visitors is from the curbside drop-off via a covered walkway to a private entry patio for each MHRC. Staff and service providers enter via a separate door to a staff/service corridor, to avoid disruption to the residents.

The Supported Housing unit is a modified “L” plan. Entry for visitors and clients is from a drop-off area on the loop road to a central waiting and reception area on the first floor. Campus Center rooms, such as art room, retail space, chapel and wellness room, adjoin the lobby. From the lobby, one has an uninterrupted view of the central green space and double doors lead out to it. From these doors, the visitor can walk under cover to the large community room in the separate one-story pavilion to the south. Service entry and loading dock, in a walled enclosure, occur at the west side of the building, with kitchen and other building support spaces adjacent. Administrative offices are situated at the south wing of the “L” on the first floor. Each of the three upper floors of the building contain two residential wings connected by shared spaces including a central dining/activity room that has a private balcony and a broad view of the central green space.

The new facilities are arrayed on the site to allow the existing building to remain in operation throughout construction and to allow construction of all new buildings in a single phase, followed by demolition of the existing building and final site improvements. An early bid package for site clearing and grading may be issued to accelerate the construction process. Parking is planned for approximately 130 cars, doubling the current available parking on site, and matching the parking count provided in the County’s original “Bridging Documents.”

The project design is aligned with the County’s mandatory requirements and key priorities as discussed with the County’s project representatives in the Concept Design workshops.
Client Vision, Mandatory Requirements & Priorities

The County of San Mateo’s Cordilleras project team crafted a Vision statement to guide the design of the project and to establish a framework for decision making. As quoted below, the specific vision statements for the Cordilleras facility, in bold type, are linked to the core values of the County in italicized type:

**Focus on Wellness – to be healthy**
The new Cordilleras campus will be dedicated to the whole health and wellness of its clients. The environment of the Center will support and reflect a productive individualized wellness path for all clients.

**Promote Respect – to be livable**
The new Cordilleras Center will provide a strong foundation of assuring dignity and respect for its clients and staff. The Center will emphasize client’s choice in a safe environment that inspires pride, motivates the spirit, accommodates diversity in culture and beliefs, instills optimism for personal growth and improves quality of life.

**Build Community – to be collaborative**
The new Cordilleras Center will build strong communities – amongst its own clients, families, staff, and visitors, and add value to the surrounding community. The Center will become an integral part of its social surroundings, with its programs and services valued as innovative assets and its residents respected as citizens.

**Heal through Nature – to be environmentally conscious**
The new Cordilleras Center will capitalize on its beautiful serene natural setting to complement the process of wellness, rehabilitation and recovery. The Center will incorporate progressive sustainable design strategies, efficient building systems, and natural materials to the benefit of healthy people, place and planet.

**Strive for Recovery – to flourish**
The new Cordilleras Center will help clients realize their full potential, achieving their goals for recovery and return to living independently in the community. We will develop a world-class model of care that sets a new standard for excellence, by drawing from current best practices and anticipating future advances in behavioral health care.

Key Design Elements Required

The following are essential requirements, which cannot be compromised in the execution of the design due to functional imperatives and funding constraints:

1. MHRC bed mix for each unit: 75% singles (12 beds), 25% doubles (4 beds)
2. Supported Housing Unit bed mix for the 57 beds: 75% doubles and 25% singles.
3. Separate and independent courtyard for each MHRC.
4. No commingling of patient populations.
5. Individual addresses for each facility.
6. Support services to be independently contracted by providers, however a production kitchen on campus may be required.
7. Independently operated and governed by each provider.
8. Separately licensed by each selected provider.
9. Safe Furniture, Fixture and Equipment appropriate for psychiatric facilities.
10. One floor of Supported Housing Unit built to MHRC delayed egress standards to accommodate patient relocation.
11. Soothing interior design to meet needs of psychiatric population.
12. Focus on access to nature, sunlight and well-being.
Client Vision, Mandatory Requirements & Priorities

Priorities

As part of the Concept Design Workshops with the CannonDesign team, County representatives evaluated the relative importance of twenty-one key project issues, grouped in seven general categories: Logistics, Safety, Engagement, Functionality, Indoor Environment, Connection to Landscape, and Aesthetics. The County representatives were each given sixteen dots and asked to place those dots in any quantity on the items of highest importance to them. It was noteworthy that dots were applied in all twenty-one categories, indicating the wide range of important considerations for the design. Based on a count of the dots, the issues were ranked in the following order:

1. Patient privacy
2. Centralized exterior programming shared by entire campus
3. Elopement protection of exterior spaces
4. Localized exterior programming dedicated to individual MHRCs and SH Units
5. Sightlines and visibility of patient areas
6. Durability of finishes and materials – low maintenance
7. Decrease obviousness/ awareness of security elements
8. Patient choice – variety of options for daytime therapy/activity spaces
8. Flexibility
8. Onstage/offstage – ability to separate staff/service from patient areas
8. Optimized staff and operational efficiency
8. Shared community amenities present on campus
8. Ability of facility to support volunteer or outreach programs and to reduce stigma
8. Clarity of entry/arrival
11. Access to daylight and views
8. Normalized Patient environment, emulating home and daily life
8. Program and project within budget
8. Minimized site phasing
7. Investment in materials and massing that minimize institutional character
6. Project complete by 2021
6. Ligature and tamper resistance
5. Flexibility
5. Patient choice – variety of options for daytime therapy/activity spaces
5. Increased consumer/family satisfaction
5. Increased staff satisfaction
5. Reduced waiting time for the transfer from the San Mateo Medical Center psychiatric inpatient services to the MHRCs which will improve access and patient flow through the healthcare delivery system.

Measures of Success

As documented in the County’s 2014 Feasibility Study, the following measures of success retain high importance:

• Reduced length of stay at the MHRCs
• Reduced rates of readmissions to the MHRCs
• Reduced admissions to Psychiatric Emergency Services for the Cordilleras population
• Reduced resident to resident and resident to staff altercation
• Increased consumer/family satisfaction
• Increased staff satisfaction
• Reduced waiting time for the transfer from the San Mateo Medical Center psychiatric inpatient services to the MHRCs which will improve access and patient flow through the healthcare delivery system.
Site Goals

Serving San Mateo County’s most vulnerable residents, Cordilleras Health System Replacement Project looks to update its facilities to be at the forefront of holistic treatment through thoughtful design that weaves the built and natural environment. The design team has been involved in the site and landscape concept redesign to update existing facilities and create new spaces for wellness and recovery. Outdoor spaces include open, communal spaces with opportunity for a range of programs and self-contained courtyard gardens to serve clients within the MHRC buildings. The natural environment surrounding the site will heavily influence the landscape character and site programs. The design will thoughtfully integrate various programs into the surrounding environment and work with the existing site’s natural beauty to better connect clients to nature. The creek becomes a unique opportunity within the site that can be celebrated and incorporated into the design to create therapeutic spaces.

The overall site design allows for a large open space in the center of the campus creating the opportunity for a range of programs with enough buffer between for clear transitions of space. The Supported Housing is sited toward the “front door” of the site, acting as a gateway into the central communal landscape area. Programming closer to the building will focus on larger, more active communal gathering spaces and activities like sheltered outdoor seating areas, picnic tables, community gardens, and half-court basketball. An open lawn toward the center of the site allows for flexible space for special events and activities while serving as a transition space between the active entry and tranquil creek area. Programming will shift toward more intimate, reflective spaces for healing as one comes closer to the creek area. The creek becomes an amenity for clients and staff with walking paths and interpretive signage, while also providing direct contact with therapeutic natural settings.

Private courtyards and patios for each MHRC building provide a familiar and safe environment for the most intensive care clients. These enclosed outdoor spaces will provide sensory interests and calm areas for small gathering. Each private courtyard will have various seating options, walking loops, and gardening opportunities to create a strong connection between the indoor and outdoor space.

Taking cues from the existing topography, hydrology, and natural resources already on site, the design team has designed safe, comfortable spaces that leverage best practices for healing outdoor spaces with recreational and social functionality. Textured perennial plantings and close attention to warm materiality will evoke calm, home-like settings for clients to reach recovery and rehabilitation. Accessible pathways will connect clients with the central campus core while immersing users in the native environment. Together, the communal gathering areas, private courtyards, fitness opportunities, looped nature paths, and varied programmatic elements aim to foster healing through direct experience and engagement with nature.
Biophilic Design

Biophilic principles were a key consideration in the development of the Concept Design and will continue to inform the development of the design going forward.

The term “biophilia” was coined by the social philosopher Erich Fromm in 1964, and its principles were developed by biologist E.O. Wilson and social ecologist Steven Kellert in the 1980s. These scientists proposed that human beings have a fundamental dependence on nature, arising from our evolutionary development, that significantly influences the way we think, feel, create, and live our lives. They offered this definition of the term in their 1991 book The Biophilia Hypothesis:

“Biophilia is the inherent human inclination to affiliate with nature.”

In the years since, biophilia has become an evidence-based framework for enhancing the connection between people and nature in ways that are beneficial to our physical and mental health. A growing body of research, including recent studies by faculty at Stanford University and UC Berkeley, demonstrates that engagement with the natural environment reduces tension, anxiety, anger, fatigue, confusion and mood disturbance, providing positive restorative value. Studies also suggest that exposure to nature can offer therapeutic value in mental health programs, helping to normalize differences and increase the sense of belonging, especially for those with low levels of wellbeing, depression, dementia, addiction and other behavioral disorders.

These findings are consistent with the values and vision of the San Mateo County Health System and the specific objectives of the Cordilleras Mental Health facility. The beautiful wooded setting of the Cordilleras site resonates in the core value of the facility: Heal through Nature. It is incumbent on the design team to develop design strategies that enhance the natural setting for the benefit of clients, staff and visitors.

The beneficial effects of biophilia can be activated by site design and architectural design that is cognizant of recent research. In the Cordilleras canyon, enabling exposure to the natural environment is not a difficult task – the setting encourages direct engagement with nature. But design strategies can enhance aspects of this engagement. Forested landscapes offer a tranquil retreat, and an aesthetically compelling context. We have sought to capitalize on the forest setting at Cordilleras by preserving it as much as possible, and maintaining walking paths that extend beyond the developed areas.

The most restorative landscapes, however, are those which offer wide open spaces similar to the savanna-type landscapes, dotted with trees and easy to move across, inhabited by our ancient ancestors. For our ancestors, savannas were places of refuge, where they could be protected from the elements, and places of prospect, where they had good views of visually attractive features as well as possible dangers. The combination of refuge and prospect offered restorative value to our ancestors and modern humans have inherited those genetic predispositions. In our design for the Cordilleras campus we have proposed a large open area at the center of the campus, in which multiple outdoor activity centers will be available to clients, staff and visitors. In the organization of the buildings around this central green space, we have strived to create conditions of prospect and refuge. For example, from the enclosed courtyards of the MHRCs and from the private and public spaces in the Supported Housing building, expansive views of this open space are available. The architecture will be configured to allow a sense of refuge and protection to the residents as well as outward looking views, so that the benefits of prospect and refuge can coexist – all basic principles of biophilic design. There will be a clear hierarchy of outdoor spaces – from intimate areas, to enclosed courtyards, to covered terraces and open activity areas organized in consideration of the security requirements of the facility.

In addition to responding to the environment in the campus plan and building configurations, as we move forward into Schematic Design other principles of biophilic design will be studied in the architecture of the campus to reinforce the beneficial aspects of nature. Our philosophy of design recognizes that a building can embody characteristics in its aesthetics and features that offer many of the benefits that derive from direct experience of nature. Biophilic design can nurture a love of place and forge connections between people and the environment, creating spaces that are inspirational, restorative and healthy.

There are three pathways to biophilic design that we will explore with the County during the next phase of the work:

- Direct experience of nature – optimizing access to environmental conditions such as natural light, fresh air, perhaps water features.
- Indirect experience of nature – selection of
Biophilic Design (cont’d)

materials, colors, textures, patterns and processes that are natural or that refer to nature in a symbolic way.

- Experience of space and place – creating spatial characteristics that celebrate aspects of prospect and refuge, such as transitional spaces between inside and outside, porches, trellised courtyards, and window seats. As the Bay Area architect, Charles Moore, said, “The power of outlook is enhanced if some elements in the foreground, like the window itself, serve as bridge between the near and the distant.”

The Cordilleras campus will be home for your clients. As your design professionals, this is at the forefront of our minds, and guides the way in which we will develop the organization and architectural expression of your campus and its buildings. We will avoid creating a place that has characteristics of an institution, but instead find ways to foster feelings of domesticity, where your clients can feel safe, centered, in control, independent, secure, and affiliated with nature.
Civil Engineering

Overall Existing Site Description

The site is located at 200 Edmonds Road in Redwood City, CA. There are three main buildings on the site, The Cordilleras Mental Health Center, Canyon Oaks Youth Center School and the San Mateo County Fire Department Station 18. The mental health center was built in the 1950’s and is currently being used by the County as a mental health care facility. The Canyon Oaks building and fire station were constructed in the 2000’s and are still in use. The buildings are located at the bottom of a canyon. The upper stretch of Cordilleras Creek flows through the site from the northwest to the southeast. Through the middle of the site, the creek is conveyed underground in a concrete pipe. The elevations of the creek vary through the site from 280’ to about 310’. The slopes of the canyon are heavily wooded and relatively steep with an average slope of about 1.5 to 1.

Layout and Paving

The existing facilities on site are accessed by asphalt paved roadways and parking areas. These paved areas will be removed, used for temporary access during construction or kept in service. The only portion of the existing paved areas that may remain in service after construction completion will be the parking lots and access driveway to the Youth Center and Fire Station. [See drawing “Conceptual Site Plan,” under 04 Concept Site Plan]

The new site layout will account for one major phase of construction while the existing mental health center remains operational allowing for access to the youth center and fire station at all times during construction while also allowing for temporary construction facilities, construction parking, staff and visitor parking. The second and final phase of construction will demolish the existing mental health center and construct the remaining sidewalk, hardscape, driveway and parking area paving. [See multiple drawings under 05 Concept Site Phasing]

The new pavement areas will include driveways, parking areas, sidewalks, ramps and open space hardscape. Primary access to the site will be a driveway from the end of Edmonds Road consisting of an internal loop road that accesses drop off areas in front of the five MHRCs and the Supported Housing Building. The new loop road will meet or exceed minimum fire truck access requirements. New parking areas will be established off the loop road meeting the handicap, staff and visitor parking requirements. Sidewalks and ramps will be set at locations and elevations that allow for accessible paths of travel between buildings and drop off areas.

A new maintenance access road to the existing water tank the will be 12’ wide and have a weatherized surface.

Final determination of the pavement sections will be during the schematic design phase and will be influenced by the final approach to storm water treatment and the size and locations of the biofiltration basins as well as interface with CEQA exercise. Any of the paved areas could be considered for permeable paving or paver systems in order to reduce the amount of storm water that requires treatment and sizing of the biofiltration basin.

Earthwork and Soil Nail Walls

It will be necessary to cut into the surrounding canyon side slopes and construct soil nail or mechanically stabilized wall systems to allow for the new flat building pads. The earthwork concept plan shows approximate wall locations and heights, cut and fill depths and earthwork quantities. [See drawing “Concept Earthwork Analysis,” under 04, Concept Site Plan]

The concept design for the wall system includes setting walls around a significant portion of project perimeter that vary in height from 1’ to 56’, with the highest walls at northwest, northeast, and southwest sides of the developed area. The wall system will be included in the construction documents as design-build and will be bid by the construction manager. The goal is to create a set of design-build documents allowing for the most economical wall type and construction approach.

Based on the concept earthwork analysis there will be a substantial amount of earthwork work with approximately 44,000 CY of cut and 35,000 CY of fill generating approximately 9,000 CY of off-haul. This analysis is based on a very approximate grading concept with a focus on building pad elevations, accessibility relationships, and minimum roadway grades. The excavated material from the canyon side slopes will need to be further investigated and analyzed to determine if it is feasible to be used as fill. As the grading design progresses through the
Civil Engineering (cont’d)

Schematic design and design development the goal will be to adjust the grades to increase the fill amount such that the site balances with minimum off-haul. Temporary off-site stockpile areas may need to be established by the earthwork contractor in order to allow for the initial construction phase to include construction of all new buildings simultaneously.

Based on the preliminary geotechnical report the existing canyon side slopes consist of material that is marginally rippable by larger pieces of earth moving equipment such as a D10R bulldozer further and could be classified as hard to rock material. Further investigation at the proposed cut locations will be performed to determine if the goal of using the excavated material as reworked on-site general or engineered fill is achievable. The goal will be to determine the most economical way of meeting the site fill requirements with the alternatives being reworking the excavated material and using as fill or off-hauling the excavated material and importing suitable material. The goal will be to minimize cost.

Water and Fire Distribution System

A new potable water and fire protection distribution system will replace the existing system servicing the Mental Health Center, Youth Center, and Fire Station. The new system will provide potable water and fire protection services for the new MHRCs, Supported Housing Building, existing Youth Center and existing Fire Station. The goal will be to create the most economical system that will meet the potable water, fire hydrant and sprinkler system demands. The new system will be designed to meet:

1. Peak potable water system flow demands and residual pressures at each building based on use.
2. Fire hydrant flow and residual pressure requirements per NFPA, State and local fire code requirements.
3. Fire service and sprinkler flow and residual pressure demands for each building.
4. Irrigation system flow & residual pressure demands.

The existing 150,000-gallon water storage tank will need to be further studied to evaluate its condition for continued long-term use and if it is adequately sized to accommodate the potable water system operating volume and fire flow duration. KPFF civil will request any recent studies on the tank and review them, perform a visual inspection, and then document observations regarding long-term use.

The design team will be contacting the County Fire Marshall to confirm minimum fire hydrant flows based on building types and occupancy and the fire flow duration (usually one or two hours). After confirming the fire criteria KPFF civil will perform the necessary calculations to determine if the existing tank has adequate volume to meet the build-out needs.

Two primary alternative approaches (and possible hybrids) will be studied by the design team in order to produce the most economical system. The first alternative will consider a gravity feed system from the water storage tank to the new and existing buildings and the second would be to construct a new central pump station that feeds separate loops for potable water and firewater. The systems are summarized below and demonstrated in the Concept Utility Plans. [See drawing “Concept Utility Plans - Water System,” under 04 Site Plan]

Alternative 1. Gravity Feed System Feed

This system would consist of the following major components:

- Reuse of the existing pump station located near the main site entrance.
- Replacement of the existing line feeding the existing water storage tank with a new 4” line.
- Two new 12” mains connecting from water storage tank to a new 12” water main loop.
- New 12” water main loop within the loop road.
- New fire hydrants.
- New potable water services to MHRCs and Supported Housing Building.
- New fire services to MHRCs and Supported Housing Building.
- Domestic booster pump in Supported Housing Building.
- Domestic booster pump in MHRCs and Supported Housing Building.
- Possible domestic booster pump in MHRCs where static and residual pressures are marginal.
- Fire booster pumps in MHRC and Supported Housing buildings.
- Meters and backflow preventers in MHRC and Supported Housing buildings.
- Possible upgrade/replacement of existing water storage tank.

Alternative 1 will provide low static pressures at the MHRC building faces which could be as low as 40 psi based on the pad and water tank elevations. There
Civil Engineering
(cont’d)

will be a need for larger 12” diameter pipes allowing for minimal pressure losses while meeting the 20 psi residual pressure requirements at the fire hydrants.

Alternative 2. Central Pump Station

This system would consist of the following major components:

- Reuse of the existing pump station located near the main site entrance.
- Replacement of the existing line feeding the existing water storage tank with a new 4” line.
- New central pump station as a stand-alone or inside a new building consisting of domestic and fire booster pumps feeding separate on-site loops.
- New 8” main connecting from water storage tank to a central pump station.
- New 4” domestic water main loop within the loop road connected to central pump station.
- New 8” fire water main loop within the loop road connected to central pump station.
- New fire hydrants feed off of 8” fire loop.
- New potable water services to MHRCs and Supported Housing Building fed off potable water loop.
- New fire services to MHRCs and Supported Housing Building fed off fire loop.
- Meters and backflow preventers in MHRC and Supported Housing buildings.
- Possible upgrade/replacement of existing water storage tank.

The two described alternatives shown in the Concept Utility Plans or variations of them will be studied by the design team to more detail during the schematic design phases to determine the most cost-effective way of providing potable water, fire protection, and irrigation services to the new and existing buildings. The primary result of this analysis will determine if booster pumps are inside each individual building or if there is a central pump station servicing all of the new buildings through separate looped systems.

Sanitary Sewer Collection System

The project goal is to construct a new sanitary sewer collection system that will replace the existing system servicing the Mental Health Center, Youth Center, and Fire Station while also meeting 72-hour emergency storage requirements. The new system will collect sewer services from each new and existing building and convey discharges to the point of connection at the existing sanitary sewer line in Edmonds Road at the east entrance to the site. The collection system will include underground storage tanks that will detain up to 72-hours of sewer discharge in an emergency situation. This will require underground storage tanks at the outside of each building or one large storage tank for the entire site near the east entrance. (See drawings “Concept Utility Plans - Sanitary Sewer System,” under 04 Site Plan)

Sanitary Sewer Alternative 1.
(One 72-hr Emergency Storage Tank at Site Entrance)

- 8” sanitary sewer mains.
- Manholes.
- Service connections to new buildings.

Sanitary Sewer Alternative 2.
(72-hr Emergency Storage Tanks at New Buildings)

- 8” sanitary sewer mains.
- Manholes.
- Service connections to new buildings.
- Cleanouts at building services.
- 50,000-gallon emergency storage tank east entrance to accommodate 72-hour emergency storage. Volume is for an order of magnitude purposes only and will be confirmed during schematic development phases.
- Diversion structure at emergency storage tank allowing for redirecting sewer for 72-hour emergency flows.

During the schematic design phase, the goal for the design team will further study the alternatives, focus on meeting the emergency storage requirements and reducing overall all project costs.
Civil Engineering
(cont’d)

Storm Drainage Collection, Detention and Treatment System

A new storm drainage collection, detention, and treatment system will replace the existing system conveying Cordilleras Creek, two tributaries, and existing site development. The new system will intercept existing discharges from Cordilleras Creek and tributaries and the new site development.

In order to meet local stormwater treatment C.3 provisions mandated through San Mateo County’s MS4 permit, all stormwater from impervious roof and pavement surfaces will need to be treated prior to discharge into the new storm drainage system. To satisfy this goal, a biofiltration basin will be designed to meet these requirements in the central open space area between the buildings. As indicated in the Concept Utility Plans, the rainwater leaders from the buildings and site drainage will be diverted into the biofiltration basin for treatment prior to discharge into the main 36” storm drain line that will discharge into Cordilleras Creek at the downstream end of the site.

During the schematic design phase, KPFF civil will be meeting with the County Building Department Civil Engineer to discuss the stormwater design criteria and detention design criteria and strategies regarding sizing the system and maintaining peak discharges into Cordilleras Creek downstream of the project. Based on the final criteria the sizing of the storm drainage system and required detention volume will be calculated and considered in the design of the collection system and the biofiltration/detention basin.

The storm drainage collection and treatment system demonstrated in the Concept Utility Plans will consist of: [see drawing “Concept Utility Plans - Stormwater,” under 04 Site Plan]

- A minimum 36” diameter backbone storm drain line and manholes that will divert Cordilleras Creek through the site and accept and convey treated stormwater prior to discharge into Cordilleras Creek downstream from the site.
- Storm drainage collection system consisting of 12” storm drain lines and catch basins that intercept untreated stormwater and convey to the biofiltration basin.
- Biofiltration basins with bubble up structures and catch basins that are connected to the 36” backbone storm drain line.
- Biofiltration basin will also be sized to accommodate any required stormwater detention required by County of San Mateo.
- Reconstruction of the Cordilleras Creek upstream headwall structure
- Reconstruction of the Cordilleras Creek downstream outfall structure.
Mechanical, Electrical, & Plumbing Systems

HVAC Design Methods

The HVAC design for the project will follow the design standards set forth in the bridging documents for the Codes, Indoor and Outdoor Design Temperatures. Load calculations for the HVAC design will be performed using Trane Trace 700 and outlined in the latest ASHRAE Fundamentals Handbook to meet industry standards. Loads will be run based on final design selections for lighting, envelope, equipment, etc. Block loads will be used for the sizing of centralized equipment so as not to oversize the equipment. A 10% safety factor will be applied to all cooling loads and a 20% safety factor to heating loads to allow for fluctuations in the use of the spaces.

HVAC Design Strategy

The HVAC Design Strategy for the project is to utilize an air cooled variable refrigerant volume system (VRV/VRF) with air cooled condensers installed on the roofs of the individual buildings. The condensers will be connected to fan coil units, distribution boxes, and all isolation devices. The heating and cooling medium will be refrigerant and appropriate isolation valves will be installed in the system to allow for maintenance.

Residence rooms will be provided with dedicated ducted supply and return VRF fan coil units to allow for individual temperature control of the spaces, however temperature control of these spaces will be accomplished remotely by the BMS system. The bridging documents have located these unit above the ceilings of the toilet rooms of each residence, but we are recommending that these units are located to outside of the residence spaces to allow for easier maintenance and additional resident protection.

Administrative, support, and common spaces will be provided with supply and return VRF fan coil units to allow for zoning of these spaces as per the bridging documents. These spaces will be controlled from the BMS system.

Outside air for each of the spaces will be provided from an Energy Recovery Ventilator installed in each of the MHRCs and within the Supported Housing facility. These units will be equipped with an energy recovery wheel and the outside air ductwork will be fed directly to each VRF fan coil unit for final tempering of the air to the spaces. With the relocation of the VRF fan coil units in the residence rooms as described above, we recommend that the outside air is ducted directly from the ERVs instead of the outside as described in the bridging documents.

The MHRC’s are provided with a fan assisted natural ventilation system which can be used when the Living room and associated corridor spaces. This system will consist of louvers with motor operated dampers along the perimeter of these spaces and roof mounted exhaust fans ducted to each individual zone to allow for the air to be brought into the spaces. The natural ventilation system will be used when Outdoor air conditions are within acceptable levels and will be used as a first stage of cooling.

The kitchens of each building will be provided with a 100% make-up air handling unit to offset the air exhausted by the kitchen hoods. This make-up air handling unit will be provided with a water coil for tempering the outside air. Chilled and heating water for this coil will be provided from a hydronic heat exchange connected to the VRF system. The heat exchanger and associated pumping system will provide 50 degrees water and 110 degree water during the cooling and heating seasons, respectively.

The Multipurpose room will be served from a more traditional system which will utilize a package rooftop unit with heat recovery, demand control ventilation and electric heating. This unit will be provided with economizer capabilities.

Telecommunication rooms will be provided with cooling only split system units. Electrical rooms which contain transformers will be provided with cooling only split systems, all other electrical rooms will be provided with a general exhaust fan.

The Building Management System (BMS) will consist of a centralized BACNET system that will control all of the mechanical equipment. Residence rooms will be provided with temperature sensors that will only report to the VRF control system.

Sustainable HVAC Design Strategy

By using a VRF system for the primary HVAC system we will be able to use the system’s ability for simultaneous heating and cooling in zones to provide better thermal comfort control while reducing energy usage. We are also proposing the use of energy...
Mechanical, Electrical, & Plumbing Systems (cont’d)

recovery systems for both the air-side and waterside of the systems to generate additional energy savings. The added benefit of a VRF system is the ability of the system to be used in conjunction with a future PV installation to allow for a net-zero ready facility.

Plumbing Systems

The plumbing systems for the project consist of the installation of a complete domestic cold water, domestic hot water, storm, sanitary sewer, and vent system. Sanitary sewer and vent piping will be provided to all of the plumbing fixtures as required and sized as per the California Plumbing Code. All sanitary piping will be routed to 5 feet outside of the building and then connected to the site sanitary systems. Storm drainage will be provided for each building sized per the requirements of the California Plumbing Code and routed to 5 feet outside of the building and then connected to the site storm system. As a part of the Addendum process the grey and rain water collection systems were removed from the project and is no longer being pursued as a part of this project.

Each building will be provided with an independent domestic cold water system from the municipal water sources. Each system will be provided with the necessary primary and secondary backflow prevention. All piping will be routed each of the plumbing fixtures and sized per the requirements of the California Plumbing Code. Domestic hot water for each of the buildings will be provided from domestic hot water heaters in each of the buildings. The domestic water heater will be provided primarily from a heat exchanger tied into the building HVAC VRF system with an electric back-up heater. Each building will be provided with a continuous hot water circulating system. All plumbing fixtures will be selected based on the safety and security of the occupants. In addition to the safety and security aspects of the project we will provide low-flow plumbing fixtures to reduce water consumption in each of the buildings. The flow rates as outlined in the bridging documents will be used as a guideline for the water flow rates of each fixture.

Plumbing Sustainable Design

The use of the waste heat from the HVAC VRF system to heat the domestic hot water within the buildings is a sustainable feature that will remain as a part of the project. In addition we are still proposing the use of low flow plumbing fixtures within the buildings which will reduce the water usage of the facility.

Fire Protection Systems

The Supported Housing and MHRC buildings will be protected throughout with a new wetpipe sprinkler system supplied by the public mains. The design and installation will comply with the requirements of NFPA 13 and 24. The Supported Housing building will also be provided with a manual wetpipe standpipe system consisting of hose connections at the intermediate landings of all of the exit stairwells and at locations required by NFPA 14 and Chapter 9 of the California Fire Code. As outlined in the Bridging documents fire protection mains, connections, and hydrants will be provided.

Electrical Systems

The electrical systems for the campus will be provided with both a normal and emergency electrical distribution systems. We will review the installation of either a single PG&E transformer for the site or individual PG&E transformers at each building. The system would consist of the following:

1. A 225 Amp 277/480 V, 3 Phase, 4 wire incoming service will be provided at each of the MHRC’s. This will be connected to a PG&E transformer or a site distribution system. Each MHRC will be provided with an individual meter. The lighting and HVAC loads will be served from the 480/277 V panelboards. Step down transformers and panelboards will be provided for the 120/208 V system. Provide a separate 60 AMP circuit breaker to serve the life safety systems.

2. An 800 Amp 277/480 V, 3 Phase, 4 wire incoming service will be provided in the Supported Housing facility. The Supported Housing system will be provided with an individual meter. The lighting and HVAC loads will be served from the 480/277 V panelboards. Step down transformers and panelboards will be provided for the 120/208 V system. Provide a separate 125 AMP circuit breaker to serve the life safety systems.

3. Where receptacles are provided within occupant rooms, they will be tamper-resistant, hospital grade, and provided with GFCI protection. A dedicated circuit for each occupant room and bath will be provided to allow for remote shut-off if necessary for the occupant’s safety.

4. The receptacle outlets will be controlled to
Mechanical, Electrical, & Plumbing Systems (cont’d)

conform with Title 24 2016 requirements.

The emergency Electrical distribution system for the campus shall be provided as follows and is consistent with the intent of the bridging documents:

1. A single 1000 KW, 1250 KVA, 1600 A, 277/480 V centrally located emergency standby diesel generator will be installed at the Supported Housing facility. The generator will be installed outside and located within a sound attenuated weatherproof enclosure. The generator capacity will support 80 percent of the electrical loads of the Supported Housing and MHRC buildings. The diesel fuel tank shall be sized with a capacity to allow for a 72 hours at generator full load capacity.

2. The main emergency distribution 1600 A, 277/480V board will be installed in the Supported Housing building main electrical room. The panel board will be provided with a 1600 AT main breaker, one 800 AT breaker to serve the Supported housing life safety and normal power systems, and five 225 AT breakers to serve the MHRC’s life safety and normal power systems.

3. Route conduit and wiring from each of these breakers to the respective MHRC’s where a separate electrical emergency panel will be provided. For the MHRC’s this panel will be rated for 225 AMPS and have a breaker for normal and life safety needs. An separate 125 Amp ATS will be provided for the life safety loads.

4. Within the supported housing facility a 125 AMP Life safety panel shall be provided to serve all of the life safety loads in the building. This panel will be served from both the normal and life safety panel. A separate 125 AMP ATS will be provided for the life safety loads.

5. At the supported housing facility provide a separate 600 AMP ATS to serve the normal needs for the facility in addition to the 125 AMP ATS described above.

6. Each of the MHRC’s will be provided with a separate 60 Amp life safety panels to serve the life safety needs of this space. This panel will be served from both normal and life safety loads of the facility. A separate 60 AMP ATS will be provided for the life safety loads.

7. All panels will have separate power monitoring systems.

A complete lighting system for all indoor, outdoor, and building mounted lighting will be provided. The lighting system will consist from LED sources, incandescent will not be used. In order to reduce the energy consumption associated with the lighting systems we will target a lighting power reduction for the project at 25% below the minimum code requirements in Title 24. The lighting levels and design standards for the spaces as outlined in the bridging documents will be maintained. The lighting control systems will consist of low voltage digital lighting management and local dimming occupancy sensors. Outdoor lighting controls will consist of a low voltage digital management control system. Lighting controls shall conform with 2016 Title 24 requirements.

An automatic, addressable, fire alarm system will be provided to meet the requirements of the California Building Code, California Fire Code. Each of the buildings will be provided with a fire alarm panel and each fire alarm panel will be monitored at a centralized security station, along with off-site monitoring.

Sustainable Electrical Systems

The requirements to provide a net-zero energy facility are a part of the project and we are assuming at this early stage of the project an approximate amount of 650 kW array. This number is a budget number for the array at this point and we will continue to refine this number throughout the design process.

Technology Systems

The technology design for the Supported Housing building will consist of telecommunications rooms (TR) located on each level. The room located on the first floor of the Supported Housing building will be the Main Point of Entry (MPOE) for telephone and data services for the Supported Housing facility. Each of the MHRC’s will be also provided with a MPOE since each MHRC is an independent facility. Telecommunication rooms will be provided with a location to bring all systems to, racks, and wire managers for backbone and horizontal cable management. This includes wire basket cable tray in the corridors and J-hooks elsewhere. Telecommunications cabling from the MPOE to the individual TR’s will be fiber optic cabling. Copper backbone network cabling shall be Cat 3 copper cable. Cabling from the TR’s to the final point of connections will be Category 6 voice and data cabling.

A Cable Television (CATV) system will be distributed
Mechanical, Electrical, & Plumbing Systems (cont’d)

from the MPOE in the Supported Housing facility and the MHRC's. Cabling and equipment will be wall mounted in each TR and all horizontal cabling will be routed to the final locations for the project.

A zoned intercom and paging system will be provided and have the capabilities to provide program distribution and “all-call” to speakers throughout. Coverage will be provided to offices, conference rooms, corridors, and other common interior and exterior spaces. All speakers shall be individually homerun to the nearest TR and then connected back to the MPOE of each building.

A security system consisting of an Access Control, Internet Protocol (IP) Cameras, and Intrusion Alarm will be provided as a part of this project. All systems will be connected into a single security management system and centrally controlled from a security management system within each building. The system will have the capability to interface with the BMS system.

The access control system shall control locking and unlocking of selected interior and exterior doors. The access control system will be provided with card readers and keypads to allow secured entry into the building.

The IP based camera and surveillance system will have cameras placed to monitor both interior and exterior spaces in concert with the access and intrusion systems. The Intrusion alarm system shall be provided with external and internal door monitoring.
Summary of Photovoltaic (PV) Analysis

Summary of PV Analysis

- Roof areas were analyzed in details to identify areas where roof is shaded by nearby surfaces
- Key dates/times were visualized to show problem areas
- Annual image shows summation of total solar insolation on all roof areas
- Total generation on roof areas was extracted from the analysis
- It was assumed that approximately 40% of roof areas are not available for PV panels due to code access requirements as well as areas near the retaining wall/hill that get less overall solar insolation
- Total available roof area for PV was approximated to be 41,000 square feet
- It was assumed that all PV panels will be flat for this analysis covering the total area above, however if design team tilts portions of the areas toward south façade it will be beneficial
- Multiple rows of tilted solar panels are not recommended due to increased self-shading
- Multiple PV panel efficiencies were analyzed as well
- Higher panel efficiencies can significantly alleviate the site energy use budget from average 30 to 42 Energy Use Intensity (EUI)
- With projected total site EUI of 30, the site energy budget can be met with 15% panel efficiencies

Site EUI & PV Generation Analysis - 15% Efficient Panels

Site EUI & PV Generation Analysis - 15% Efficient Panels

Site EUI & PV Generation Analysis - 19% Efficient Panels

Conceptual Photovoltaic Panel Areas

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**Staffing & Hours of Use**

**Staffing and Staff Areas:**

Each of the five 16-bed MHRCs will be separately licensed and operated. The facilities shall employ support staff as necessary to perform office work, cooking, house cleaning, laundering, and maintenance of buildings, equipment and grounds.

The 3-floor 57-bed Supported Housing will be licensed by the Department of Social Services under one license and operated by one single operator. In facilities with a licensed capacity of 50 or more clients, one employee shall have full-time responsibility for the organization, conduct and evaluation of planned activities, and shall be given assistance as necessary in order to ensure that all clients participate in accordance with their interests and abilities.

The staff on the campus will include three high intensity staffing models, two medium intensity staffing models and one supported housing models. For more information, refer to staffing model provided to us by San Mateo County Health Systems included in the Appendix.

**HOURS OF OPERATION**

**Site**
- Accessible 24 hrs a day, 7 days a week
- Site boundaries not secured

**Campus Center**
- Monday-Friday: 8:00am-5:00pm
- Saturdays & Weekday Evenings: As needed for scheduled community events

**Primary Care**
- Tuesdays, Thursdays and Fridays only
- 6 hours per day between hours of 8am-5pm (exact hours to be determined)
- Hours may expand depending on future need.

**Loading Dock**
- Monday-Friday: 7:00am-4:00pm
Security Electronics Systems

Codes, Guidelines and Standards

The equipment, design, materials and installation will meet or exceed the requirements as set forth in the following codes, guidelines and standards. All State, Local, County or City Ordinances will also apply.

ADA  Americans with Disabilities Act
ANSI  American National Standards Institute, Inc.
CAL/OSHA California Occupational Safety & Health Administration
CBC  California Building Code
CFC  California Fire Code
NEC  National Electrical Code
NECA  National Electrical Contractors Association
NEMA  National Electrical Manufacturer’s Association
NESC  National Electrical Safety Code
SFPA  National Fire Protection Association
SFM  California State and Local Fire Marshal
UBC  Uniform Building Code
UFC  Uniform Fire Code
UL  Underwriters’ Laboratories

Security Electronics System

1. This project will integrate camera, door control and monitoring and intercom control into a single integrated security electronics system operable via touchscreen controllers located in the Open Team Station within each MHRC building. The security electronics systems will be connected to an exclusive ethernet network with no connections outside of the campus. All security electronics systems will be connected to emergency power.

2. Staff will control and monitor inmate and staff movement through all secured building areas, including the sally port, Living Rooms, Private Rooms and Patient Courtyards via touchscreen controls. Operators in each building will monitor and control all electronic security systems including remote door control, intercom system, video surveillance, and duress alarm system. Each building control station will be staffed at all times, with relief staffing for operator breaks. One (1) touchscreen control panel, with associated video displays, will be provided for each MHRC Building control location.

3. Touchscreen control panels employing a Graphical User Interface (GUI) will be provided as the primary interface for staff to operate the security control systems. The touchscreen GUI layout will provide a logical means for staff to control and monitor doors, intercoms, help buttons and cameras throughout the facility. The exact layout and configuration of the GUI, including maps, icons, alert tones, etc., will be created in collaboration with the County. Each building will maintain independent control of its security electronics systems at all times.

4. A campus-wide access control system, integrated with the video surveillance system will be provided to facilitate staff movement throughout the restricted areas of each building. Access to individual card holders can be granted or denied to any door in any building on a cardholder by cardholder basis.

5. Control equipment for the security electronics system will be distributed to the security electronics rooms located throughout the facility.

6. The camera system will be network based for recording and real-time camera switching. Any camera shall be assignable by software to any video display monitor in the facility. Two video display monitors will be provided at each Control operator's station. Touchscreen multiplex views will be configurable via the control touchscreens. All cameras will be solid-state high-resolution color IP cameras. All doors remotely controlled from each control location will be visible by camera image. Selected cameras will have video recorded onto network video storage.

7. The camera system will be fully integrated with intercom, door control, and alarm monitoring systems to automatically call-up designated camera views to video display monitors when corresponding devices are active.

8. Door control and monitoring will be accomplished by an industrial programmable logic controller (PLC) based door control system. Sally port doors will be interlocked to prevent simultaneous opening of more than one door in an interlock group.

9. A detention-grade intercom system will be provided for communication between Private Rooms and Open Team Stations. Private Room intercoms will be mounted in the room door jamb. Intercom stations for movement control will be installed on each side of remotely controlled doors.

10. Duress alarms will report to the local team station touchscreen.
Security Electronics Systems (cont’d)

11. A campus-wide access control system, integrated with the video surveillance system, will be provided to allow staff access to restricted locations inaccessible to patients and not required for constant monitoring at the control locations. Selected doors will require control interface to both the access control system and the Door Control PLC.

SECURITY ELECTRONICS SYSTEM CLARIFICATIONS

It is understood that security electronics infrastructure is desired in the SH building to facilitate the possibility of using the patient spaces in a manner similar to the MHRC buildings. This will require that the same security electronics equipment be installed in the SH building. Until the County desires to use the SH building in this manner, the campus-wide access control system can facilitate staff and patient movement within the building.

In order to provide the SH building security electronics infrastructure, control locations for touchscreens and monitors will need to be identified.

If the County desires control of the access to the main loop road, a control location for the remote operation of access gates will need to be identified. It is understood that the intent of this facility is to provide as much as possible open access to the campus. However, consideration should be taken that having the public in close proximity to the secure perimeter of the MHRC buildings introduces security risk such as the introduction of contraband into the secured campus spaces. Also, the possibility for audible communication between patients and the public becomes a possibility when the public has close proximate access to the secure building.
Food Service

MHRC

Section A – General

1. Scope

- The food service design brief narrative and outline specifications are intended to provide a general direction, for the proposed satellite kitchen located at the Mental Health Rehabilitation Center located on the ground level.
- The MHRC Satellite kitchen will be the destination for all food service consumable and non-consumable items. This kitchen will receive and accommodate dry goods / refrigerated items. The areas of the kitchens will be the following; preparation area, cooking/reheating area, receiving area (prepackaged or pre-prepared food), and sanitation area. Meals to be catered; breakfast, morning tea, lunch, afternoon tea, and dinner.

2. Work Included:

- The food service facility shall comply with architectural, structural, plumbing, and mechanical requirements and all documents referred to therein.
- The food service facility will be designed and installed in compliance with San Mateo County and the building department.
- Furnishes, fixtures, food service equipment, and installation will be designed and specified to meet or exceed local Health codes, and generally accepted good practices.

3. System Scope

The following list of systems and components are included within this narrative:

- Ground Level: MHRC Satellite Kitchen (Reheat & Service).
- General Equipment Connections.
- Preliminary Food service Equipment List.
- General Food service Requirements.

Section B – Description of Work

1. MHRC Kitchen – Ground Level

- Adjacent to the dining room and restroom - all consumables and non-consumables will be delivered, stored, unpackaged / prepared, cooked / reheated for daily operations on a minor scale.
- In addition, the satellite kitchen may support external food service activities within the area, if required.
- MHRC Kitchen Area will include; Dry Storage Zone, Refrigeration Zone, Preparation Zone, Cooking/Reheating Zone, Serving Zone integrated / Cart Zone and Ware Wash Zone.
- The cooking/reheating area will contain a combination of multipurpose equipment to meet all food service and HACCP requirements.
- Pre-prepared food items; delivered, stored, cooked/re-heated will have a
Food Service (cont’d)

- Positive impact to the food service area(s) and model.
- All consumable items are either transferred from the central kitchen area or outsourced in ambient / refrigerated / heated carts and/or a combination of both.
- Additional, upright display refrigerators can be positioned within the area for immediate Grab n Go / Support / Storage.

2. General Food & Beverage Equipment Connections:

- Electrical power will be required for specific campus and satellite kitchen. Electrical power to specific equipment shall range from 120 volts or 208 volts, single phase to 3 phase. Size of breakers shall be based on manufacturer’s shop drawings.
- Mechanical connections for Hood Type I (grease hoods) will be supplied as part of the construction of the satellite kitchen. In coordination with the mechanical consultant, and nominated Kitchen Equipment Contractor. HVAC requirements, by mechanical consultant.
- All food and beverage equipment will be sized and plumbed in coordination with plumbing consultant and KEC’s nominated plumber contractor. Direct / in direct floor sinks required for food and beverage areas – all floors to fall to a floor waste / sink. A grease trap to be located, and sized by OTHERS.

Campus Center & Supported Housing

Section A – General

1. Scope

- The food service design brief narrative and outline specifications are intended to provide a general direction, for the proposed kitchens located on Level 1 and a satellite kitchen located on level 2.
- The level 1 Kitchen will be the destination for all food service consumable and non-consumable items. This kitchen will receive and accommodate bulk dry goods / refrigerated items. The identified zones within the kitchen will demonstrate the following; preparation area, cooking/reheating area, delivery service, and sanitation area. Meals to be covered breakfast, morning tea, lunch, afternoon, and dinner.
- The level 2 Kitchen will be the destination for all consumable and non-consumable items from the campus kitchen and/or outsourced. The kitchen components will compromise (on a minor scale); housing of dry/refrigerated items, limited preparation, ability to cook/reheat, service and a sanitization area. Meals to be covered breakfast, morning tea, lunch, afternoon, and dinner.
Food Service
(cont’d)

2. Work Included;
   • The food service facility shall comply with architectural, structural, plumbing, and mechanical requirements and all documents referred to therein.
   • The food service facility will be designed and installed in compliance with San Mateo County and the building department.
   • Furnishes, fixtures, food service equipment, and installation will be designed and specified to meet or exceed local Health codes, and generally accepted good practices.

3. System Scope

The following list of systems and components are included within this narrative:

   • Level 1: Campus Kitchen (Production & Service) / Level 2: Satellite Kitchen (Reheat & Service).
   • General Equipment Connections.
   • Preliminary Food service Equipment List.
   • General Food service Requirements.

Section B – Description of Work

1. Campus Kitchen – Level 1
   • Adjacent to the loading dock, and female locker room - all consumables and non-consumables will be delivered, stored, prepared, cooked / reheated for daily operations on a major scale.
   • In addition, to supporting the satellite kitchen located on level 2. The campus kitchen will provide support for external food service activities at the Multi-Purpose Room.
   • Campus Kitchen Area will include; Bulk Dry Storage Zone, Bulk Refrigeration Zone, Preparation Zone, Cooking/Reheating Zone, Serving/Cart Zone and Ware Wash Zone.
   • The cooking area will contain a combination of multipurpose equipment to meet all food service and HACCP requirements.

   • Pre-prepared food items; delivered, stored, cooked/re-heated will have a positive impact to the food service area(s) and model.

2. Satellite Kitchen – Level 2
   • Adjacent to the clean supply room and dining room - all consumables and non-consumables will be delivered, stored, prepared, cooked / reheated for daily operations on a minor scale.
   • Kitchen to provide support and service to the adjacent dining facility.
   • Satellite Kitchen Area will include; Dry Storage Zone, Refrigeration Zone, Preparation Zone, Cooking/Reheating Zone, Ware Wash Zone and Servery Zone integrated.
   • The cooking area will contain a combination of multipurpose equipment to meet all food service and HACCP requirements.
   • Pre-prepared food items; delivered, stored, cooked/re-heated will have a positive impact to the food service area(s) and model.
   • All consumable items are either transferred from the central kitchen area in ambient / refrigerated / heated carts and/or a combination of both.
   • Additional, upright display refrigerators can be position within the area for immediate Grab n Go / Support / Storage.

3. General Food & Beverage Equipment Connections:
   • Electrical power will be required for specific campus and satellite kitchen. Electrical power to specific equipment shall range from 120 volts or 208 volts, single phase to 3 phase. Size of breakers shall be based on manufacturer’s shop drawings.
   • Mechanical connections for Hood Type I (grease hoods) and Hood type II (heat/condensate hoods) will be supplied as part of the construction of the campus and satellite kitchen. In coordination with the mechanical consultant, and nominated Kitchen Equipment Contractor. HVAC requirements, by mechanical consultant.
   • All food and beverage equipment will be sized and plumbed in coordination with plumbing consultant and KEC’s nominated plumber contractor. Direct / in direct floor sinks required for food and beverage areas – all floors to fall to a floor waste / sink. A grease trap to be located, and sized by OTHERS.
Authorities Having Jurisdiction

The Cordilleras Health Systems Replacement Project anticipates the following regulatory agencies in the review and approval of the project:

- **County of San Mateo**
  - Planning & Building Department (P&B)
  - Project Development Unit (PDU)
  - Office of Sustainability (OOS)
- **CalFire**
- **US Fish and Wildlife Service**
- **US Army Corp of Engineers**
- **Regional Water Quality Control Board**
- **California Department of Fish and Wildlife**
- **California Natural Resources Agency**
- **California Department of Health Care Services**
- **California Department of Social Services**

Applicable Code Information

**Zoning**
- Zone: (Resource Management District) San Mateo County
- Building Height: 36 feet & 3 stories max except by use permit (Chapter 22, Article 2, Section 6405 of the San Mateo County Ordinance Code)
- Setbacks: 50' front, 20' side, 20' rear. See also Zoning Regulations (Jan 2018), Sect. 6319B.
- Separations: Main & Accessory buildings to be 30' apart, minimum
- Parking: TBD
- Development Review Permit (Chapter 23)

**MHRC (Mental Health Rehab Center):**
- Occupancy Group: I-3, Condition 2
- Construction Type: I-A or I-B, Per California Building Code
- CBC 2016 - 408.1.2, Exception 1 Allows Type II-A, III-A, or V-A if floor area does not exceed 5,200 SF between fire walls of 2-Hour FR construction, with 1 or 1.5 hour rated openings.

**Supported Housing:**
- Occupancy Group: R-2.1
- Construction Type: To be determined.

**Campus Center:**
- Occupancy Group: B / A3 Mixed Use Occupancy
- Construction Type: To be determined.

**Third-Party Certification**

Per the County of San Mateo Green Building Policy (December 2017), this project is required to achieve Leadership in Energy and Environmental Design (LEED) certification, using version 4, and Zero Net Energy (ZNE). A minimum level of LEED Certified is required, and documentation is reviewed by the Green Business Certification Inc (GBCI). ZNE is based on the amount of energy produced on-site is equal to the amount of electrical and gas energy consumed by the project annually. The county does not current require third party certification for ZNE.
02 Preliminary Program
Concept Space Program

The following program represents a functional room-by-room summary of the space needs as identified by the County to date through the Conceptual Design phase. It represents a culmination and progression of thought that began with the Reference Design, and has evolved over the past several design workshops as the collective team has worked towards finding an optimal balance between MHRC and Supported Housing building footprints, site opportunities, and functional needs. Notably, it reflects a 3-wing approach to the MHRC’s, inclusive of refinements made to on-stage / off-stage separation, enlarged open common area for patients, and increased access to outdoor space variety. The Campus Center and Supported Housing programs have remained relatively unchanged, maintaining the basic room complement established with the Reference Design.

The grossing factors indicated in the space program have been aligned and tested against the various design options developed during the design phase. This implies a closer fit between the anticipated floor area identified in the space program, and the actual designed area needed to meet the net functional areas and the desired adjacencies, circulation elements, and infrastructure components.

SUMMARY

<table>
<thead>
<tr>
<th>Program</th>
<th>Net SF</th>
<th>Net SF to Gross SF Factor</th>
<th>Gross SF</th>
<th>Comments</th>
</tr>
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<tbody>
<tr>
<td>MHRC’s</td>
<td>37,075</td>
<td>1.485</td>
<td>55,056</td>
<td>Reflects five units</td>
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<tr>
<td>Campus Center</td>
<td>11,710</td>
<td>1.485</td>
<td>17,389</td>
<td></td>
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<tr>
<td>Supported Housing</td>
<td>20,820</td>
<td>1.650</td>
<td>34,353</td>
<td>Reflects three units</td>
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<tr>
<td>Total</td>
<td>69,605</td>
<td></td>
<td>106,799</td>
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## Concept Space Program - MHRC

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<thead>
<tr>
<th>Element</th>
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<th>Proposed Net SF</th>
<th>Total Net SF</th>
<th>Comments</th>
</tr>
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<tbody>
<tr>
<td><strong>1.00 Visitor Areas</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.01 Waiting / Lobby Space</td>
<td>4</td>
<td>25</td>
<td>100</td>
<td>may be integrated with central open area above with 4 to 6 half height lockers</td>
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<tr>
<td>1.02 Locker Alcove</td>
<td>1</td>
<td>5</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td><strong>SUBTOTAL</strong></td>
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<td></td>
<td>105</td>
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<tr>
<td><strong>2.00 Client Areas</strong></td>
<td></td>
<td></td>
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<tr>
<td>2.01 Bedroom, Private</td>
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<td>120</td>
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<td>2.02 Bedroom Semi-Private</td>
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<td>2.03 Bathroom</td>
<td>11</td>
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<tr>
<td>2.04 Bathroom, Accessible</td>
<td>3</td>
<td>70</td>
<td>210</td>
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<tr>
<td>2.05 Tub Room</td>
<td>1</td>
<td>120</td>
<td>120</td>
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<tr>
<td>2.06 Storage, Patient Belongings</td>
<td>0</td>
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<td>0</td>
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<tr>
<td>2.07 Meditation / Seclusion</td>
<td>1</td>
<td>120</td>
<td>120</td>
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<tr>
<td>2.08 Library / Computer Room</td>
<td>1</td>
<td>140</td>
<td>140</td>
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<tr>
<td>2.09 Exercise Room</td>
<td>1</td>
<td>120</td>
<td>120</td>
<td></td>
</tr>
<tr>
<td>2.10 Visitaton / Assess / Interview</td>
<td>2</td>
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<td>280</td>
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<tr>
<td>2.11 Toilet, Patient / Visitor</td>
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<td>50</td>
<td>50</td>
<td></td>
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<td>2.12 TV Room</td>
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<td><strong>SUBTOTAL</strong></td>
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<td>3,550</td>
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<tr>
<td><strong>3.00 Clinical Care Support Areas</strong></td>
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<td></td>
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<tr>
<td>3.01 Care Team Station, Open</td>
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<td>100</td>
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<tr>
<td>3.02 Care Team Workroom</td>
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<td>200</td>
<td></td>
</tr>
<tr>
<td>3.03 Copy/Print/Office Supply Alcove</td>
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<td>60</td>
<td>60</td>
<td></td>
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<tr>
<td>3.04 Medication Room</td>
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<tr>
<td>3.05 Kitchen</td>
<td>1</td>
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<tr>
<td>3.06 Open Dining / Activity Room</td>
<td>1</td>
<td>500</td>
<td>500</td>
<td></td>
</tr>
<tr>
<td>3.07 Enclosed Dining / Activity Room</td>
<td>1</td>
<td>350</td>
<td>350</td>
<td></td>
</tr>
<tr>
<td>3.08 Rehab / Activity Space</td>
<td>1</td>
<td>30</td>
<td>30</td>
<td></td>
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<tr>
<td>3.09 Living Room</td>
<td>3</td>
<td>250</td>
<td>750</td>
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<tr>
<td><strong>SUBTOTAL</strong></td>
<td></td>
<td></td>
<td>2,490</td>
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</tbody>
</table>

**Key Points / Notes**

- 1. Bedrooms size aligned with California Building Code, which is larger than FGI Healthcare Guideline minimums

---

### Element List for 4.00 Staff & General Support

#### 4.00 Staff & General Support

<table>
<thead>
<tr>
<th>Element</th>
<th>Proposed Quantity</th>
<th>Proposed Net SF</th>
<th>Total Net SF</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.01 Laundry, Residents</td>
<td>1</td>
<td>120</td>
<td>120</td>
<td>stackable washer and dryer (2 each)</td>
</tr>
<tr>
<td>4.02 Storage, Clean Supplies</td>
<td>0</td>
<td>10</td>
<td>0</td>
<td>included in item 4.03 below</td>
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<tr>
<td>4.03 Storage, Clean Linen</td>
<td>3</td>
<td>10</td>
<td>30</td>
<td>1 per bed wing</td>
</tr>
<tr>
<td>4.04 Soiled Holding / Hskp.</td>
<td>1</td>
<td>100</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>4.05 Storage, General</td>
<td>1</td>
<td>120</td>
<td>120</td>
<td></td>
</tr>
<tr>
<td>4.06 Office, Facility Director</td>
<td>1</td>
<td>120</td>
<td>120</td>
<td></td>
</tr>
<tr>
<td>4.07 Office, Shared, Nursing/Phys.</td>
<td>1</td>
<td>120</td>
<td>120</td>
<td></td>
</tr>
<tr>
<td>4.08 Office, Shared, Social Wk/Rehab</td>
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<td>120</td>
<td>120</td>
<td></td>
</tr>
<tr>
<td>4.09 Staff Break / Locker Room</td>
<td>1</td>
<td>140</td>
<td>140</td>
<td>integrated with Staff Workroom</td>
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<td>4.10 Toilet, Staff</td>
<td>1</td>
<td>50</td>
<td>50</td>
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<tr>
<td><strong>SUBTOTAL</strong></td>
<td></td>
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### Element List for 5.00 Building Support

#### 5.00 Building Support

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<tr>
<th>Element</th>
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<th>Proposed Net SF</th>
<th>Total Net SF</th>
<th>Comments</th>
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</thead>
<tbody>
<tr>
<td>5.01 S Allyport / Vestibule</td>
<td>1</td>
<td>50</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>5.02 Storage, Maintenance</td>
<td>0</td>
<td>30</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>5.03 Technology Room</td>
<td>1</td>
<td>100</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>5.04 Electrical Room</td>
<td>1</td>
<td>100</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>5.05 Mechanical Room</td>
<td>1</td>
<td>100</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td><strong>SUBTOTAL</strong></td>
<td></td>
<td></td>
<td>350</td>
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</table>

**TOTAL NET SQUARE FEET**

| 7,415                      | Net Square Feet   |

**GROSS SQUARE FEET**

| 11,011                      | Gross Square Feet |
### Concept Space Program - Campus Center

#### Key Points / Notes
1. For concepts with a detached Multi-purpose Room, exterior circulation is not counted within the grossing factor.
2. The receiving and loading area is assumed to be an exterior space.
3. Head-end MEP spaces are indicative of expected needs, and will be revised as the design and MEP strategies progress.

<table>
<thead>
<tr>
<th>Element</th>
<th>Proposed Quantity</th>
<th>Proposed Net SF</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1.00 Visitor Areas</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>1.01 Reception Desk</td>
<td>1</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>1.02 Waiting Space</td>
<td>4</td>
<td>25</td>
<td>100</td>
</tr>
<tr>
<td>1.03 Toilet/Lav, Accessible, Male</td>
<td>1</td>
<td>230</td>
<td>230</td>
</tr>
<tr>
<td>1.04 Toilet/Lav, Accessible, Female</td>
<td>1</td>
<td>230</td>
<td>230</td>
</tr>
<tr>
<td><strong>SUBTOTAL</strong></td>
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<td>610</td>
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<table>
<thead>
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<th>Comments</th>
</tr>
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<tbody>
<tr>
<td><strong>2.00 Staff / Administrative Offices</strong></td>
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<td></td>
</tr>
<tr>
<td>2.01 Campus Office, Administrator</td>
<td>1</td>
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<td>120</td>
</tr>
<tr>
<td>2.02 Office, Shared, Adult Resource</td>
<td>1</td>
<td>120</td>
<td>120</td>
</tr>
<tr>
<td>2.03 Office, Shared, MHRC 1</td>
<td>1</td>
<td>120</td>
<td>120</td>
</tr>
<tr>
<td>2.04 Office, Shared, MHRC 2</td>
<td>1</td>
<td>120</td>
<td>120</td>
</tr>
<tr>
<td>2.05 Office, Shared, MHRC 3</td>
<td>1</td>
<td>120</td>
<td>120</td>
</tr>
<tr>
<td>2.06 Office, Shared, MHRC 4</td>
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<td>120</td>
<td>120</td>
</tr>
<tr>
<td>2.07 Office, Shared, MHRC 5</td>
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<td>120</td>
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<tr>
<td>2.08 Office, Shared, Hotel</td>
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<td>120</td>
</tr>
<tr>
<td>2.09 Workroom, Shared, Volunteers</td>
<td>1</td>
<td>250</td>
<td>250</td>
</tr>
<tr>
<td>2.10 Dietary Director Office</td>
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<tr>
<td>2.11 Office, Facilities Director</td>
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<tr>
<td>2.12 Copy / Print / Office Supply</td>
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<tr>
<td>2.13 Consult Room</td>
<td>2</td>
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<tr>
<td><strong>SUBTOTAL</strong></td>
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<table>
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<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>3.00 Primary Care / Wellness</strong></td>
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<td></td>
</tr>
<tr>
<td>3.01 Workroom, Provider/MA</td>
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<td>150</td>
</tr>
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<td>3.02 Copy / Print / Office Supply</td>
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<td>25</td>
</tr>
<tr>
<td>3.03 Exam / Vitals Room</td>
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<td>140</td>
</tr>
<tr>
<td>3.04 Wellness Room</td>
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<td>140</td>
<td>140</td>
</tr>
<tr>
<td>3.05 Storage, Supplies / Equipment</td>
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<td>140</td>
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#### 4.00 Shared Activity Areas

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<tbody>
<tr>
<td>4.01 Chapel</td>
<td>1</td>
<td>200</td>
<td>200</td>
</tr>
<tr>
<td>4.02 Multipurpose Room</td>
<td>1</td>
<td>3,000</td>
<td>3,000</td>
</tr>
<tr>
<td>4.03 Storage, Multipurpose Room</td>
<td>1</td>
<td>400</td>
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</tr>
<tr>
<td>4.04 Art Room</td>
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</tr>
<tr>
<td>4.05 Storage, Art Room</td>
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<tr>
<td>4.06 Retail</td>
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<tr>
<td>4.07 Storage, Retail</td>
<td>1</td>
<td>30</td>
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</tr>
<tr>
<td>4.08 Toilet/Lav, Staff/Clien access.</td>
<td>1</td>
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<td>50</td>
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<tr>
<td>4.09 Alove, Drinking Fountain</td>
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#### 5.00 Dietary

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</thead>
<tbody>
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<td>5.01 Kitchen</td>
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#### 6.00 Shared Support

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<td>400</td>
<td>400</td>
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<tr>
<td><strong>SUBTOTAL</strong></td>
<td></td>
<td></td>
<td>Sub dividable into 2 smaller rooms via operable partition</td>
</tr>
<tr>
<td>6.02 Conference Room, Small</td>
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<td>200</td>
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<tr>
<td>6.03 Storage, Conference</td>
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<td>20</td>
</tr>
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<td>6.04 Staff Break Room</td>
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<tr>
<td>6.05 Staff Locker, Male, Accessible</td>
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<td>200</td>
</tr>
<tr>
<td>6.06 Staff Locker, Female, Accessible</td>
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<td>200</td>
</tr>
<tr>
<td>6.07 Toilet/Lav/Shower, Staff, Male</td>
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<tr>
<td>6.08 Toilet/Lav/Shower, Staff, Female</td>
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<td>70</td>
</tr>
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<td>6.09 Housekeeping</td>
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</tr>
<tr>
<td>6.10 Storage, General</td>
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<td>0</td>
</tr>
<tr>
<td>6.11 Eyewash, Alove</td>
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<td>15</td>
<td>15</td>
</tr>
<tr>
<td>6.12 Engineering/Maintenance Shop</td>
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<td>6.13 Storage, Maintenance Shop</td>
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## Concept Space Program - Campus Center (cont’d)

### Concept Space Program - Campus Center

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<th>Proposed Quantity</th>
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<th>Comments</th>
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<td>7.03 Electrical Room</td>
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<td>7.04 Main Technology Room</td>
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<td>7.05 Main Electrical Room</td>
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<tr>
<td>7.06 Mechanical Room</td>
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<td><strong>1,100</strong></td>
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</table>

**TOTAL NET SQUARE FEET** = 11,710 Net Square Feet

Grossing Factor: Walls × 1.1 = 12,881

Grossing Factor: Circulation × 1.35 = 17,389

**GROSS SQUARE FEET** = 17,389 Gross Square Feet
## Concept Space Program - Supported Housing

### Key Points / Notes
1. Semi-private Bedroom size aligned with California Building Code, which is larger than FGI Healthcare Guideline minimums.
2. Private Bedroom size enlarged (relative to MHRC’s) to work within the planning module of a Semi-Private Room.

### 1.00 Visitor Areas
- **1.01 Lobby / Elevator Vestibule**: 1 space, 150 sf.
- **1.02 Visitation Room**: 1 space, 120 sf.
- **1.03 Toilet/Lav, Accessible**: 2 spaces, 50 sf each, total 100 sf.

**SUBTOTAL**: 370 sf.

### 2.00 Client Areas
- **2.01 Bedroom, Private**: 5 spaces, 140 sf each, total 700 sf.
- **2.02 Bedroom, Semi-Private**: 7 spaces, 200 sf each, total 1,400 sf.
- **2.03 Bathroom**: 6 spaces, 50 sf each, total 300 sf.
- **2.04 Bathroom, Accessible**: 6 spaces, 70 sf each, total 420 sf.
- **2.05 Tub Room, Accessible**: 1 space, 140 sf.
- **2.06 Storage, Belongings**: 2 spaces, 35 sf each, total 60 sf.
- **2.07 Meditation / Quiet Room**: 1 space, 140 sf.
- **2.08 Library / Computer**: 1 space, 140 sf.

**SUBTOTAL**: 3,300 sf.

### 3.00 Clinical / Care Support Areas
- **3.01 Care Team Workroom**: 1 space, 240 sf.
- **3.02 Office, Director**: 1 space, 120 sf.
- **3.03 Office, Social Work/Staff**: 2 spaces, 120 sf each, total 240 sf.
- **3.04 Copy/Print/Office Supply Alcove**: 1 space, 60 sf.
- **3.05 Medication Room**: 1 space, 120 sf.
- **3.06 Therapy / Interview**: 1 space, 120 sf.

**SUBTOTAL**: 480 sf.

### 4.00 Group Areas
- **4.01 Kitchen**: 1 space, 380 sf.
- **4.02 Dining Room**: 1 space, 760 sf.
- **4.03 Storage, Rehab / Activity**: 1 space, 50 sf.
- **4.04 Living Room**: 2 spaces, 600 sf.

**SUBTOTAL**: 1,790 sf.

### 5.00 Staff & General Support
- **5.01 Laundry, Residents**: 1 space, 140 sf.
- **5.02 Storage, Clean Supplies / Linen**: 1 space, 120 sf.
- **5.03 Storage, General**: 1 space, 120 sf.
- **5.04 Staff Break / Locker Room**: 1 space, 120 sf.
- **5.05 Toilet/Lav, Staff, Accessible**: 1 space, 50 sf.
- **5.06 Housekeeping**: 1 space, 50 sf.

**SUBTOTAL**: 650 sf.

### 6.00 Building Support
- **6.01 Technology Room**: 1 space, 100 sf.
- **6.02 Electrical Room**: 1 space, 100 sf.
- **6.03 Mechanical (shaft space)**: 1 space, 150 sf.

**SUBTOTAL**: 350 sf.

**TOTAL NET SQUARE FEET**: 6,940 sf

**Grossing Factor: Walls**: 1.1

**Net Square Feet**: 7,634 sf

### Comments
- 4.01 Kitchen: One space for dining and activity use at 40sf per patient; operable partition to allow for use of two spaces.
- 4.02 Dining Room: One space for dining and activity use at 40sf per patient; operable partition to allow for use of two spaces.
- 4.03 Storage, Rehab / Activity: One space for storage and activity use at 40sf per patient.
- 4.04 Living Room: One space for living use at 30sf per patient.

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Cordilleras Health Systems Replacement Project | Concept Design Report | 34
Site Program

The site programs incorporated within the Cordilleras Health System Replacement Project will provide opportunities for a range of activities such as private therapy sessions and outdoor recreation. The design team held a workshop with key stakeholders to determine which programs would be most beneficial to clients, visitors and staff. The following site programs were recommended for inclusion within the campus core:

- Community Garden - of similar size as the existing garden
- Half-size Basketball Court - with flexibility to be used for other court activities like volleyball
- Meditation garden – potentially combined with a small amphitheater
- Looped Creek Walking Path – with small breakout fitness areas and interpretive signage
- Open Lawn

- Sheltered Group Gather/ Community Table
- Forest Gathering Area
- Animal Yard
- Small group gathering areas
- Hammock Grove
- Picnic Areas

In addition, each MHRC building will have a dedicated, enclosed courtyard and outdoor spaces for client's exclusive use. Each courtyard will include:

- Looped walking Path
- Small Seating Areas
- Gardening Spaces
- Small Group Gathering Areas
- Aesthetically pleasing planting and garden spaces
- Breakout space from indoor dining room
## 03 Preliminary FF&E List
The following preliminary furniture and equipment list represents our team’s initial pass at summarizing reasonable and realistic needs on a room-by-room basis. As furniture and equipment were not primary discussion points during the Concept Design phase, this list has been generated using the following input and methodology:

- Furniture, equipment, and detailed room layout information included with the Reference Design was used as a starting point and basis for this initial list.
- Modifications made to the space program during the Concept Design phase workshops, including adjustments to room function, room quantity, or room size, are reflected in the furniture and equipment list.
- Our team’s food service consultant has been engaged, and an initial list of equipment for the various kitchen spaces has been provided.

<table>
<thead>
<tr>
<th>Room Type</th>
<th>Furniture</th>
<th>Equipment</th>
<th>Quantity</th>
<th>Comments</th>
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</thead>
<tbody>
<tr>
<td>Lobby / Waiting Area</td>
<td>Lounge chair</td>
<td>Side table</td>
<td>3</td>
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<tr>
<td>Locker Alcove</td>
<td>Locker (1/2 height)</td>
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<tr>
<td>Private Bedroom</td>
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<td>Will depend on layout to determine fit</td>
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<td>Semi-private Bedroom</td>
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<td>Will depend on layout to determine fit</td>
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<td>Washroom (Bathroom)</td>
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<tr>
<td>Tub Room</td>
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</tr>
<tr>
<td>Storage, Patient Belongings</td>
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<td>Medicine Room</td>
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<td>Atrium</td>
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Architectural Furniture, Furnishings & Equipment

April 27, 2018
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<tr>
<td></td>
<td>Task chair</td>
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<td>Computer</td>
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<td>Computer</td>
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## Room Inventory

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<td>Storage / file cabinet</td>
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<td>Bar stool (2' height)</td>
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<tr>
<td>Staff Room, Female</td>
<td>Bench</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Bar stool (2' height)</td>
<td>20</td>
<td>10</td>
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</tr>
<tr>
<td>Kitchen</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Note: Refer to separate food service design brief, which includes mandatory equipment</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Conference Room, Medium</td>
<td>Conference table</td>
<td>1</td>
<td>Could be two large conference tables instead of several smaller tables depends on flexibility required</td>
<td></td>
</tr>
<tr>
<td>Conference Room, Small</td>
<td>Conference table</td>
<td>1</td>
<td>Could be one large conference table instead of several smaller tables depending on flexibility required</td>
<td></td>
</tr>
<tr>
<td>Maintenance Room</td>
<td>Track</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Chair</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Work materials</td>
<td>Track</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Maintenance Room</td>
<td>Track</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Chair</td>
<td></td>
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<tr>
<td>Work materials</td>
<td>Track</td>
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**Cordilleras Health Systems Replacement Project | Concept Design Report | 40**
<table>
<thead>
<tr>
<th>Room</th>
<th>Furniture</th>
<th>Equipment</th>
<th>Quantity</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supported Housing (3 units)</td>
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<td></td>
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<tr>
<td>Lobby</td>
<td></td>
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</tr>
<tr>
<td>Main entrance / Reception</td>
<td>Desk</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Room</td>
<td>Lounge chair</td>
<td></td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Side table</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Computer</td>
<td></td>
<td>1</td>
<td>Consider laptops or tablets instead, for portability and security?</td>
</tr>
<tr>
<td>Private Bedroom</td>
<td>Platform bed (psychiatric)</td>
<td></td>
<td>2</td>
<td>Note: 7 instances of this room type</td>
</tr>
<tr>
<td></td>
<td>Desk</td>
<td></td>
<td>2</td>
<td>Will depend on layout to determine fit</td>
</tr>
<tr>
<td></td>
<td>Wardrobe cabinet</td>
<td></td>
<td>2</td>
<td>Will be built in overall, depending on design</td>
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<tr>
<td>Semi-private Bedroom</td>
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<td>2</td>
<td>Note: 9 instances of this room type</td>
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<td></td>
<td>Desk</td>
<td></td>
<td>2</td>
<td>Will depend on layout to determine fit</td>
</tr>
<tr>
<td></td>
<td>Wardrobe cabinet</td>
<td></td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lounge chair</td>
<td></td>
<td>2</td>
<td>Will depend on layout to determine fit</td>
</tr>
<tr>
<td>Washroom, Patient / Visitor</td>
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<td></td>
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<tr>
<td></td>
<td>Desk</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Desk chair (foot base)</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Side table</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Computer</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Storage, Belongings</td>
<td>Sofa</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Meditation</td>
<td>Desk</td>
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<tr>
<td></td>
<td>Lounge chair</td>
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<tr>
<td></td>
<td>Side table</td>
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<tr>
<td>Exercise Room</td>
<td>Treadmill</td>
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<td></td>
<td>Stationary bicycle</td>
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</tr>
<tr>
<td>Office, Director</td>
<td>Desk</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Task chair</td>
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</tr>
<tr>
<td></td>
<td>Swivel chair</td>
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<td>Lateral file</td>
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<td></td>
<td>Printer</td>
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<td>Keyboard tray</td>
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<td>Room</td>
<td>Furniture</td>
<td>Equipment</td>
<td>Quantity</td>
<td>Comments</td>
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<tr>
<td>-----------------------------</td>
<td>-----------------</td>
<td>-----------------</td>
<td>----------</td>
<td>---------------------------</td>
</tr>
<tr>
<td>Office, Shared</td>
<td>Chair</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Task Chair</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Library</td>
<td>Chair</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Task Chair</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Storage</td>
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</tr>
<tr>
<td>Type</td>
<td></td>
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</tr>
<tr>
<td>Kitchen</td>
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<td></td>
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</tr>
<tr>
<td>Entree Dining/Alcove Room</td>
<td>Chair</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Task Chair</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staircase Entry</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Living Room</td>
<td>Sofa</td>
<td></td>
<td>2</td>
<td>(Note: 2 instances of this room type)</td>
</tr>
<tr>
<td>Task Chair</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staircase (Hallway)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task Chair</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Entry Table</td>
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<tr>
<td>Appendix</td>
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<tr>
<td>Chair Style</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>General Storage</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Staff Break Room / Locker</td>
<td>Chair</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staircase (Hallway)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task Chair</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staircase</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Office Break Room</td>
<td>Chair</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task Chair</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coffee Maker</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Coffee Maker</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Lunch (1/2 Height)</td>
<td></td>
<td></td>
<td>12</td>
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<tr>
<td>Washing, Staff</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Housekeeping</td>
<td>Map basket</td>
<td></td>
<td>1</td>
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<tr>
<td>Housekeeping</td>
<td>Mop bucket</td>
<td></td>
<td>1</td>
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</table>

Cordilleras Health Systems Replacement Project | Concept Design Report | 42
## Kitchen Equipment

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>QUANTITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHRC Satellite Kitchen (5 units)</td>
<td></td>
</tr>
<tr>
<td>Dry Store Area (consumable and non-consumables) – Adjustable Shelving</td>
<td>1</td>
</tr>
<tr>
<td>Upright Freezer</td>
<td>1</td>
</tr>
<tr>
<td>Upright Refrigerator</td>
<td>1</td>
</tr>
<tr>
<td>Hand Sinks</td>
<td>1</td>
</tr>
<tr>
<td>Preparation Benches with Sink</td>
<td>1</td>
</tr>
<tr>
<td>Extraction Canopy w/ supply air</td>
<td>1</td>
</tr>
<tr>
<td>Combi Oven – Static w/ sheet pan stand</td>
<td>1</td>
</tr>
<tr>
<td>Induction Counter Unit</td>
<td>1</td>
</tr>
<tr>
<td>Spreader Table</td>
<td>1</td>
</tr>
<tr>
<td>Mobile Hot Box</td>
<td>1</td>
</tr>
<tr>
<td>Carts/dolly’s for staging</td>
<td>TBC</td>
</tr>
<tr>
<td>Mobile work table with shelves under</td>
<td>1</td>
</tr>
<tr>
<td>U / counter ware wash unit – low temp unit</td>
<td>1</td>
</tr>
<tr>
<td>3-Compartment Sink w/ tapware</td>
<td>1</td>
</tr>
<tr>
<td>Tubular wall shelves – single tier</td>
<td>1</td>
</tr>
<tr>
<td>Janitors Closet – Detergent Cupboard, cleaners sink, mop &amp; broom holder</td>
<td>1</td>
</tr>
<tr>
<td>Refuse Area – compost, landfill, recycle</td>
<td>1</td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td>QUANTITY</td>
</tr>
<tr>
<td>--------------------------------------------------</td>
<td>----------</td>
</tr>
<tr>
<td><strong>SH Campus Kitchen</strong></td>
<td></td>
</tr>
<tr>
<td>Dry Store Room (consumable and non-consumables) - Adjustable Shelving</td>
<td>1</td>
</tr>
<tr>
<td>Walk in Freezer - Adjustable Shelving</td>
<td>1</td>
</tr>
<tr>
<td>Walk in Refrigerator - Adjustable Shelving</td>
<td>1</td>
</tr>
<tr>
<td>Blast Chiller</td>
<td>1</td>
</tr>
<tr>
<td>Ice Machine &amp; Ice Caddy</td>
<td>1</td>
</tr>
<tr>
<td>Hand Sinks</td>
<td>1</td>
</tr>
<tr>
<td>Preparation Benches with Sinks</td>
<td>1</td>
</tr>
<tr>
<td>Mixer</td>
<td>1</td>
</tr>
<tr>
<td>Slicer</td>
<td>1</td>
</tr>
<tr>
<td>Vacuum Machine &amp; bags</td>
<td>1</td>
</tr>
<tr>
<td>Extraction Canopy w / supply air</td>
<td>1</td>
</tr>
<tr>
<td>Combi Ovens - Static &amp; Roll In Units</td>
<td>3</td>
</tr>
<tr>
<td>Braising Pan - Standard or Pressurized</td>
<td>1</td>
</tr>
<tr>
<td>Burner Range</td>
<td>1</td>
</tr>
<tr>
<td>Spreader Tables</td>
<td>3</td>
</tr>
<tr>
<td>Mobile Hot Boxes</td>
<td>2</td>
</tr>
<tr>
<td>Cart/dolly's for staging</td>
<td>TBC</td>
</tr>
<tr>
<td>Mobile work tables with shelves under</td>
<td>3</td>
</tr>
<tr>
<td>Upright refrigeration cabinets</td>
<td>1</td>
</tr>
<tr>
<td>Inlet bench with pre-rinse sink</td>
<td>1</td>
</tr>
<tr>
<td>Pre-rinse spray with tapware</td>
<td>1</td>
</tr>
<tr>
<td>Condensate Canopy</td>
<td>1</td>
</tr>
<tr>
<td>Rack Conveyor Ware Washer - high chamber unit</td>
<td>1</td>
</tr>
<tr>
<td>Roller Outlet bench with tubular shelves under</td>
<td>1</td>
</tr>
<tr>
<td>3-Compartment Sink w / tapware</td>
<td>1</td>
</tr>
<tr>
<td>Tubular wall shelves - single tier</td>
<td>2</td>
</tr>
<tr>
<td>Janitors Closet = Detergent Cupboard, cleaners sink, mop &amp; broom holder</td>
<td>1</td>
</tr>
<tr>
<td>Refuse Area = compost, landfill, recycle</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>QUANTITY</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SH Satellite Kitchen</strong></td>
<td></td>
</tr>
<tr>
<td>Dry Store Area (consumable and non-consumables) - Adjustable Shelving</td>
<td>1</td>
</tr>
<tr>
<td>Upright Freezer</td>
<td>1</td>
</tr>
<tr>
<td>Upright Refrigerator</td>
<td>1</td>
</tr>
<tr>
<td>Hand Sinks</td>
<td>1</td>
</tr>
<tr>
<td>Preparation Benches with Sink</td>
<td>1</td>
</tr>
<tr>
<td>Extraction Canopy w / supply air</td>
<td>1</td>
</tr>
<tr>
<td>Combi Ovens - Static w / sheet pan stand</td>
<td>1</td>
</tr>
<tr>
<td>Induction Counter Unit</td>
<td>1</td>
</tr>
<tr>
<td>Spreader Tables</td>
<td>1</td>
</tr>
<tr>
<td>Mobile Hot Boxes</td>
<td>1</td>
</tr>
<tr>
<td>Cart/dolly's for staging</td>
<td>TBC</td>
</tr>
<tr>
<td>Mobile work tables with shelves under</td>
<td>2</td>
</tr>
<tr>
<td>Upright refrigeration cabinets</td>
<td>1</td>
</tr>
<tr>
<td>Inlet bench with pre-rinse sink</td>
<td>1</td>
</tr>
<tr>
<td>Pre-rinse spray with tapware</td>
<td>1</td>
</tr>
<tr>
<td>U / counter ware wash unit - low temp unit</td>
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<td>3-Compartment Sink w / tapware</td>
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</tr>
<tr>
<td>Tubular wall shelves - single tier</td>
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</tr>
<tr>
<td>Janitors Closet = Detergent Cupboard, cleaners sink, mop &amp; broom holder</td>
<td>1</td>
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<tr>
<td>Refuse Area = compost, landfill, recycle</td>
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</table>
04 Concept Site Plan
Solar & Shading Study - April 27

10:00am

12:00pm

2:00pm

4:00pm
Solar & Shading Study - Spring Equinox (March 20)

10:00am

12:00pm

2:00pm

4:00pm
Solar & Shading Study - Summer Solstice (June 21)

10:00am

12:00pm

2:00pm

4:00pm
Solar & Shading Study - Fall Equinox (September 22)

<table>
<thead>
<tr>
<th>Time</th>
<th>Diagram 1</th>
<th>Diagram 2</th>
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<tr>
<td>10:00am</td>
<td><img src="image1" alt="Diagram 1, 10:00am" /></td>
<td><img src="image2" alt="Diagram 2, 10:00am" /></td>
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<tr>
<td>12:00pm</td>
<td><img src="image3" alt="Diagram 1, 12:00pm" /></td>
<td><img src="image4" alt="Diagram 2, 12:00pm" /></td>
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<tr>
<td>2:00pm</td>
<td><img src="image5" alt="Diagram 1, 2:00pm" /></td>
<td><img src="image6" alt="Diagram 2, 2:00pm" /></td>
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<td>4:00pm</td>
<td><img src="image7" alt="Diagram 1, 4:00pm" /></td>
<td><img src="image8" alt="Diagram 2, 4:00pm" /></td>
</tr>
</tbody>
</table>
Solar & Shading Study - Winter Solstice (December 21)

10:00am

2:00pm

12:00pm

4:00pm
These vignettes depict the amount of solar radiation energy on each of the buildings’ roof surface, measured in kBtu/ft². The purpose of these diagrams is to show the areas of roof that has a better potential for locating of photovoltaic panels.

The building roof form, for this purpose, is shown flat. As with the shading studies, the 2 MHRCs to the southwest will have reduced radiation due to the retaining wall and tree coverage.
Solar Insolation on Wall Surfaces

These vignettes depict the amount of solar radiation energy on each of the buildings’ walls, measured in kbtu/ft². The purpose of these diagrams is to understand sun exposure of the exterior enclosure as we begin to look at building fenestration (windows) in the Schematic Design phase.
**Concept Earthwork Analysis**

**Cut/Fill Summary**
- Site Area: 298,075
- Cut: 43,616
- Fill: 35,003 cu yd
- Net Cut: 8,613 cu yd

*Retaining Wall Face Area*: 37,805 sf
Concept Utility Plans - Water System

Alternate 1 - Gravity Feed From Existing Water Tank Conceptual Layout

Alternate 2 - Stand-alone Pump Station Conceptual Layout
Concept Utility Plans - Stormwater System

Storm Drainage Collection & Treatment Conceptual Layout
Concept Utility Plans - Sanitary Sewer System

Alternate 1 - Sanitary Sewer Conceptual Layout

Alternate 2 - Sanitary Sewer Conceptual Layout
Site Parking Analysis

This preliminary parking study is based on the January 2018 San Mateo County Zoning Code and the concept floor plans for the MHRC and Supported Housing buildings presented in this Concept Phase Report. Section 6619 “Parking Spaces Required” of the Zoning Code shows different parking count formulas based on the use of the facility. For this project, we have assessed that “Convalescent Homes, Skilled Nursing Facilities, Hospitals” (requiring 1 stall per 5 beds), “Dance Halls, Assembly Halls Without Fixed Seats, Exhibition Halls, Meeting Halls, Clubs, Card Rooms” (requiring 4 stalls per 100 sf of floor area), and “Medical or Dental Clinic, Banks, Business Offices, Professional Offices” (requiring 1 stall per 200 sf floor area) are applicable, and are broken down in the diagrams on this page.

The bridging documents from HGA suggest 125 stalls for this facility, presumably only based on a parking demand study (reference page 195 of the bridging documents program) and not the zoning code. Further discussions with County of San Mateo Planning & Building is needed to clarify parking requirements. Existing parking counts for Fire Station #18 and Canyon Oaks Youth Center is assumed to remain as existing.

<table>
<thead>
<tr>
<th>Building Level</th>
<th>Parking Spaces</th>
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<tbody>
<tr>
<td>SH 1st Floor</td>
<td>73,24 stalls (73)</td>
</tr>
<tr>
<td>SH Floors 2 - 4</td>
<td>11.4 stalls (11)</td>
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<tr>
<td>MHRC 1st Floor</td>
<td>3.2 stalls (3)</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Building Level</th>
<th>Parking Spaces</th>
</tr>
</thead>
<tbody>
<tr>
<td>SH 1st Floor</td>
<td>58 stalls</td>
</tr>
<tr>
<td>SH Floors 2 - 4</td>
<td>15.6 stalls (16)</td>
</tr>
<tr>
<td>MHRC 1st Floor</td>
<td>27 stalls</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Building Level</th>
<th>Parking Spaces</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHRC's</td>
<td>70 stalls</td>
</tr>
<tr>
<td>Supported Housing</td>
<td>132 stalls</td>
</tr>
<tr>
<td>Total stalls for CHSR:</td>
<td>202 stalls</td>
</tr>
</tbody>
</table>
05 Concept Site Phasing
1 - SITEWORK - Site Clearing / Rough Grading / Utilities

- Site Clearing
- Temporary Barrier
- Reduced parking capacity
- Relocation of building service entrance
- Existing main entry unchanged
- Existing recreation area reduced
- Existing auditorium remains in service

Client Bed Count

<table>
<thead>
<tr>
<th></th>
<th>Independent</th>
<th>This Phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing</td>
<td>49</td>
<td>49</td>
</tr>
<tr>
<td>New</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Secured</td>
<td></td>
<td>57</td>
</tr>
<tr>
<td>Existing</td>
<td>68</td>
<td>68</td>
</tr>
<tr>
<td>New</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>117</td>
<td>117 - 20 = 97</td>
</tr>
<tr>
<td></td>
<td></td>
<td>137</td>
</tr>
</tbody>
</table>
2 - NEW CONSTRUCTION - All Buildings

- Building loop road with temporary lollipop configuration
- Demo/Relocation of small structures
- Construct 5 new MHRCs
- Construct new Supported Housing & Campus Center
- Temporary barrier adjusted and reduced
- Existing building and reaction area in use during construction

Client Bed Count

<table>
<thead>
<tr>
<th></th>
<th>Independent</th>
<th>This Phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing</td>
<td>Existing 49</td>
<td>49</td>
</tr>
<tr>
<td>New</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Secured</td>
<td>Existing 68</td>
<td>68</td>
</tr>
<tr>
<td>New</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>117</strong></td>
<td><strong>117 - 20 = 97</strong></td>
</tr>
</tbody>
</table>
3 - DEMOLISH EXISTING BUILDING

- Client Relocation to new buildings
- Site clearing in center
- Demolish existing building
- Temporary Barrier remains in service until demolition and site clearing complete

Client Bed Count

<table>
<thead>
<tr>
<th></th>
<th>This Phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing Independent</td>
<td>49</td>
</tr>
<tr>
<td>New Secured</td>
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<tr>
<td>Existing Secured</td>
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</tr>
<tr>
<td>New</td>
<td>0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>117</td>
</tr>
</tbody>
</table>
4 - COMPLETION - Finish Grading / Landscaping

- Complete loop road & parking
- Final site work and landscaping
- Final grading

Client Bed Count

<table>
<thead>
<tr>
<th></th>
<th>Independent</th>
<th>This Phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing</td>
<td>49</td>
<td>49</td>
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<tr>
<td>New</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Secured</td>
<td></td>
<td>57</td>
</tr>
</tbody>
</table>

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing</td>
<td>68</td>
<td>68</td>
</tr>
<tr>
<td>New</td>
<td>0</td>
<td>80</td>
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<tr>
<td>TOTAL</td>
<td>117</td>
<td>117 - 20 = 97</td>
</tr>
<tr>
<td></td>
<td></td>
<td>137</td>
</tr>
</tbody>
</table>
07  Concept Floor Plans
Alternate Floor Plan Studies
Alternate Floor Plan Studies (cont’d)
The MHRC plan selected as basis of design for this Concept Phase is the result of collaborative dialogue and the analysis of multiple options and iterations in tandem with distinct site approaches.

- The “three-finger” configuration satisfied several desired benefits.
- Foremost, the design engaged the canyon edges allowing for improved views and open green space on the whole site, an approach which provided several logistical benefits.
- Clear gradation between private patient space, communal patient space, and staff-only space.
- Potential for a larger client courtyard and 2 addition courtyard spaces for more patient, choice, variety, and access to nature.
- Enclosed Dining / Activity Room in addition to a large open activity area.
- Distinct Entries – “on-stage / off-stage” separation.

The evolution of the MHRC plan will continue in the schematic design phase to advance the desired balance between functionality, Safety, Campus Engagement, Logistics and the Therapeutic Platform to meet the desired outcomes.

10,850 GSF
Supported Housing Plans

The Campus Center and Supported Housing plan and location are integral in achieving a single phase approach. The Campus Center and Supported housing plan selected as basis of design for this Concept Phase is a hybrid of two similar studies in this location that were presented in Workshop Two (2). Advantages of both options were combined to form a single direction for development in the schematic design phase.

Some desired benefits of this configuration are:

**Campus Center**
- Loading at Northwest with Back-of-House Circulation
- Kitchen Located with Service spaces and separated from Admin, Clinical functions.
- A single point of arrival on the ground level
- More pronounced lobby / gathering space
- Conference Rooms accessible from the lobby for added flexibility.
- A detached multi-purpose room

**Supported Housing**
- Back-of-House Circulation
- 2 Distinct Bed Wings
- Central Sub-Dividable Dining / Activity Room with view, daylight, outdoor space.
07 Appendix
WORKSHOP 1 Agenda

Day 1 - Wednesday March 21

<table>
<thead>
<tr>
<th>AM</th>
<th>9</th>
<th>1. Introductions</th>
<th>20 Mins</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:20</td>
<td>2.</td>
<td>Core Team &amp; Communications</td>
<td>20 Mins</td>
</tr>
<tr>
<td>9:40</td>
<td>3.</td>
<td>Project Schedule</td>
<td>40 Mins</td>
</tr>
<tr>
<td>10:20</td>
<td>4.</td>
<td>Break</td>
<td>10 Mins</td>
</tr>
<tr>
<td>10:30</td>
<td>5.</td>
<td>Program Validation</td>
<td>90 Mins</td>
</tr>
<tr>
<td>PM</td>
<td>12</td>
<td>6. Lunch</td>
<td>60 Mins</td>
</tr>
<tr>
<td>1:00</td>
<td>7.</td>
<td>Sustainable Design Strategies</td>
<td>90 Mins</td>
</tr>
<tr>
<td>2:30</td>
<td>8.</td>
<td>Break</td>
<td>15 Mins</td>
</tr>
<tr>
<td>2:45</td>
<td>9.</td>
<td>Biophilic Design + Domesticity</td>
<td>45 Mins</td>
</tr>
<tr>
<td>3:30</td>
<td>10.</td>
<td>Food for Thought</td>
<td>30 Mins</td>
</tr>
</tbody>
</table>

Day 2 - Thursday March 22

<table>
<thead>
<tr>
<th>AM</th>
<th>9</th>
<th>11. Visioning + Goal Setting</th>
<th>80 Mins</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:20</td>
<td>12.</td>
<td>Site Design</td>
<td>80 Mins</td>
</tr>
<tr>
<td>11:40</td>
<td>13.</td>
<td>Site Tours</td>
<td>10 Mins</td>
</tr>
<tr>
<td>11:50</td>
<td>14.</td>
<td>Recap &amp; Next Steps</td>
<td>10 Mins</td>
</tr>
</tbody>
</table>

1. Introductions

2. Core Team & Communications
### Project Organization

#### Core Leadership Team
- **Debbie Bazan**
  - Director
- **Sam Lin**
  - Manager
- **Jim Mosier**
  - Project Manager
- **Larry Funk**
  - Special Projects Coordinator
- **Terry Wilcox**
  - Clinical Services Manager

#### Behavioral Health Specialists
- **Tim Rommel**, AIA, ACIA, AREC
  - Director of Design
- **David Sass**, AIA, LEED AP, LEAN
  - Behavioral Health Planner/Programmer
- **Will Ransom**, RA
  - Behavioral Health Planner/Programmer

#### Team Specialists
- **Tim Rommel**, AIA, ACHA, MRAIC
  - Director of Design
- **David Sass**, RA, LEED AP, LEAN
  - Behavioral Health Planner/Programmer
- **Will Ransom**, RA
  - Behavioral Health Planner/Programmer

#### Implementation Team
- **Keith Hammelman**, PE
  - Project Engineer Leader
- **Steve Moreland**, PE
  - Lead Senior Civil Engineer - KPFF
- **Manuela King**, LEED AP
  - Landscape Architect - RHAA

#### Steering Committee
- **Behavioral Health Specialists**
  - **Michael Smith**, AIA, LEED AP BD+C
    - Principal-in-Charge
  - **Deepa Balgi**, Assoc. AIA
    - Project Manager
  - **Carey Woo**, AIA, CDI, LEED AP BD+C
    - Project Architect
  - **John Phung**, AIA, CDI, LEED AP BD+C
    - Project Designer / Sustainability Leader
  - **JT Hsu**, AIA, LEED AP BD+C
    - Project Coordinator
  - **Carey Woo**, AIA, CDI, LEED AP BD+C
    - Project Architect
  - **John Phung**, AIA, CDI, LEED AP BD+C
    - Project Designer / Sustainability Leader
  - **JT Hsu**, AIA, LEED AP BD+C
    - Project Coordinator

#### Technical Team
- **Christof Madeiski**, Assoc. AIA
  - Construction Administration Leader

### Concept Design Phase Scope

#### 3. Project Schedule
CEQA Requirements

Project Description
- Functional Floor Plans
- Site Development Plan
- Phasing
- Mass Grading
- Utilities
- Stormwater Treatment and Detention
- Impact to Endangered Species Habitats
- Impact to Stream Banks

Environmental Permitting
- US Army Corp of Engineers, Section 404
- Regional Water Quality Control Board, Section 401
- California Dept. of Fish and Wildlife -- Lake and Streambed Alteration Agreement
- Nationwide Permit
- U.S. Fish and Wildlife

Planning & Building Permitting

County Planning Approvals
- Zone RM, Height Limit, Process for Exception
- Parking

County Building Approvals

Erosion Control & Tree Protection Pre-Site Inspection

Stormwater Drainage and Encroachment Permit
4. Break
We will start back at 10:30am

5. Program Validation

### Program Summary and Comparison (from Design / Build proposal)

<table>
<thead>
<tr>
<th>Written Program in RFP</th>
<th>Illus. Program in Ref. Design</th>
<th>Cannon Program from Pursuit</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHRC’s 58,644</td>
<td>MHRC’s 59,080</td>
<td>MHRC’s 54,500</td>
</tr>
<tr>
<td>Campus Center 17,580</td>
<td>Campus Center 17,318</td>
<td>Campus Center 17,246</td>
</tr>
<tr>
<td>Supportive Housing 33,415</td>
<td>Supportive Housing 31,409</td>
<td>Supportive Housing 29,140</td>
</tr>
<tr>
<td>Total 109,639</td>
<td>Total 107,807</td>
<td>Total 100,885</td>
</tr>
</tbody>
</table>

- More closely align room sizes with California Building Code and FGI Healthcare Guidelines
  - Align bedroom sizes with California Building Code
    - CBC calls for 120sf Private / 200sf Semi
    - Note: FGI calls for 100sf Private / 160sf Semi
  - Align Activity / Dining with FGI Healthcare Guidelines
    - Total of 40sf per patient
    - Note: CBC calls for 30sf per patient

- Actual Area as Designed in Bridging Documents: 116,981 sf
- Actual Area as Designed in Design/Build Proposal: 104,325 sf
MHRC Program and Layout

MHRC – Key Program ?’s

- Bedroom Size
- Activity / Dining
  - Total area
  - # of Rooms
  - Access to Exterior
- Kitchen Size
- Laundry, Tub, Meditation Sizes
- TV / Quiet & Exercise Rooms
  - Total area
  - # of Rooms
  - Access to Exterior
- Storage – Size and Distribution

MHRC – Benches

<table>
<thead>
<tr>
<th>Key Room Benchmark</th>
<th>California Building Code (V2.5)</th>
<th>MHRC Guideline</th>
<th>Minimum Area Required from V2 Code</th>
<th>Physical Plan (Outside)</th>
<th>V2 Code Area (Outside)</th>
<th>MHRC Area (Outside)</th>
<th>V2 Code Area (Inside)</th>
<th>MHRC Area (Inside)</th>
<th>V2 Code Area (Inside)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bedroom</strong></td>
<td>364 sq ft</td>
<td>144 sq ft</td>
<td>45 sq ft</td>
<td>364 sq ft</td>
<td>144 sq ft</td>
<td>134 sq ft</td>
<td>364 sq ft</td>
<td>144 sq ft</td>
<td>134 sq ft</td>
</tr>
<tr>
<td><strong>Bathroom</strong></td>
<td>48 sq ft</td>
<td>24 sq ft</td>
<td>0 sq ft</td>
<td>48 sq ft</td>
<td>24 sq ft</td>
<td>0 sq ft</td>
<td>48 sq ft</td>
<td>24 sq ft</td>
<td>0 sq ft</td>
</tr>
<tr>
<td><strong>Kitchen</strong></td>
<td>120 sq ft</td>
<td>48 sq ft</td>
<td>0 sq ft</td>
<td>120 sq ft</td>
<td>48 sq ft</td>
<td>0 sq ft</td>
<td>120 sq ft</td>
<td>48 sq ft</td>
<td>0 sq ft</td>
</tr>
<tr>
<td><strong>Laundry</strong></td>
<td>48 sq ft</td>
<td>24 sq ft</td>
<td>0 sq ft</td>
<td>48 sq ft</td>
<td>24 sq ft</td>
<td>0 sq ft</td>
<td>48 sq ft</td>
<td>24 sq ft</td>
<td>0 sq ft</td>
</tr>
<tr>
<td><strong>Meditation</strong></td>
<td>0 sq ft</td>
<td>0 sq ft</td>
<td>0 sq ft</td>
<td>0 sq ft</td>
<td>0 sq ft</td>
<td>0 sq ft</td>
<td>0 sq ft</td>
<td>0 sq ft</td>
<td>0 sq ft</td>
</tr>
</tbody>
</table>

MHRC – Reference Design

Key Objectives / Drivers

- 4-bed clusters
- Integrated living rooms
- Distributed staff
- Access to outdoors
- Corridor sightlines

12,375 sf
135' x 151'
MHRC – Design / Build Proposal

Program Impacts

- Align bedroom sizes with California Building Code
  - CBC calls for 120sf Private / 200sf Semi
  - Note: FGI calls for 100sf Private / 160sf Semi

- Align Activity / Dining with FGI Healthcare Guidelines
  - Total of 40sf per patient (1 @ 640sf vs 2 @ 450sf)
  - Note: CBC calls for 30sf per patient

- Reduce Tub, Laundry, Meditation, Exercise from 130 or 140 sf to 120 sf
  - 120sf is larger than CBC or FGI Guidelines for rooms where minimums are given (often 100sf)

- Reduce to 1 TV / Quiet Room (per Addendum)

- Soiled / Hskp. Increased to 100sf

10,900 sf (1,475 sf smaller)
124' x 150' (11' narrower)

---

MHRC – Other Opportunities?

Engaging the Hillside

Alternate Site Concept

- Engage MHRC’s into hillsides
- Explore more on-stage / off-stage separation
- Consider open common area / separate Activity
- Consider alternate outdoor space access
- Internalize MEP rooms

10,900 sf (same as previous)
112' x 147' (12' narrower than previous)
MHRC – Other Opportunities?
Alternate Site Concept

• Entry similar to “X” layouts developed to date
• Less on-stage / off-stage separation
• Impacts on outdoor space

MHRC – Other Opportunities?
Alternate Site Concept

• Is a 3-wing strategy relevant in this scenario?

Campus Center / Supportive Housing Program

5. PROGRAM VALIDATION

Campus Center / Supportive Housing – Key Program ?’s

• Bedroom Size
• 2-Bed Rooms: Internal Layout and Relationship to Windows
• Activity / Dining
  • Total area
  • # of Rooms
• Access to Outdoor Space (Large and Small balconies)
• Staff Workrooms on Each SH Floor
Campus Center (Level 1) – Reference Design
Key Objectives / Drivers

• Public Zone Amenities
• Multi-purpose Room: Interior and Exterior Access
• Separate Admin. Zone
• Small Clinic

Supportive Housing (Levels 2, 3, 4) – Reference Design
Key Objectives / Drivers

• 2 Bed Wings
• Integrated Living Rooms
• Access to Outdoor Terraces
• Distributed Staff
• Not as Restrictive as MHRC’s

Supportive Housing – Design / Build Proposal
Level 1 – Campus Center

Supportive Housing – Design / Build Proposal
Levels 2,3,4 – Supportive Housing Units

• Align bedroom sizes with California Building Code
  • CBC calls for 120sf Private / 200sf Semi
  • Note: FGI calls for 100sf Private / 160sf Semi
• Align Activity / Dining with FGI Healthcare Guidelines
  • Total of 40sf per patient (2 @ 380sf vs 2 @ 450sf)
  • Note: CBC calls for 30sf per patient
• Large Break / Workroom provided per floor
  • Deleted in Addendum
6. Lunch
We will start back at 1:00pm.

7. Sustainable Design Strategies

1. Reuse
2. Conservation
3. Long-lasting
4. Affordable
5. Mitigating impacts
6. Local products
7. Systems
8. Reduced carbon impact
9. Mindset/culture

The purpose of this workshop is to ensure that we understand your building performance goals for this project (Engineering Systems, LEED certification, Netzero Energy).

We will document these goals via the Owner’s Project Requirements.
The OPR is part of the fundamental commissioning process that is required for LEED.

- The OPR and the basis of design (BBD) are critical to LEED V4 (and 2009) certification since Fundamental Commissioning (Cx) is a prerequisite under EA1.
- LEED V4 also has a strong emphasis on the integrative design process. These three components of our sustainable design process support the LEED V4 IP credits which are optional but highly valuable.

### Qualitative Goals

#### Optimized Energy Performance

**TOPIC:** Integrated & Innovative Design

**DESCRIPTION:** Sustainable design optimizes energy and resources and reduces the carbon footprint of a building improving building performance and comfort. Sustainable design anticipates future energy sources and needs.

**MEASURABLE OUTCOMES:**
- Building Energy Use
- Building Re-Use
- Diversity of Construction Waste
- Regional Materials
- Recycled Materials
- Material Health
- Resiliency
- Adaptability

#### Environmental Impacts of Materials

**TOPIC:** Regional & Community Design

**DESCRIPTION:** Sustainable design protects and benefits ecosystems, watersheds, and wildlife habitats in the presence of human development.

**MEASURABLE OUTCOMES:**
- Site Usage
- Storm Water Management

#### Future Adaptability and Resilience

**TOPIC:** Bioclimatic Design

**DESCRIPTION:** Sustainable design conserves resources and maintains comfort through design adaptations to site-specific and regional climate conditions.

**MEASURABLE OUTCOMES:**
- Passive Design Strategies

#### Collective Feedback and Lessons Learned

**TOPIC:** Enhanced Indoor Environment

**DESCRIPTION:** Sustainable design conserves water and protects and improves water quality.

**MEASURABLE OUTCOMES:**
- Site Water Use
- Building Water Use

#### Other Design Guidance

**TOPIC:** Water Conservation and Protection

**DESCRIPTION:** Sustainable design conserves resources and maintains comfort through design adaptations to site-specific and regional climate conditions.

**MEASURABLE OUTCOMES:**
- Passive Design Strategies

#### Building Operations

**TOPIC:** Collaborative Design:

**DESCRIPTION:** Third Party Verification

**MEASURABLE OUTCOMES:**
- Key Design Activities
- Third Party Verification
- Transportation
- Storm Water Management
- Passive Design Strategies

**MEASURABLE OUTCOMES:**
- Site Usage
- Storm Water Management
- Passive Design Strategies

**MEASURABLE OUTCOMES:**
- Site Water Use
- Building Water Use

**MEASURABLE OUTCOMES:**
- Active Design
- Bioships

**MEASURABLE OUTCOMES:**
- Waste Management
- Food Services
- Indoor Cleaning & Maintenance
- Site Cleaning & Maintenance

**MEASURABLE OUTCOMES:**
- Site Water Use
- Building Water Use

**MEASURABLE OUTCOMES:**
- Passive Design Strategies

**MEASURABLE OUTCOMES:**
- Site Water Use
- Building Water Use

**MEASURABLE OUTCOMES:**
- Passive Design Strategies
LEED v4 for BD+C: New Construction & Major Renovation

Project Checklist

- Integrative Design Process
- Focus on Performance
- Material Transparency
- Life Cycle Analyses
- Health Product Declaration

LEED v4 insight: Building Product Disclosure & Optimization

- The materials credits have been completely reconfigured from LEED v2009.
- The 3 Building Product Disclosure & Optimization (BPDO) credits in LEED v4 are pushing the industry into new territory.

Regional & Community Design: Transportation

<table>
<thead>
<tr>
<th>Code/Standard</th>
<th>Performance Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Everyone drives</td>
</tr>
<tr>
<td>2</td>
<td>Public transportation to site</td>
</tr>
<tr>
<td>3</td>
<td>Bike storage &amp; changing rooms</td>
</tr>
<tr>
<td>4</td>
<td>Designated parking for fuel-efficient vehicles</td>
</tr>
<tr>
<td>5</td>
<td>Provide fuel-efficient vehicles</td>
</tr>
<tr>
<td>6</td>
<td>No use drives</td>
</tr>
</tbody>
</table>

1 bus stop (morning & afternoon)
Access to hiking trails via transit
MHRC van/shuttles
Sidewalk to enhance community connectivity

Land Use & Site Ecology: Site Usage

<table>
<thead>
<tr>
<th>Code/Standard</th>
<th>Performance Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Previously Undeveloped Site</td>
</tr>
<tr>
<td>2</td>
<td>Previously Developed Site</td>
</tr>
<tr>
<td>3</td>
<td>Restore Native Habitat</td>
</tr>
<tr>
<td>4</td>
<td>Brownfield Remediation</td>
</tr>
</tbody>
</table>

Minimizing fill exports
Land Use & Site Ecology:
Stormwater Management

<table>
<thead>
<tr>
<th>Code/Standard</th>
<th>Performance Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conventional</td>
<td>Increase perviousness of site</td>
</tr>
<tr>
<td></td>
<td>Reduce amount of hardscape</td>
</tr>
<tr>
<td></td>
<td>Native vegetation</td>
</tr>
<tr>
<td></td>
<td>Storm water retention</td>
</tr>
<tr>
<td></td>
<td>Green roof</td>
</tr>
</tbody>
</table>

Flood detention
Infiltration
Dryer areas due to climate change, how to mitigate; fire-break, resilience
Urban wildlife interface & abatement
Wooded hillside buffer, Tree survey & arbor report > tree protection & EIR mitigation measures
Need for existing utility survey via locator (vs record info)
Green roof garden?
Challenged budget / maintenance of green roof

Bioclimatic Design:
Passive Design Strategies

<table>
<thead>
<tr>
<th>Code/Standard</th>
<th>Performance Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Orientation Optimized for Sun &amp; Wind</td>
</tr>
<tr>
<td>2</td>
<td>Optimized Massing (SA/V ratio)</td>
</tr>
<tr>
<td>3</td>
<td>Window to Wall Ratio</td>
</tr>
<tr>
<td>4</td>
<td>Shading Devices and/or Site Vegetation</td>
</tr>
<tr>
<td>5</td>
<td>Envelope Optimization</td>
</tr>
<tr>
<td>6</td>
<td>Natural Ventilation</td>
</tr>
<tr>
<td>7</td>
<td>Thermal Mass</td>
</tr>
<tr>
<td>8</td>
<td>Stack Effect/Buck chimney</td>
</tr>
</tbody>
</table>

Interface w/ natural ventilation, how operated
Secured buildings > incorporate airflow w/o operable windows
Prefer natural ventilation.

Enhanced Indoor Environment:
Access to Views

<table>
<thead>
<tr>
<th>Code/Standard</th>
<th>Performance Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>No significant Outdoor Views</td>
</tr>
<tr>
<td>2</td>
<td>Outdoor Views in major space and circulation</td>
</tr>
<tr>
<td>3</td>
<td>75% of Occupied Spaces or Outdoor Views</td>
</tr>
<tr>
<td>4</td>
<td>98% of Occupied Spaces or Outdoor Views</td>
</tr>
</tbody>
</table>

Enhanced Indoor Environment:
Indoor Air Quality

<table>
<thead>
<tr>
<th>Code/Standard</th>
<th>Performance Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ASHRAE 62.1</td>
</tr>
<tr>
<td>2</td>
<td>HVAC VDC</td>
</tr>
<tr>
<td>3</td>
<td>Construction IAQ</td>
</tr>
<tr>
<td>4</td>
<td>CO2 monitoring</td>
</tr>
<tr>
<td>5</td>
<td>30% increased outside air</td>
</tr>
<tr>
<td>6</td>
<td>UV filtration/HEPA filters</td>
</tr>
</tbody>
</table>
### Water Conservation & Protection: Site Water Use

<table>
<thead>
<tr>
<th>Code/Standard</th>
<th>Performance Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Permanent irrigation system</td>
</tr>
<tr>
<td>2</td>
<td>Drip irrigation</td>
</tr>
<tr>
<td>3</td>
<td>Weather-based controls</td>
</tr>
<tr>
<td>4</td>
<td>50% reduction of potable</td>
</tr>
<tr>
<td>5</td>
<td>100% non-potable</td>
</tr>
<tr>
<td>6</td>
<td>No irrigation</td>
</tr>
</tbody>
</table>

Reclaimed water? Need to verify safety aspects
Access to water during emergency (earthquake)?

### Water Conservation & Protection: Building Water Use

<table>
<thead>
<tr>
<th>Code/Standard</th>
<th>Performance Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>EPACT 1992 Low-flow fixtures</td>
</tr>
<tr>
<td>2</td>
<td>Ultra low-flow fixtures</td>
</tr>
<tr>
<td>3</td>
<td>Collect &amp; use rainwater</td>
</tr>
<tr>
<td>4</td>
<td>Treat &amp; reuse gray water</td>
</tr>
<tr>
<td>5</td>
<td>Treat &amp; reuse black water</td>
</tr>
<tr>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

### Impacts of Materials: Construction Waste Diversion

<table>
<thead>
<tr>
<th>Construction Waste Diversion</th>
<th>Performance Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0% Waste Diversion</td>
</tr>
<tr>
<td>2</td>
<td>50% Waste Diversion</td>
</tr>
<tr>
<td>3</td>
<td>75% Waste Diversion</td>
</tr>
<tr>
<td>4</td>
<td>100% Waste Diversion</td>
</tr>
</tbody>
</table>

### Impacts of Materials: Material Health

<table>
<thead>
<tr>
<th>Code/Standard</th>
<th>Performance Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>AIR TSCA 2002 Non-VOC</td>
</tr>
<tr>
<td>2</td>
<td>Environmental Product Declarations</td>
</tr>
<tr>
<td>3</td>
<td>Raw Material Sourcing Disclosures</td>
</tr>
<tr>
<td>4</td>
<td>CAD tool Reporting (Waste or TSC materials, Recycled Content or Locally Produced)</td>
</tr>
<tr>
<td>5</td>
<td>Health Product Declarations</td>
</tr>
<tr>
<td>6</td>
<td>&quot;Red List&quot; non-toxic LCA</td>
</tr>
</tbody>
</table>
7. SUSTAINABLE DESIGN STRATEGIES

Future Adaptability & Resiliency:
Resiliency

<table>
<thead>
<tr>
<th>Code/Standard</th>
<th>Performance Target</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
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<tr>
<td></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>5</td>
</tr>
</tbody>
</table>

- Not Concerned
- Concerned
- Assessment
- Informed
- Strategies
- Ready Rating
- Proactive & Prepared
- Mission Critical
- Shelter in Place
- Regional Strategy Coordination

12 hrs emergency power & fuel? CD to provide recommendations
House in place, provide energy for basic items going (frig, heater), water
Verify w/ vendor policy & DPW
Storage containers?
Canyon Oaks youth center connection?

Lessons Learned:
Measurement and Verification

<table>
<thead>
<tr>
<th>Performance Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>5</td>
</tr>
</tbody>
</table>

- Whole building (utility bill survey)
- Major systems
- Primary minor systems
- All systems

5 MHRCs – design to baseline
Individually metered, monitored via BMS?

Lessons Learned:
Post-Occupancy Evaluation

<table>
<thead>
<tr>
<th>Performance Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
</tbody>
</table>

- Operational
  (3-6 months post occ.)
- Project Review
  (12-18 months post occ.)
- Strategic Review
  (4-5 years post occ.)

Building Operations:
Waste Management

<table>
<thead>
<tr>
<th>Code/Standard</th>
<th>Performance Target</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>5</td>
</tr>
</tbody>
</table>

- Landfill
- Composting & off-site separation
- Composting & on-site separation
- Organic composting
- On-site waste management

Review w/ county policy
Prefer 1 location onsite for recycling
7. SUSTAINABLE DESIGN STRATEGIES

Building Operations: Food Services

<table>
<thead>
<tr>
<th>Code/Standard</th>
<th>Performance Target</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Standard fare</td>
<td>Promoting healthy options</td>
</tr>
</tbody>
</table>

Every organization will contract with 1 vendor?
MHRC warming kitchen + skill-building
Life science kitchen
Using gardens to provide food to kitchen? demonstration

Building Operations: Indoor Cleaning & Maintenance

<table>
<thead>
<tr>
<th>Code/Standard</th>
<th>Performance Target</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Formulas 409 &amp; bleach</td>
<td>Environmentally-friendly</td>
</tr>
</tbody>
</table>

May rely on DPW policy / procedures (need to verify housekeeping)

Building Operations: Site Maintenance

<table>
<thead>
<tr>
<th>Code/Standard</th>
<th>Performance Target</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Conventional practices</td>
<td>Electric-powered landscaping</td>
</tr>
</tbody>
</table>

DPW policy?
Indoor air quality plan?

Energy Analysis Sample:

Energy Use Intensity (EUI)

- Fan Coil Units
- Variable Refrigerant Flow (VRF)
- Dedicated Outdoor Air System
- Energy Recovery Ventilation

Energy Use:

- Heating
  - Fan Coil Units
  - 45 kBtu/ft²
- Cooling
  - Fan Coil Units
  - 32 kBtu/ft²
- Lighting
- Equipment
- HVAC
- Heat Recovery
- Zones

CANNONDESIGN
7. SUSTAINABLE DESIGN STRATEGIES

Energy Analysis Sample:
Energy Intensity Analysis

VRF + Natural Ventilation

VRF + Natural Ventilation + PV

23 kBTU/ft²
Energy Cost

7 kBTU/ft²
Energy Cost

MHRC Annual Energy Cost Comparison

≈ 8,000 ft²
≈ 470 PV panel
≈ 157 kW – 50%

MHRC Annual Energy Cost Comparison with Photovoltaic Generation for Net Zero

MHRC Window to Wall Ratio (WWR) Sensitivity Analysis of Different Forms

50 to 70 kW difference in PV array size to get to net zero energy
7. SUSTAINABLE DESIGN STRATEGIES

Energy Analysis Sample:
Daylighting Analysis

Energy Analysis Sample:
Daylighting Analysis with Skylight at Staff Team Area

Future Discussions:
Inputs/Assumptions

- Hourly occupancy, equipment and lighting schedules:
  - Regular weekdays
  - Weekends
  - Special events/days anticipating high occupancies
  - Security management & interface

- Anticipated plug load equipment for each space type (i.e. number of computers, diagnostic, audio/visual, etc.):
  - Lobby
  - Campus Center
  - Support spaces
  - Patient rooms
  - Laundry
  - Fitness
  - Maintenance shop tools
  - Mobile equipment
  - Any special medical devices?
  - Are patients allowed to have personal devices plugged in?
  - Any on-site refrigeration?
  - Kitchen loads?
  - Outdoor
7. Sustainable Design Strategies

Future Discussions:
Inputs/Assumptions

8. Break
We will start back at 2:40pm

9. Biophilic Design + Domesticity

10. Food for Thought
• If you are a member of the community, what first drew you to the new Cordilleras campus, and what surprised and delighted you while you were there?

• If you are a staff member, what differences in patient outcomes did you begin to observe one year after the facility opened?

• If you are a family member, what do you like most about the new Cordilleras campus and its facilities?

• If you are a client, what are some of the things about Cordilleras that give you a sense of comfort, security and belonging – that help you feel at home?

WORKSHOP 1 Agenda

<table>
<thead>
<tr>
<th>Day 1 - Wednesday March 21</th>
<th>Day 2 - Thursday March 22</th>
</tr>
</thead>
<tbody>
<tr>
<td>AM 9 1. Introductions</td>
<td>AM 9 11. Visioning + Goal Setting 80 Mins</td>
</tr>
<tr>
<td>9:20 2. Core Team &amp; Communications</td>
<td>10:20 12. Site Design 80 Mins</td>
</tr>
<tr>
<td>9:40 3. Project Schedule</td>
<td>11:40 13. Site Tours 10 Mins</td>
</tr>
<tr>
<td>10:30 5. Program Validation</td>
<td>10 Mins</td>
</tr>
<tr>
<td>PM 12. Lunch</td>
<td>60 Mins</td>
</tr>
<tr>
<td>1 7. Sustainable Design Strategies</td>
<td>90 Mins</td>
</tr>
<tr>
<td>2:45 10. Food for Thought</td>
<td>3:30 10 Mins</td>
</tr>
</tbody>
</table>
11. Visioning + Goal Setting

Breakout Exercise

Review of Questions

• If you are a member of the community, what first drew you to the new Cordilleras campus, and what surprised and delighted you while you were there?

• If you are a staff member, what differences in patient outcomes did you begin to observe one year after the facility opened?

• If you are a family member, what do you like most about the new Cordilleras campus and its facilities?

• If you are a client, what are some of the things about Cordilleras that give you a sense of comfort, security and belonging – that help you feel at home?
### FUNCTIONALITY

**FLEXIBILITY AND ABILITY TO EXPAND IN FUTURE**
- Flexibility and Future Expansion
- Patient-Focused / Active Treatment Mode
- Staff Efficiency and Satisfaction
- On Stage / Off Stage Separation

**“ON-STAGE / OFF-STAGE” – THE ABILITY TO SEPARATE STAFF/SERVICE FROM PATIENT AREAS**

**OPTIMIZED STAFF AND OPERATIONAL EFFICIENCY**

### INDOOR ENVIRONMENT

**ACCESS TO DAYLIGHT AND VIEWS**

**PATIENT PRIVACY**

**PATIENT CHOICE – VARIETY OF OPTIONS FOR DAYTIME THERAPY / ACTIVITY SPACES**

### CONNECTION TO LANDSCAPE

**LOCALIZED EXTERIOR PROGRAMMING DEDICATED TO INDIVIDUAL MHRC’S OR SUPPORTIVE HOUSING UNITS**

**CENTRALIZED EXTERIOR PROGRAMMING SHARED BY ENTIRE CAMPUS**

**ELOPEMENT PROTECTION AT EXTERIOR SPACES**

### QUALITATIVE PROJECT GOALS

<table>
<thead>
<tr>
<th>TOPIC: FUNCTIONALITY</th>
<th>DESCRIPTION: THE QUALITY OF PATIENT AND CLINICAL STAFF SPACES AS THEY RELATE TO DESIRED FUNCTIONAL OUTCOMES</th>
</tr>
</thead>
<tbody>
<tr>
<td>INDOOR ENVIRONMENT</td>
<td>THE QUALITY OF THE INDOOR ENVIRONMENT AS IT RELATES TO ACTIVE ZONE, BED ROOMS AND STAFF AREAS</td>
</tr>
<tr>
<td>CONNECTION TO LANDSCAPE</td>
<td>THE ROLE OF THE LANDSCAPE AS A THERAPEUTIC PLATFORM</td>
</tr>
<tr>
<td>AESTHETICS</td>
<td>WHAT ARCHITECTURAL FEATURES ARE IMPORTANT TO THE AESTHETICS YOU ARE TRYING TO ACHIEVE</td>
</tr>
<tr>
<td>ENGAGEMENT</td>
<td>THE LEVEL OF COMMUNITY INTERACTION WITH THE HOSPITAL</td>
</tr>
<tr>
<td>SAFETY</td>
<td>FINDING A BALANCE BETWEEN SAFETY, FUNCTIONALITY AND NORMALIZATION</td>
</tr>
<tr>
<td>LOGISTICS</td>
<td>BALANCE OF BUDGET, SCOPE AND SCHEDULE.</td>
</tr>
</tbody>
</table>

### ELEMENTS:

- Roof forms
- Materiality / Durability
- Visible Security – Fences etc.
- Encouraging Community Involvement / Normalization
- Shared Resources (Gym, Conference Space, Outdoor Rec Therapy)
- Public Outreach, Meetings, Presentations
- Ligature-Resistance
- Tamper-Resistance
- Privacy
- Access
- Level of patient control over personal environment
- Open Environments / Access to Views (% glazing)
- Privacy
- Intuitive Wayfinding Strategies
- Health Landscape Features, Restorative Gardens, Labyrinths etc.
- Recreational Therapy
- Outdoor Group Rooms / Exterior Programming

### QUALITATIVE PROJECT GOALS

- Ligature-Resistance
- Tamper-Resistance
- Privacy
- Access
- Open Environments / Access to Views (% glazing)
- Privacy
- Intuitive Wayfinding Strategies
- Health Landscape Features, Restorative Gardens, Labyrinths etc.
- Recreational Therapy
- Outdoor Group Rooms / Exterior Programming
- Flexibility and Future Expansion
- Patient-Focused / Active Treatment Mode
- Staff Efficiency and Satisfaction
- On Stage / Off Stage Separation

### WRITE-IN

- Schedule
- Cost
- Phasing
- Localized Exterior Programming Dedicated to Individual MHRC’s or Supportive Housing Units
- Centralized Exterior Programming Shared by Entire Campus
- Elopement Protection at Exterior Spaces
<table>
<thead>
<tr>
<th>AESTHETICS</th>
<th>ENGAGEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INVESTMENT IN MATERIALS AND MASSING THAT MINIMIZES INSTITUTIONAL CHARACTER</strong></td>
<td><strong>ABILITY OF THE FACILITY TO SUPPORT VOLUNTEER OR OUTREACH PROGRAMS – REDUCING NEGATIVE STIGMA</strong></td>
</tr>
<tr>
<td><strong>DECREASE OBVIOUSNESS / AWARENESS OF SECURITY ELEMENTS</strong></td>
<td><strong>SHARED COMMUNITY AMENITIES (EDUCATION, RECREATION ETC.) PRESENT ON THE CAMPUS</strong></td>
</tr>
<tr>
<td><strong>NORMALIZED PATIENT ENVIRONMENT – EMULATING HOME AND DAILY LIFE</strong></td>
<td><strong>CLARITY OF ENTRY / ARRIVAL AND PUBLIC DESTINATIONS TO VISITORS</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SAFETY</th>
<th>LOGISTICS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LIGATURE AND TAMPER RESISTANCE</strong></td>
<td><strong>COMPLETE BY 2021</strong></td>
</tr>
<tr>
<td><strong>SIGHTLINES AND VISIBILITY OF PATIENT AREAS</strong></td>
<td><strong>PROGRAM / PROJECT WITHIN BUDGET</strong></td>
</tr>
<tr>
<td><strong>DURABILITY OF FINishes / MATERIALS – LOW MAINTENANCE</strong></td>
<td><strong>MINIMIZED SITE PHASING</strong></td>
</tr>
</tbody>
</table>
### 12. Site Design

#### FUNCTIONALITY
- Total
- Highest Priority Topics

<table>
<thead>
<tr>
<th>Topic</th>
<th>Total</th>
<th>Highest Priority Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>INDOOR ENVIRONMENT</td>
<td></td>
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</tr>
<tr>
<td>CONNECTION TO LANDSCAPE</td>
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</tr>
<tr>
<td>AESTHETICS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LOGISTICS</td>
<td></td>
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</tr>
</tbody>
</table>

#### Constraints Exhibit

#### Design Value Matrix

---

**SAFETY**

---

**LOGISTICS**

---

**TOTALS**

---
Site Design Considerations

- Steep forested terrain & canyon
- Cordilleras Creek & riparian zone
- Habitat for the wood rat
- Stormwater management and treatment
- Phased construction within a tight timeframe
- Maintaining existing operations during construction
- Vehicular and pedestrian circulation
- Maintaining fire & emergency access in all stages
- Promoting outdoor activity
- Relationship & connection to nature
- Encouraging community involvement

Can we reduce cost of SITE CONSIDERATIONS … … and use the budget for facilities that promote care & recovery?

Layout Options
As shown on bridging documents

Option benefits:
- Reduce site area & retaining walls
- Simplify Supportive Housing
- MHRCs more efficient

Comparison to Bridging Documents:
Reduce Site Coverage: 9%
Reduce Retaining Walls from 80' to 58'
13. SITE DESIGN

Idea 1: Design-build with loop road

Layout Options

Option benefits:
- Reduce site area & retaining walls
- Loop road omits turnarounds
- MHRCs more efficient

Comparison to Bridging Documents:
- Reduce Site Coverage: 17%
- Reduce Retaining Walls from 80' to 50'

Idea 2: Supportive housing in back

Layout Options

Option benefits:
- Reduce site area & retaining walls
- More prominent MHRC buildings
- Supportive housing built in 1st phase

Comparison to Bridging Documents:
- Reduce Site Coverage: 17%
- Reduce Retaining Walls from 80' to 75'
13. SITE DESIGN

Layout Options
Idea 3a: Curved supportive housing in front

Option benefits:
• Reduce site area & retaining walls
• More prominent Supportive Housing
• 4 MHRCs built in 1st phase

Comparison to Bridging Documents:
Reduce Site Coverage: 13%
Reduce Retaining Walls from 80' to 35'

Layout Options
Idea 3b: Supportive housing in front, 2 + 3 MHRC

Option benefits:
• Reduce site area & retaining walls
• Supportive Housing built in 1st phase
• 3 MHRCs built in 1st phase

Comparison to Bridging Documents:
Reduce Site Coverage: 20%
Reduce Retaining Walls from 80' to 35'
13. SITE DESIGN

Idea 3c: Supportive housing in front, 4 + 1 MHRC

Option benefits:
- Reduce site area & retaining walls
- Supportive Housing built in 1st phase
- 4 MHRCs built in 1st phase

Comparison to Bridging Documents:
- Reduce Site Coverage: 13%
- Reduce Retaining Walls from 80' to 35'

---

Idea 4: Single phase building construction

Option benefits:
- Reduce site area & retaining walls
- All buildings may be built in 1st phase
- Organized around central green

Comparison to Bridging Documents:
- Reduce Site Coverage: 17%
- Reduce Retaining Walls from 80' to 50'
13. Site Tours

14. Recap & Next Steps
MEETING NOTES

CANNON DESIGN

Project Name: Cordilleras Health System Replacement Project
Project Number: 005318.00
Date: March 21, 2018 / March 22, 2018
Time: 9:00 AM-4:00 PM / 9:00 AM-12:00 PM
Place: PDU Trailer – 1402 Maple Street, Redwood City

Attendees:
- Michael Smith: CannonDesign
- Dewapali Beligi: CannonDesign
- John Phung: CannonDesign
- Corey Woo: CannonDesign
- Tim Rommels: CannonDesign
- David Sass: CannonDesign
- WB Ransom: CannonDesign
- Gustavo Lopez: CannonDesign
- Steve Moreland: PFF
- Manuela King: RHAA
- Robin Kim: RHAA
- Jim Mosier: SMC-PDU
- Sam Lin: SMC-PDU
- Deborah Bazan: SMC-PDU
- Kate Werner: MIQ-TRA
- Taylor Peterson: MIQ-TRA
- Louise Rogers: SMC-HS
- David Young: SMC-HS
- Larry Funk: SMC-HS
- Terry Wilcox: SMC-HS
- Peter Shin: SMC-HS
- Tony Burley: IBI Group
- Don Howley: SMC-Board of Supervisors

Discussion: Fist Visioning Session Day 1: March 21, 2018

INTRODUCTIONS:

1. Terry Wilcox gave an introduction and provided some background: Cordilleras opened 100 years ago and is a "sacred healing ground." It was a TB clinic in 1920. In 1978 the facility opened as a MRHC
2. Request that the team watch the movie, When Medicine Got It Wrong. [http://www.theremedy.com/Med/19thCentury.html]
3. The Board did a feasibility study with HGA in 2013 and crafted a vision statement: Valor statement was distributed (see attached) and reviewed with primary bullets:
   - Focus on wellness to be healthy
   - Promote respect
   - Build Community
   - Heal through Nature
   - Strive for Recovery
4. The question was posed: "If you could do it over again what would you do differently?" Improve overall metrics for success, residents, staff, length of stay and reduce the need for return
5. Review of the County of San Mateo understanding of Design Parameters for Cordilleras Project. (See attached) The 3 big takeaways:
   - Five independent licensed residential programs,
   - Organizationally distinct (management structure, not building program)
   - Targeting sub population for each building
6. Review of Key Design Elements – List provided (See attached) - We cannot deviate from these requirements for assurance of funding and reimbursement.

SECTION 1: OBJECTIVES AND GOALS FOR THE WORKSHOP

7. Michael Smith provided an introduction and reviewed the goals for the workshop.

SECTION 2: CORE TEAM + COMMUNICATION

8. All communication will be filtered through Jim Mosier and Deepa Balgi (if they are not copied the communication never happened)

SECTION 3: PROJECT SCHEDULE

10. 50% CD will be used to start the ER (Environmental Impact Report) process. This will include project description.
11. Wildlife resources and environmental impact study, especially concerned with site works.
   a. Mitigation Plan required for permitting.
   b. Dusty-footed woodland relocation in important.
12. Taylor Peterson reviewed the EIR Process.
13. The County permitting process is also important and runs on a parallel track with CEQA.
14. Confirmed that the project does not need to open a new NOP unless a substantial change from the original project.
15. Don Howley, Supervisor, mentioned that he is personally interested in not using jails to accommodate the needs of behavioral health. Consider a dedication/memorial donor area in the new facility.
16. Traffic, parking and access increases need to stay on the radar for this review. Parking for community recreational trail access may need to be accommodated. Design team needs to account for construction parking along with the visitor parking.
17. Interaction with the fire department is essential for access and parking.
18. Terry: help to normalize the process during construction. Sound proofing walls with windows. Mitigate the clinical impact of the construction. The clients will be interested in observing the design and construction process.
19. Facility Tours:
   a. Tour dates and locations need to be defined. Coordinate tours through Jim Mosier.
   b. The tours will be looking for solutions to very specific problems and patient populations of very distinct models of care.
   c. Bill gave will be able to provide examples of several locations in Europe to tour.
   d. The facilities the county had already visited:
      i. Feasibility Study lists all the places they visited and a spreadsheet that describes what they learned,
      ii. Massachusetts – village idea
      iii. North Carolina – farm idea
20. David Young: Integrated technology is of interest.
21. Louise Rogers mentions a Michael Moore film to watch: "The Next Great Invasion" (Movie)

SECTION 4: BREAK
SECTION 5: PROGRAM VALIDATION

OPTION 1

MHRC - Reference Design
Key Objective / Drivers
- 4-bed clusters
- Integrated living rooms
- Distributed staff
- Access to outdoors
- Corridor sightlines

- Takeaway is that 4 wings is more of a minimum.

MHRC - Design / Build Proposal
Program Impacts
- Align bedroom sizes with California building code
  - CBC calls for 120 sf Private / 300 sf Semi-private
  - Note: CF only calls for 190sf Private / 50sf Semi
- Align Activity / Dining with FGI
- Healthcare Guidelines
  - Total of 60% per patient (1.6-0.680 or 2.0-0.450)
  - Other (gem) calls for 20% per patient
- Reduce Tub, Laundry, Medication, Exercise from 130 or 140 sf to 120 sf
  - 120 is larger than CBC or FGI Guidelines for rooms where minimums are given (often 100sf).
- Reduce to 1 TV / Quiet Room (per Addendum)
  - Solved / Hspp. Increased to 100sf
  - 10,900 sf (11,475 if smaller)
  - 138 x 138 (137 narrower than previous)

- The reduction of activity space from 130 to 100sf per patient was acceptable in the second interview scheme.
- Fewer number of best wings is problematic, it causes larger groups/populations to congregate in hallways
- Sightlines get too long
- Want a larger variety of spaces / patient choice.
- subgroup flexibility with in the units
- Perhaps a smaller bed wing (a half) for a specialized group
- One pod is envisioned for a more medically complicated patient population and one for a younger population, Acute care populations
- They planned on the worst-case, longest MHCP program for all the units.
- Less mobile patients would not have the congestion issues and there may be an opportunity for two distinct pods.
- Patient profiles can be provided by the hospital

OPTION 2

MHRC - Other Opportunities?
Functional Enhancements
- Maintain core County
- Objectives for MHRC's
- Compress width
- Bed Wing geometry considerations

 Они have a good grasp on the quality of outdoor space for each option.
- Orientation on site
- Visibility should take advantage of the sites/views
- Liked the elimination of blind spots, very important.

OPTION 3

MHRC - Other Opportunities?
Alternate Site Concept
- Engage MHRC's into dialogues
- Explore more on-stage / off-stage separation
- Consider open common area / separate activity
- Consider alternate outdoor space access
- Internalize MEP rooms

- Really like the garden patio, more possibilities for outdoor activities that can provide different experiences.
- 3D views, Concerned about the grading of the exterior space, Concerns about site placement,
- Concern about safety and fire alarms for staff to accommodate.
- On-stage/off-stage is awesome, Like that very much.
- Concern about safety and fire alarms for staff to accommodate,
- Delivery access as well as how patients arrive and are discharged.
- Entry could be shared between two buildings.
- Access to the outdoor spaces, number of and quality of plus security of those spaces.
OPTION: 5

MHRC - Other Opportunities?
Alternate Site Concept

- Entry similar to "X" layouts developed to date
- Less on-slab / off-stage separation
- Impacts on outdoor space

- Delivery access as well as how patients arrive and are discharged.
- Access to the outdoor spaces, number of and quality of plus security of those spaces.
- Really like the garden patios, more possibilities for outdoor activities that can provide different experiences.
- On-slab/off-stage is awesome. Like that very much.
- Concern about safety and fire alarms for staff to accommodate.

OPTION: 6

MHRC - Other Opportunities?
Alternate Site Concept

- Is a 3-wing strategy relevant in this scenario?

- Jerry does not like the loss of the large patio.
- Large break room: Building management services provider need to be separate from the care provider. Workroom is meant to accommodate these two entities.
- Needs to be thought through more to identify the exact spatial need.
- Potential for more conflicts.
- Still need layout to have a floor that flex supportive housing to flip use to a MHRC.

22. Supportive Housing:
   a. Separate entity runs the facility & provides services
   b. More workspace could be important
   c. Potential to convert a floor into MHRC

SECTION 5: LUNCH

23. Louise suggested looking at William Curtis’ work linking biophilia to the idea of mindfulness. Patients, staff and the entire system would be interested in the approach this project takes regarding this concept.

SECTION 6: SUSTAINABLE DESIGN


29. PDU expressed concern about the department of public works and their ability to maintain and operate the net-zero / sustainable features of the building.

32. Biophilic design:
   - Secured operable windows, natural ventilation

33. Lighting systems:
   - Occupant controlled adjustable lighting in each room. Staff has control to override systems. Concerns with staff training about BMS systems.

34. Resiliency:
   - 12 hrs of power & water

35. Waste management:
   - Policy in place

36. Food service:
   - Food would be centrally prepared and then distributed to each MHRC. Kitchen will be more like a life sciences kitchen. Each MHRC would contract independently with food service vendor. Garden produce could potentially be used in kitchen.

37. Indoor cleaning & maintenance:
   - DPW (contractor).

38. There is a county sustainability office which sets standards for the county.

39. CannonDesign will have a more detailed workshop for sustainability after a preferred site plan has been selected.

SECTION 10: FOOD FOR THOUGHT

40. Questions were given to attendees to think about overnight and come prepared for an interactive activity for the second day of the visioning workshop.
   a. If you are a member of the community, what first drew you to the new Cordilleras campus, and what surprised and delighted you while you were there?
   b. If you are a staff member, what differences in patient outcomes did you begin to observe one year after the facility opened?
   c. If you are a family member, what do you like most about the new Cordilleras campus and its facilities?
   d. If you are a client, what are some of the things about Cordilleras that give you a sense of comfort, security and belonging – that help you feel at home?
Discussion: Fist Visioning Session Day 2: March 22, 2018

SECTION 11: VISIONING ACTIVITY

41. Question 1: If you are a member of the community, what first drew you to the new Cordillera campus, and what surprised and delighted you while you were there?
   a. Terry: Visit art show at the community center, Good food, Volunteer work, Education about mental illness, worship in the chapel
   b. Active participation, engagement, de-stigmatization
   c. Larry Community – Privacy of the site, Serenity, A break from the city noise, Access to nature, Residential scale of the facility compared to the larger center.
   d. Jim: People know the facility is there but it is not intrusive to the community
   e. They want anonymity unless the system drives them to visit.
   f. Terry – wants to draw the community in to use the facility for community events. Neighbours should be included.
   g. Volunteer lockers to keep belongings in if they want to engage.
   h. Feel welcomed and greeted. Historical presentation or educational presentation.
   i. Tim: Facility is lacking to have this facility be a new model in de-stigmatization.
   j. Dave: Young; The facility could facilitate a volunteer program to engage the community.
   k. Peter: Facility needs to be a community asset.

42. Question 2: If you are a staff member, what differences in patient outcomes did you begin to observe one year after the facility opened?
   a. Sam: Happier, more comfortable, more interactions with staff, gather in public spaces, nice place for families to visit on a more regular basis. Staff like the building and design, Parking is an issue for visitors
   b. Jim: Happy building management and maintenance staff.
   c. Larry: Hope for improved wellness, a place for people to go for loved ones, improved access, space available due to high turnover (currently hard to get a bed)
   d. Dave: Safety should be very big priority and the perception of safety. Navigating the facility from a functional standpoint, Material suited for their purposes.
   e. Peter: Improved safety & perception of safety for the staff. Ease of navigation of the facility.

43. Question 3: If you are a family member, what do you like most about the new Cordillera campus and its facilities?
   a. Tony: It’s splitting to arrive on campus, feel & free will. Cafe, nice place to spend some time, comforting to visit your family member who is being well cared for in this beautiful facility.
   b. Will: Kids visitation. How can we help child visitors not be scared?
   c. Dave: Pride in the facility that houses their love ones, No shame.
   d. Tim: Goal: That this is the last facility that needs to be built because we have affectively served the community to take control of their mental health.
   e. Deborah: Upon arrival families have experienced years of loss and frustration so it is important for families to see their loved ones safe and cared for.
   f. Louise: Hope for the future. Program and activities as a Hope generator.

44. Question 4: If you are a client, what are some of the things about Cordillera that give you a sense of comfort, security and belonging – that help you feel at home?
   a. Jim: This place is great, Enjoy taking daily walks, playing, learning to cook and gardening.
   b. Dave: Clients feel “I don’t want to be here because I have issues. I don’t have freedom but…There is a community here and I can move around and there is hope for recovery.”
   c. Peter: Enjoy being a part of a community, made new friends, more welcoming unlike an institution.
   d. Having the freedom of choices.

45. There was some client engagement/ solicitation for ideas. Terry will try to provide the summary / documentation from their original visioning.

46. Consider access to a variety of courtyard spaces.
   - Have a path people could walk without obstruction. They need to walk as part of therapy (Possibly a labyrinth)
   - Gardening opportunity
   - Shaded areas to sit in
   - Group gathering areas with outdoor furniture
   - Softened landscape
MEETING NOTES

47. IS1: Let's be tough about doing better.
48. Sam: Every aspect should be included in budget. Treat it like your own money. If key elements are not included in the project, then we are not achieving our goals.

SECTION 12: SITE DESIGN

49. Terry would like to maintain the exterior area south of the existing building during construction.

50. Positive reaction to the idea 1:
   a. clear and obvious improvements over the bridging documents,

51. K-scheme:
   a. Think they like that they are losing courtyard space with the K scheme to improve the density,

52. Idea 2:
   a. Doesn't have enough swing space between phases. Campus centre should be up front. Idea 2 probably not moving forward,

53. Idea 3a:
   a. Loss of an impact on the client flow.

MEETING NOTES

b. Tim: Gradation of client acuity,
   c. Jim M does not like the idea of breaking up the campus centre into two phases,
   d. Terry: We need the campus centre in phase one,
   e. Terry: There could be a phased decending solution. They see the benefits but there are a lot of logistics to consider,
   f. Louder: (Thinking that some vacancies may be possible to clear some space). Try to make ourselves some "wiggle room" in terms of impact on patient population and the smoothness of the transition.

54. Idea 4:
   a. Single phase building construction. More MHRC's would be constructed faster so clients wouldn't have to be temporarily relocated. Lots of value to continue exploration. This option brings the road to the center of the site. There are concerns about safety,

55. Things we heard:
   a. Loop road could be either internal or external,
   b. Supportive housing at "front"
   c. Not necessary to maintain a 5% slope but we need to make sure their safe pedestrian routes,
   d. Maximum number of beds in phase 1
   e. Meet in some of the other MHRC layouts so it's possible to continue to expand our explorations.

56. Recap from day 1:
   a. K is viable but not an ideal trade-off
   b. Not moving forward with the three-wing approach
   c. Separation of staff and visitors is very desirable.

57. Next steps:
   a. Come together again in three weeks (April 10, 2018) and leave with a preferred approach,
   b. Supportive housing at the front with a loop road
   c. Internal loop road solution
   d. Study the internal workings of the supportive housing,
   e. Zoning and organizing the internal portion of the site.

58. Team to stop referring back to the Design Build. Project name is now Cordilleras Health System Replacement Project.

To the best of my knowledge, the above items were discussed. Should there be any additions or corrections, please advise CannonDesign in writing within seven days. We will consider these meeting notes an accurate record for proceeding with the necessary “actions”, unless informed otherwise as noted.

Prepared by,

Deepa Batla
Project manager

Attachments:
- Vision Statements
- Key Design Elements Required for Cordilleras Project
- County of San Mateo Interdepartmental Correspondence
- CannonDesign Presentation

cc: Attendees
**Bridging Documents:**

- Tall retaining walls up to 85' high
- Two service courts
- 3 MHRCs built in 1st phase

**Design Build Alternative:**

- Reduce site area & retaining walls
- Loop road avoids grade changes
- MHRCs more efficient

**Idea 1:**

- Design-build with Loop Road

**Idea 2:**

- Supportive Housing in Back

**Idea 3a:**

- Curved Supportive Housing in Front

**Idea 3c:**

- Supportive Housing in Front, 4 + 1 MHRC

**Idea 3e:**

- Supportive Housing in Front, 4 + 1 MHRC

**Idea 4:**

- Single Phase Building Construction

---

Cordilleras Mental Health Center
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<td>INVESTMENT IN MATERIALS AND MASSING THAT MINIMIZES INSTITUTIONAL CHARACTER</td>
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## Introductions

### WORKSHOP 2 Agenda

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<td>AM 9</td>
<td>1. Introduction – Site &amp; Program Overview</td>
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<td>2. Site/Building Concept A</td>
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<td>3. Site/Building Concept B</td>
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<td>4. Site/Building Concept C</td>
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<td>5. Lunch</td>
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<td>6. Landscaping Visioning</td>
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<td>7. Concept Evaluation</td>
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<td>8. Next Steps</td>
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**Concept Design Strategy**

**CANNONDESIGN**

**CANNONDESIGN**
Site Plan
Workshop 1 Studies

Site Design Comparison
Concept A
Construct 3 MHRCs & Supportive Housing in 1st phase

Concept B
Construct 4 MHRCs & Supportive Housing in 1st phase

Concept C
Construct 5 MHRCs & Supportive Housing in 1st phase

Existing Conditions
Water Tank
PG&E Access Gate
Service Entrance
Cordilleras Creek
Enclosed Recreation Yard
Main Entrance

CANNONDESIGN
Concept A
Circulation & Open Space

SITE DESIGN

Concept A
Site Sections

SITE DESIGN

Concept A: Phasing
Sitework

• Site clearing
• Demolish existing multipurpose room
• Temporary barrier
• Existing service entrance unchanged
• Existing main entry unchanged
• Reduced recreation area

SITE DESIGN

Concept A: Phasing
Phase 1

• Building loop road with connection between fire station and youth center
• Construct 3 new MHRCs
• Construct new Supportive Housing
• Existing building & some recreation area in use during construction

SITE DESIGN
Concept A: Phasing

Building Demo

- Client relocation to new buildings
- Site clearing
- Demolish existing building

SITE DESIGN

Phase 1
- Construction 2 MHCs
- Complete loop road & parking lots
- Final site work & landscaping

Phase 2
- Site 2d Area: 285,445 sq ft
- Cut: 48,975 cu yd
- Fill: 42,087 cu yd
- Net cut: 889 cu yd
- Retaining Wall Face Area: 27,800 sf
- Earthwork / Ret. Wall Cost: $5.8 m

SITE DESIGN

Phasing & Client Bed Count

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Concept A

Phasing & Client Bed Count

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<td>TOTAL</td>
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Earthwork & Retaining Wall Impacts

- Cut/Fill Summary:
  - Site 2d Area: 285,445 sq ft
  - Cut: 48,975 cu yd
  - Fill: 42,087 cu yd
  - Net cut: 889 cu yd
  - Retaining Wall Face Area: 27,800 sf
  - Earthwork / Ret. Wall Cost: $5.8 m

SITE DESIGN

CANNONDESIGN
Concept A – MHRC: “X” Layout

Key Points
- Familiar Design – embodies input gathered from previous discussion
- Works well when MHRC’s are arrayed in a row – creates large individual courtyard; privacy considerations against adj. MHRC
- Small secondary outdoor patio / garden
- Single enclosed Dining / Activity Room
- Single Entry

10,900 sf

Concept A – Supportive Housing

Level 1 – Campus Center

- Loading at East
- Back-of-House Circulation
- Zoning: Community, Service, Admin, Clinical
- Separate entry near Admin / Clinical
- Multi-purpose room engaged; roof occupiable

Concept A – Supportive Housing

Level 2,3,4 – Supportive Housing Units

- Simple geometry
- Back-of-House Circulation
- Entry Lobby on Level 2
- 2 Distinct Bed Wings
- Outdoor space at ends of Bed Wings
- Outdoor space above Multi-purpose Room
- Sub-dividable Dining / Activity Room

Concept A

Daylighting & Energy Use

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<td>Total rooftop PV available [kW]</td>
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- Both MHRC and Support building HVAC systems are assumed to be VRF in combination with natural ventilation to reduce cooling loads.
- Rooftop PV analysis accounts for the impact of shading from topography to estimate how much PV capacity each option offers with MHRC and Support building rooftop areas.
Concept A
SH + 3 MHRCs in Phase 1

KEY FEATURES
- Construct Supportive Housing (SH) & 3 MHRCs in Phase 1.
- Shared recreation area with Campus Center frontage.
- Creek & headwall unchanged
- Secured courtyards between MHRCs

ADVANTAGES / DISADVANTAGES
- Large site disturbance
- Large private courtyard for each MHRC
- High retaining walls front loop road.
- SH to accommodate secured beds in interim.
- Parking limited prior to final buildout.
- Fire access requirement between MHRCs & SH prevents permanent site furnishings in recreation area
- MHRC access to center green without crossing road

Concept B

Circulation & Open Space

VISITORS / COMMUNITY ACCESS
VISITOR ENTRY
STAFF/SERVICE ACCESS
STAFF/SERVICE ENTRY
FIRE DEPT ACCESS
Concept B
Circulation & Open Space

- Visitors / Community Access
- Visitor Entry
- Staff/Service Access
- Staff/Service Entry
- Fire Dept Access

Concept B
Site Sections

- Site clearing
- Demolish existing multipurpose room
- Temporary barrier
- Reduced parking capacity
- Relocation of building service entrance
- Existing main entry unchanged
Concept B: Phasing

Phase 1

- Building loop road with connection between fire station and youth center
- Construct 4 new MHRCs
- Construct new Supportive Housing
- Existing building & some recreation area in use during construction

Phase 2

- Construct 1 MHRC
- Complete loop road & parking lots
- Final site work & landscaping

Concept B: Phasing

Building Demo

- Client relocation to new buildings
- Site clearing in center
- Demolish existing building

Concept B Phasing & Client Bed Count

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* This assumes that 20 beds of the existing facility are removed from use during construction of the adjacent Supportive Housing.
Concept B
Earthwork & Retaining Wall Impacts

**Cut/Fill Summary**

- Site 2d Area: 252,406 sq ft
- Cut: 89,798 cu yd
- Fill: 39,563 cu yd
- Cut/Fill Net: 10,225 cu yd

Retaining Wall Face Area: 29,000 sf
Earthwork / Ret. Wall Cost: $7.0 m

Concept B – MHRC: "K" Layout

Key Points

- Similar to "X" Layout – thus similar overall organization and adjacencies
- Designed for different orientation on the site (rotated 90 degrees):
  - Entry closer to road
  - Entry not as close to bedrooms
  - Large courtyard open to central landscape
  - 2 additional outdoor space options
- Enclosed Dining / Activity Room and moderate open area
- Single Entry; opportunity for an exterior staff entry to Workroom if desired
  
  11,300 sf

Concept B – Supportive Housing (attached Multi-purpose Room)
Level 1 – Campus Center

- Loading at Northwest
- Back-of-House Circulation
- Zoning: Community, Service, Admin, Clinical
- More pronounced lobby / gathering space
- Conference Rooms more visible
- All Entries on Level 1

Concept B – Supportive Housing (attached Multi-purpose Room)
Level 2,3,4 – Supportive Housing

- Back-of-House Circulation
- No dedicated entry lobby on Level 2
- 2 Distinct Bed Wings
- Outdoor space at ends of Bed Wings
- No outdoor space on top of Multi-purpose
- Sub-dividable Dining / Activity Room (view/ daylight)
<table>
<thead>
<tr>
<th>MHRCs</th>
<th>Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>29</td>
<td>31</td>
</tr>
<tr>
<td>66,000</td>
<td>73,000</td>
</tr>
<tr>
<td>205</td>
<td>432</td>
</tr>
<tr>
<td>662</td>
<td>227</td>
</tr>
</tbody>
</table>

- Both MHRC and Support building HVAC systems are assumed to be VRF in combination with natural ventilation to reduce cooling loads.
- Rooftop PV analysis accounts for the impact of shading from topography to estimate how much PV capacity each option offers with MHRC and Support building rooftop areas.

**Concept B**

Daylighting & Energy Use

- Construct Supportive Housing (SH) & 4 MHRCs in Phase 1.
- Community functions visible upon entry.
- MHRC secured courtyards adjacent to open recreation area.
- Higher retaining walls at north & lower retaining walls at south.
- Most endangered species habitat impact.
- Retaining walls front loop road.
- Noise & daylight impact of SH construction adjacent to existing.
- SH is not required to have interim secured beds.
- Interim relocation of loading area to existing building needed.
- MHRC access to center green without crossing road.

**Concept C**
Concept C: Phasing

**Site Design**

**Sitework**

- Site clearing
- Temporary barrier
- Reduced parking capacity
- Relocation of building service entrance
- Existing main entry unchanged
- Existing recreation area reduced
- Existing auditorium remains in service

**Phase 1**

- Building loop road with lollipop configuration
- Construct 5 new MHRCs
- Construct new Supportive Housing
- Temporary barrier reduced
- Existing building & recreation area in use during construction

**Building Demo**

- Client relocation to new buildings
- Site clearing in center
- Demolish existing building
- Temporary barrier in place with SH
**Concept C: Phasing**

**Completion**
- Complete loop road
- Final site work & landscaping

---

**SITE DESIGN**

**Phasing & Client Bed Count**

This assumes that 20 beds of the existing facility are removed from use during construction of the adjacent Supportive Housing.

* This assumes that 20 beds of the existing facility are removed from use during construction of the adjacent Supportive Housing.

---

**Concept C – MHRC: “4 Finger” Layout**

**Key Points**
- Clear gradation between private patient space, communal patient space, and staff-only space
- Designed to engage the canyon edges
- Different bedroom orientation
- Smaller main courtyard, but potential for 3 additional outdoor spaces
- Enclosed Dining / Activity Room and large open area
- Distinct Entries – “on-stage / off-stage” separation

11,200 sf
Concept C – Supportive Housing (separate Multi-purpose Room)

Level 1 – Campus Center

- Loading at Northwest
- Back-of-House Circulation – most clear
- Zoning: Community, Service, Admin, Clinical
- More pronounced lobby / gathering space
- All Entries on Level 1
- Covered walk to Multi-purpose Room

Concept B – Supportive Housing (separate Multi-purpose Room)

Level 2,3,4 – Supportive Housing

- Back-of-House Circulation
- No dedicated entry lobby on Level 2
- 2 Distinct Bed Wings
- Outdoor space at ends of Bed Wings
- No outdoor space on top of Multi-purpose
- Sub-dividable Dining / Activity Room (view/ daylight)

<table>
<thead>
<tr>
<th>MHRCs</th>
<th>Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>28</td>
<td>31</td>
</tr>
<tr>
<td>64,000</td>
<td>73,000</td>
</tr>
<tr>
<td>199</td>
<td>426</td>
</tr>
<tr>
<td>625</td>
<td></td>
</tr>
</tbody>
</table>

Concept C

Daylighting & Energy Use

- Both MHRC and Support building HVAC systems are assumed to be VRF in combination with natural ventilation to reduce cooling loads.
- Rooftop PV analysis accounts for the impact of shading from topography to estimate how much PV capacity each option offers with MHRC and Support building rooftop areas.

<table>
<thead>
<tr>
<th>Percentage of occupied hours where illuminance is at least 40 footcandle, measured at 2’ below the first floor.</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
</tr>
</tbody>
</table>

- The idea of introducing skylights for the Option C were tested by placing skylights on two MHRCs on the south and north side. Two scenarios with 3’ and 6’ square shape skylights were analyzed.
- It is more effective to use skylights on the MHRCs on the north side of site compared to south side. The adjacent topography near southern MHRCs blocks more daylight even with 6’ skylights.
**Concept C**  
Program built in one phase

**Key Features**
- Construct new program in one phase.
- Community functions visible upon entry & frames center green.
- Large center green space.
- MHRC nested in hillside to minimize retaining wall heights.
- MHRC configuration allows focus on connection to green space.

**Advantages / Disadvantages**
- Retaining walls are less visible behind MHRC buildings.
- Noise & daylight impact of SH construction adjacent to existing.
- SH is not required to have interim secured beds.
- Existing facility recreation yard can wait through construction.
- Interim relocation of loading area to existing building needed.
- Crossing vehicular road needed to get to center green space.
- MHRC has smaller, multiple courtyards.

---

**Bed Count During Phased Construction**

<table>
<thead>
<tr>
<th></th>
<th>Concept A</th>
<th>Concept B</th>
<th>Concept C</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>During Phase 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construction, Existing Building Remains in Use</td>
<td>117</td>
<td>97 *</td>
<td>97 *</td>
<td></td>
</tr>
<tr>
<td>Completion of Phase 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>and Demolition of Existing Building</td>
<td>105 **</td>
<td>121 ***</td>
<td>137 ****</td>
<td></td>
</tr>
<tr>
<td>At Project Completion</td>
<td>137</td>
<td>137</td>
<td>137</td>
<td></td>
</tr>
</tbody>
</table>

- *Rooms facing SH Site to be removed from use during construction (20 beds)
- **SH required to be reimagined.
- ***SH required to be reimagined.
- ****Building C Complete.

---

**MHRC Comparison**

<table>
<thead>
<tr>
<th></th>
<th>Concept A</th>
<th>Concept B</th>
<th>Concept C</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHRC’s (&quot;X&quot;)</td>
<td>54,693</td>
<td>56,326</td>
<td>56,252</td>
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<tr>
<td>Campus Center</td>
<td>17,389</td>
<td>17,389</td>
<td>17,389</td>
</tr>
<tr>
<td>Supportive Housing</td>
<td>34,353</td>
<td>34,353</td>
<td>34,353</td>
</tr>
<tr>
<td>Total</td>
<td>108,435</td>
<td>108,068</td>
<td>107,994</td>
</tr>
</tbody>
</table>

- Program is similar and consistent across each Concept.
- Exception: "K" and "4 Finger" MHRC’s include more open activity / dining space.

---

**Program Summary and Comparison**
Supportive Housing Comparison

<table>
<thead>
<tr>
<th>Concept A</th>
<th>Concept B</th>
<th>Concept C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campus Center</td>
<td>17,389</td>
<td>Campus Center</td>
</tr>
<tr>
<td>Supportive Housing</td>
<td>34,353</td>
<td>Supportive Housing</td>
</tr>
</tbody>
</table>

Site Design Comparison

- **Concept A**
  - Construct 3 MHRCs & Supportive Housing in 1st phase
  - Site Development Area: 285,444 sf (most)
  - Retaining Wall Face Area: 27,815 sf
  - Grading: 889 cu. yd. net cut
  - Site rough order of magnitude*: $7.8 m ($28/sf)

- **Concept B**
  - Construct 4 MHRCs & Supportive Housing in 1st phase
  - Site Development Area: 284,442 sf
  - Retaining Wall Face Area: 23,960 sf (least)
  - Grading: 14,029 cu. yd. net fill
  - Site rough order of magnitude*: $6.3 m ($22/sf)

- **Concept C**
  - Construct 3 MHRCs & Supportive Housing in 1st phase
  - Site Development Area: 252,406 sf
  - Retaining Wall Face Area: 29,000 sf (most)
  - Grading: 10,225 cu. yd. net cut
  - Site rough order of magnitude*: $5.8 m ($20/sf)

* Site ROM is provided to compare pricing for the 3 site configurations based only on rough grading and retaining wall areas. Key exclusions: building demolition & construction, final grading, landscaping, escalation, & project soft costs.

**Lunch**

We will start back at 1:00pm

**Landscaping Visioning**
Overall Landscape Visioning

KEY OBJECTIVES
- Character for landscape
- Programming for exterior spaces
- How program fits into concepts

Overall Landscape Character
Clean and Modern

Out in Nature

Home Style
Program Preferencing

Concept A
Open Space Typologies

Circulation & Open Space

Site Sections
Concept A
Retaining Wall Conditions

Concept A
Creek

Concept A
ARF Entry + Common Space

Concept B
Open Space Typologies

LANDSCAPE DESIGN
CANNONDESIGN

Useable Space
Private Space
Creek Zone

CANNONDESIGN
rhaa
CANNONDESIGN
rhaa
MEETING NOTES

Project Name: Cordilleras Health System Replacement Project
Project Number: 005318.00
Date: April 10, 2018
Time: 9:00 AM-3:30 PM
Place: PDU Trailer - 1402 Maple Street, Redwood City

Attendees:
- Michael Smith: CannonDesign
- Jim Mosier: SMC-PDU
- Deepa Belga: CannonDesign
- Sam Lin: SMC-PDU
- John Phung: CannonDesign
- Louise Rogers: SMC-HS
- Tim Rommel: CannonDesign
- Larry Funk: SMC-HS
- David Sassa: CannonDesign
- Terry Wilcox: SMC-HS
- Will Ransome: CannonDesign
- Tony Burley: IBI Group
- Keith Hammerslamm: CannonDesign
- Manuhaa King: RHA
- Gustavo Lopez: CannonDesign
- Robin Kim: RHA
- Steve Moreland: KPF
- Ivor John Maasch: KPF

Discussion: Concept Design Phase Workshop #2: April 10, 2018

INTRODUCTIONS:

1. Michael Smith gave introduction and provided some background from last workshop:
   a. Hope as a generator
   b. The idea of building strong communities
   c. Sustainability Strategies
   d. Minimizing the impact on the beautiful setting
   e. Fostering attributes of domesticity

2. Overview of last meeting presentation items:
   a. 8 site plan options
   b. 5 MHRC layouts but no supportive housing options

3. 3 new site plans / MHRC’s that have been detailed for this meeting to progress and narrow the focus to one or two design options for schematic design phase

4. Deepa Balgi went over the agenda for today’s meeting

5. Site / Program Overview:
   a. John Phung went over the new 3 site plan options, Concept A, B & C,

SECTION 1: SITE / BUILDING CONCEPT A:

6. Supportive Housing around the same location as bridging documents. Need for paved area in the middle of site for fire truck access.

7. A question was raised if the loop around meet Cal Fire requirements. Turn around on right side of HS, might lose some parking spaces.

8. Phasing:
   a. Multi-purpose room must be demolished because of proximity of MHRC,
   b. South east area can be used by clients during construction
   c. Temporary scenario for fire trucks to gain access
MEETING NOTES

9. Jim likes that this concept because it takes care of site work all at once.
   a. Terry: Can we figure out how long it’s going to take for the excavation and site work? They need to know the duration of impact to the residents. Jim mentioned it could be a month or two.
   b. Noise or vibrations awareness to let residents know what’s coming and be able to prepare them.

10. Earthwork:
    a. Minimize the amount of earthwork
    b. Being close to having a balanced site
    c. Large excavators cutting into the hillside
    d. We need to study the impact on the neighbors and the community. What kind of complaints will this generate from neighbors?

11. MHRC ‘X’:
    a. Floor plan hasn’t changed since last meeting
    b. Jim: “X” scheme is desired for security and safety
    c. Tony: End of “X”s are defendable spaces
    d. Big courtyard, secondary outdoor spaces are small. Outdoor spaces increase in the other schemes.
    e. One main entry and central point of clear visibility
    f. Residents might not like that all rooms entries look into the lobby (privacy concerns)
    g. Sam mentioned that the patio/garden areas will be in shade.

11. Supportive Housing:
   a. The county does not have control over the efficiency of food distribution; this is up to the vendors, N. Metro.
   b. SH kitchen could also be (in the future) a production space for the whole site
      - Kitchen should have the infrastructure to provide for all MHRCs and SH (the entire resident population and the staff). Full capacity for all meals that are required.
      - All these programs should have a functional kitchen because the programs can change in the future.
      - Tour the kitchen for lessons learned
   c. Because of federal regulations the vendors will have to be independent (reimbursement requirements)
   d. SMC cannot be involved in any of the vendor operations, (food, laundry etc.)
   e. Feedback:
      - The lobby can be bigger or more comfortable seating and tables.
      - Clients and visitors can have access to all entries. Michae asked if there is a desire for a two-story lobby space to create a sense of arrival. Tony mentioned it would help the legibility of the building if both entries are somehow connected.
      - Institutional look with long skinny hallways should be avoided.
   f. Everyone should read bridging documents.
   g. All buildings must have space available for 3 days of emergency food and water supplies.

12. Daylighting:
    a. Jim asked if it is possible to use space by water tower for PVs.
    b. Campuses over parking spaces can also be used for PVS in order to reach net zero. Might not be able to use all roof space because of sunlight or architectural shape

SECTION: SITE / BUILDING CONCEPT C:

15. Site:
   a. The buildings are tucked further into the hillside.
   b. Highest retaining wall is 71 feet
   c. Raising the MHRCs on north would decrease the retaining wall on the north side but increase wall height by the creek.
   d. Think creatively of the characteristics of the site
   e. Do a site comparison of shadow studies. How is the hillside going to affect the site?

16. MHRC “K”:
   a. Big difference is the rotation of the “K”.
   b. Upstairs is courtyard opening to views and not facing another building.
   c. Balcony on other side of the project is an advantage.
   d. Single entrance. There could be a secondary entrance for staff.
   e. The site has a direct entrance from the exterior to the kitchen.
   f. Tony suggested that the team look at a lesser number of hallways with more beds.
   g. Suggested for (2) 5s and (1) 6 rooms suites
   h. Louise likes concept C more than A. The courtyards are looking outward.

17. Supportive Housing:
    a. More generous reception.
    b. Flexibility in spaces.
    c. Service entry further removed from entry point
    d. Concerned about higher level outdoor spaces (roof top garden)
       - It is a security and safety issue. More security will diminish the whole experience rooftop garden experience.
       - Not a loss to give up rooftop, more outdoor spaces (gardens) on the ground level have higher value.
    e. SMC-HS like the formal reception & two entrances.
    f. Creates a threshold for campus
    g. From community perspective this has a beautiful entrance of campus
    h. Larry: This has a better definition of arrival on campus and protects the MHRCs on the back.
    i. Breaks down the stigma.

18. Daylighting:
    a. More PV space because of large building footprint

SECTION: SITE / BUILDING CONCEPT B:

14. Sound wall goes around the whole existing HS. They will have to vacate some clients from the north wing.
    a. Loop road goes around and connects with fire station.
    b. Compare the cost of relocating a few clients vs. the cost of extra height of the sound wall.
       - Sound wall 12’ high
       - Move out clients from floor 3
       - The question was asked if the sound wall was really going to be worth the money and if it was going to work.
       - Terry will review the bed situation in the existing facility.

19. This is a single-phase option.
20. Community space is detached from the SH. Like Concept B. Building pads raised to accommodate retaining walls.
21. Site:
    a. Can retain existing auditorium during construction.
    b. All done in one phase
       - Road does not go loop around the campus because of existing building; however, after demo phase this would be completed.
       - Jim mentioned that this option would probably shave off months of construction because of single phase.
    c. How would we manage safety for pedestrians in inner road? Concerns for crossing the road to get to the central green. One-way loop would help.
    d. Sam likes the openness of the campus in this option.
       - Design opportunities for walking paths along the creek to open green space
    e. This option must bring in site 8. Relating walls no longer have visual impact on site
    f. Most appealing from the point of view of less violation of the canyon.
    g. Not as packed and can keep the auditorium during phase 1
    h. Advantages: great views
    i. Disadvantages: Accessibility
       - Need to find a balanced approach of circulation from buildings to roads & green space
    j. It was suggested to the design team to explore an option to try to avoid the bridge over the creek.
MEETING NOTES

22. MHRC “4 fingers”
   a. 2 different entries
   b. Advantage of having the rooms at the edge of wings is to provide great views and harmony.
   c. The option lends itself to diversity.
   d. Find a more efficient way for kitchen, too far from entry point.
   e. Tony suggested that it would be less formal if it was not symmetrical.
   f. 3 fingers could create larger courtyards.
   g. Phenomenal.

23. Supportive Housing:
   a. Like Concept B but multipurpose room is detached. Breezeway can be another entry for the community.
   b. Terry likes having the separate auditorium; easier to have community events, but challenging to manage due to distance from the lobby and reception.
   c. Kitchen is better located since it is closer to the MHRCs. However, it is farther away from the auditorium.
   d. Kitchen route is important for transit of food to MHRCs and the auditorium.

24. Daylighting:
   a. PVs can be located close to water tank.

SECTION 4: LUNCH

SECTION 5: LANDSCAPING VISIONING

25. Overall Landscape Character:
   a. Most popular vote (3) for “Out in Nature” concept:
      - Using the site’s context and natural beauty as a driver for the landscape design.
      - Allowing elements of the surrounding natural site to create places for therapeutic recovery and inspire design of new space.
   b. One vote for “Home Style” concept:
      - Outdoor private spaces at MHRC Buildings to incorporate this concept.
      - Creating a welcoming environment for residents.
   c. No votes for “Clean and Modern”.
   d. Suggestion to combine elements from “Out in Nature” and “Home Style” moving forward.

26. Programming Preference:
   a. Half-court Basketball Court
      - Good exercise for either one person or a group of people.
      - Could share use; i.e. volleyball court or another activity.
   b. Fitness Area
      - Walking space would be more used than an outdoor fitness area.
      - Loop path would be preferred with break off spaces from path to do activities (small steps).
      - Stopping points with interpretive signage about flora and fauna.
      - Creek Walk Path.
      - Fitness area could potentially be used if scale.
   c. Open Lawn
      - Open flexible space for event and activities.
   d. Shelter Group Gathering
      - Want protection from sun and rain.
   e. Animal Yard
      - Wanted by both staff and community and expected to be incorporated in design.
   f. Community Garden
      - Current one is well used.
      - Already said to be incorporated in design.
      - Existing garden size is adequate and desired.
   g. Amphitheatre
      - No need for large amphitheatre, would not be used for performances.
      - Small-scale amphitheatre could be combined with mediation space.
      - Could potentially be an overlook.
      - Potential extension to auditorium space.

h. Picnic Areas
   - Small seating spaces / picnic areas wanted for visiting families.

i. Ping Pong
   - Could be rolled out from auditorium and be an outdoor extension of that space.

27. Overall Concept Comments:
   a. Concept A: Impact of creek and the lake greatly restricts open space usage.
   b. Concept B: Constrained, linear, communal programs too close together, cannibalizing programs can conflict (ex: Basketball too close to meditation garden).
   c. Concept C: Open, more space between elements and transition room between spaces.
   d. General comments:
      - Small gathering preferred.
      - Design should fit into environment.

28. Small Private Courtyard Spaces:
   a. Small seating areas.
   b. Gardening spaces.
   c. Enough space to gather / sit / eat outside.
   d. Aesthetically pleasing plants and garden spaces.
   e. Room for small group activities.
   f. Places for patients to meet one on one with family.
   g. Breakout space from indoor dining room.
SECTION 6: CONCEPT EVALUATION

29. David led the Concept Evaluation exercise and went through all the criteria with the team and rated them. Concept C was the clear winner.

30. Concerns about Concept C:
   a. How are the clients going to circulate down to the site from MHRC’s?
   - Find a solution to transition between open space and MHRC without having to take steps
   - Transition should be easy and convenient
   - Concerns about ADA
   - Exterior stairs are acceptable if required in addition to the accessible ramp.
   - Terry mentioned that it would be nice to just have ramps especially due to the aging population.

31. Federal criteria: “Clients are not accepted if they cannot exit building independently. Clients in wheelchair is rare”

32. Pursue Concept C and move it forward to schematic design

33. Detached community center for the SH has its positives and negatives, but no clear decision was made.

34. Keith would like to get information on back up emergency generator’s running time and trash collection. SMU-HIS ready to talk about it at next meeting or at a more convenient time.

35. MHRC’s Licensed by the state of CA. Required continuous running time (72 hrs of running time is preferred)

36. Trash / waste pick up: The local scavenger can come on a weekly basis and pick up waste at each building. Small container should be at a convenient location that won’t disrupt the site.

37. Kitchen to have enough storage for 72 hrs worth of emergency supplies

38. The design team to check all codes for MHRCs.

39. Terry mentioned that the staffing models are complete for the MHRCs and can be sent out soon. This will help with parking analysis.

SECTION 7: CONCLUSION & NEXT STEPS

40. The design team will be submitting a report on April 27th which will conclude the Concept Design Phase.

41. The design team will present report on May 1st.

42. The review meeting to be on the following week on May 8th and this will also be the Schematic Design Phase kick-off.

43. Jim suggested discussing the facility tours at a later date and time.

To the best of my knowledge, the above items were discussed. Should there be any additions or corrections, please advise Cannon&Design in writing within seven days. We will consider these meeting notes as accurate record for proceeding with the necessary “actions”, unless informed otherwise as noted.

Prepared by,

Deepa Bali
Project manager

Attachments:
- CannonDesign Presentation
- Program
- Comparison Handout
- Concept Evaluation Matrix

cc: Attendees
<table>
<thead>
<tr>
<th>Category</th>
<th>Concept A</th>
<th>Concept B</th>
<th>Concept C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Walkability / Bikeability</td>
<td>1</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Safety / Security</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Ease of access for public</td>
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<tr>
<td>Relationship of buildings on the campus</td>
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<td>1</td>
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<tr>
<td>Connectivity from MHRC to campus center</td>
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<td>2</td>
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<tr>
<td>Visibility / Accessibility of campus center</td>
<td>3</td>
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<td>1</td>
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<tr>
<td>Access to natural daylight</td>
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<tr>
<td>Outdoor space immediately adjacent to MHRC</td>
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<tr>
<td>Views &amp; relationship to nature</td>
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<td>1</td>
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<tr>
<td>Outdoor space available to the campus</td>
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<td>1</td>
</tr>
<tr>
<td>Availability of beds</td>
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<tr>
<td>Bed mix</td>
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<td>Access and visibility of MHRC entry</td>
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<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Separation of staff / service from patient / visitor traffic in MHRC</td>
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<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Quantity and variety of daytime space for patients in MHRC</td>
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<td>2</td>
<td>1</td>
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<tr>
<td>Parking availability</td>
<td>-</td>
<td>-</td>
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<td><strong>34</strong></td>
<td><strong>28</strong></td>
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**Logistics**

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<th>Concept C</th>
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<td>Construction disruption impact</td>
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<tr>
<td>Opportunities for future growth</td>
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<td>1</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>55</strong></td>
<td><strong>34</strong></td>
<td><strong>28</strong></td>
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</tbody>
</table>
San Mateo County Behavioral Health and Recovery Services (BHRS)
Cordilleras Replacement Modeling Analysis
Annual Operating Budget, Intensive Medically Challenged Program

Section 1: Staffing Budget

### Executive Summary

**Program**

- Cordilleras Replacement Modeling Analysis

**Staffing Requirements**

- Average Census:
  - AM Staff:
    - Director of Nursing: 1.00
    - RN Charge: 1.00
    - LVN/URPs: 2.00
    - Recovery Specialist: 1.00
    - Rehab Therapists: 1.00
    - Program Director: 1.00
    - Social Worker III: 1.00
    - Food Service/Housekeeping: 1.00
    - Regional Administrator: 0.10
    - Administrator: 1.00
    - Business Office Mgr/AA: 1.00
    - Medical Records Tech/Reception: 1.00
  - PM Staff:
    - LVN/URPs: 2.00
    - Social Worker III: 1.00
    - Regional Administrator: 0.10
    - Administrator: 1.00
    - Business Office Mgr/AA: 1.00
    - Medical Records Tech/Reception: 1.00
  - NOC Staff:
    - LVN/URPs: 2.00
    - Social Worker III: 1.00
    - Regional Administrator: 0.10
    - Administrator: 1.00
    - Total AM Staff: 10.10
    - Total PM Staff: 3.00
    - Total NOC Staff: 2.00

**Total AM Staff:** 10.10

**Total PM Staff:** 3.00

**Total NOC Staff:** 2.00

**Total Full-Time Staff:** 15.30

**Total Part-Time Staff:** 5.00

**Total Total Staff:** 20.30

**Staffing Projections**

**San Mateo County Behavioral Health and Recovery Services (BHRS)**

Cordilleras Replacement Modeling Analysis

Annual Operating Budget, Intensive Behavioraly Challenged Program

Section 1: Staffing Budget

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**Staffing Projections**

**San Mateo County Behavioral Health and Recovery Services (BHRS)**

Cordilleras Replacement Modeling Analysis

Annual Operating Budget, Intensive Behaviorally Challenged with Trauma Focus Program

Section 1: Staffing Budget

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  - AM Staff:
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    - Rehab Therapists: 1.00
    - Program Director: 1.00
    - Social Worker III: 1.00
    - Food Service/Housekeeping: 1.00
    - Regional Administrator: 0.10
    - Administrator: 1.00
    - Business Office Mgr/AA: 1.00
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  - PM Staff:
    - LVN/URPs: 2.00
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    - Regional Administrator: 0.10
    - Administrator: 1.00
    - Business Office Mgr/AA: 1.00
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  - NOC Staff:
    - LVN/URPs: 2.00
    - Social Worker III: 1.00
    - Regional Administrator: 0.10
    - Administrator: 1.00
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  - Total NOC Staff: 2.00

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**Total Part-Time Staff:** 5.00

**Total Total Staff:** 20.30

**Staffing Projections**

**San Mateo County Behavioral Health and Recovery Services (BHRS)**

Cordilleras Replacement Modeling Analysis

Annual Operating Budget, Intensive Behaviorally Challenged with Trauma Focus Program

Section 1: Staffing Budget

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    - LVN/URPs: 2.00
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    - Rehab Therapists: 1.00
    - Program Director: 1.00
    - Social Worker III: 1.00
    - Food Service/Housekeeping: 1.00
    - Regional Administrator: 0.10
    - Administrator: 1.00
    - Business Office Mgr/AA: 1.00
    - Medical Records Tech/Reception: 1.00
  - PM Staff:
    - LVN/URPs: 2.00
    - Social Worker III: 1.00
    - Regional Administrator: 0.10
    - Administrator: 1.00
    - Business Office Mgr/AA: 1.00
    - Medical Records Tech/Reception: 1.00
  - NOC Staff:
    - LVN/URPs: 2.00
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**Total Part-Time Staff:** 5.00

**Total Total Staff:** 20.30

**Staffing Projections**
## EXECUTIVE SUMMARY

### PROGRAM

- Preliminary FF&E List
- Concept Site Plan
- Concept Phasing
- Concept Floor Plans

---

### APPENDIX

- Staffing Projections

### Cordilleras Health Systems Replacement Project | Concept Design Report | Page 73

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### San Mateo County Behavioral Health and Recovery Services (BMHRS)

#### Cordilleras Replacement Modeling Analysis

**Annual Operating Budget, Medium Intensity Program**

**Section 1: Staffing Budget**

### Staffing Projections

#### AM Staff

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<tr>
<th>Position</th>
<th>Mon</th>
<th>Tue</th>
<th>Wed</th>
<th>Thurs</th>
<th>Fri</th>
<th>Sat</th>
<th>Sun</th>
<th>Total Shifts</th>
<th>Total FTEs</th>
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<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
<td></td>
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<tr>
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<td>2.00</td>
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#### PM Staff

| LVN/LPNs/PTs | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 7.00 | 1.40 | L | 0% |
| Social Worker I | - | - | - | - | - | - | - | - | - | - |
| Recovery Specialist | 3.00 | 3.00 | 3.00 | 3.00 | 3.00 | 3.00 | 21.00 | 4.20 | R | 33% |
| Food Service/Housekeeping | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 3.00 | 1.40 | E | 100% |
| **Total PM Staff** | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 35.00 | 7.00 |      |       |

#### NOC Staff

| LVN/LPNs/PTs | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 7.00 | L | 0% |
| Recovery Specialist | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 14.00 | 2.80 | R | 33% |
| **Total NOC Staff** | 3.00 | 3.00 | 3.00 | 3.00 | 3.00 | 3.00 | 21.00 | 4.20 |      |       |

**Total Daily Staffing**: 14.00 | 14.00 | 14.00 | 14.00 | 14.00 | 14.00 | 18.00 | 4.30 |      |       |