

FEASIBILITY REPORT DECEMBER 22, 2016



TREANORHL

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EXECUTIVE SUMMARY

INTRODUCTION

Upon seeing the RFP for the Woodside Juvenile Rehabilitation Center (WS) my reaction was, "I am so not interested in doing prison work." This was a shockingly ignorant view. While we were guickly disabused of this notion, I suspect that much of the public still thinks Woodside is a jail for young people.

What is the Woodside Juvenile Rehabilitation Center? Institutions do not always live up to their names; but 'Rehabilitation' is a core value at WS. Juveniles, sometimes severely abused, can become a danger to themselves and others and become enmeshed in the legal system. Woodside's mission is to heal them, not in a jail, but in a secure, therapeutic environment that supports a return to society. This nationwide model is better for the youth, their family and society and is more cost effective than relying on the detention system.

As we understood how important a force for good Woodside is two things stood out:

First, we were impressed with the commitment and compassion exhibited by the staff. We felt this from the director all the way down to staff working in the dayroom or monitoring someone in crisis. Even the two chefs in the kitchen exuded commitment. We heard stories of past residents who entered in dire straits, are now are doing well and still regularly check in to say hello to the people who helped them find their way.

Second, it was sobering to see how much the existing facility works against their efforts. The needed program spaces are not available, what exists doesn't work and it feels like a jail. When people are in a jail they act accordingly which undermines the therapeutic elements of the program.

This feasibility study was compressed into a very short time frame. Our goal was to analyze the existing site and building conditions, develop a program, propose a preliminary design and an initial opinion of probable cost. We have successfully developed a design strategy that has flexibility to expand or shrink in response to program and budget needs. The next step would be to develop the site and building in more detail including building structure and systems as a basis for a more detailed cost estimate.

TEAM & PROCESS

Duncan • Wisniewski Architecture (DWA) has practiced since 1985. Our mission largely involves creating places for the less fortunate including affordable housing, homeless shelters, food shelves and other similar programs. Our biggest state job was the Williston Rest Areas on I89. For WS we teamed with TreanorHL (THL), a national firm focusing on justice work including youth rehabilitation centers. We assembled a team of local consultants to address critical portions of the work.

After assembling base information the team from THL joined us for a three day charrette - a concentrated process where client and architects develop ideas in an intense and compressed time frame - in early November to develop the program and sketch designs. At the end of the charrette we agreed on a design direction which was then developed over a course of one month.

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WOODSIDE JUVENILE REHABILITATION CENTER

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EXISTING SITE REVIEW

GENERAL - Located off of Rt. 15 in Essex, across from the old Fort Ethan Allen this is a most challenging site. In theory the 10 acres - 5.4 developed - allow room and flexibility for expansion. Our site analysis and two meetings with ANR and Army Corps representatives quickly identified major factors limiting the developable footprint to barely more than what is there now.

Natural Resources/Wetlands - Much of the site has Class II wetlands which we delineated and verified. These require a 50' buffer which is shown on our site plan and more or less coincides with the existing developed area.

Stormwater - There is no stormwater permit for this site even though its impervious area exceeds 1 acre. Any additions or new construction will require a permitted stormwater treatment system and this will require a section of our developable area to implement.

FLOODPLAIN - WS is a critical facility - verified with ANR - and cannot be built in the 100 or 500 year flood plain. A survey crew has verified that both existing buildings are in the 500 year flood plain and are not in compliance.

UTILITIES - Sufficient site utilities exist on site.

PERMITS - Our initial discussions with local zoning personnel, ANR and Army Corps Engineers suggest that we should be able to obtain local permits and an amendment to the existing Act 250 permit without undue burden. The main focus will be stormwater and respecting the new 50' wetland buffer.

EXISTING BUILDING REVIEW

GENERAL - The main structure was built in 1984 as a juvenile detention center. A gym was added in 1997. The main floor is approximately 12,000 sf with a 6,000 sf second floor. It is a slab on grade/frostwall with structural concrete masonry (CMU) walls, elevated concrete slab, wood exterior walls and wood roof structure.

STRUCTURAL - Our structural engineer has determined that it is structurally sound. However, the many small rooms with structural CMU walls and doors not meeting ADA make it very difficult to change the layout. A new steel beam structure would need to be inserted and this will be very expensive.

MECHANICAL/ELECTRICAL/PLUMBING - Our MEP report indicates that many of the systems are at the end of their life span and will need to be replaced. The ductwork is so enmeshed with the building structure that it will be difficult to remove without modifying the structure. The gym has its own propane powered heating system but is not adequately ventilated or dehumidified which leads to sweating causing slippery floors that have caused injuries. The fire protection system appears to be adequate and code compliant. The electrical systems are generally adequate.

JUSTICE STANDARDS - The Council of Juvenile Correctional Administrators (CJCA) has submitted a report noting that almost everything about the appearance and function of the building works against the treatment model of rehabilitation that WS seeks to implement. These deficiencies create unsafe and non-therapeutic behaviors which then spread through contagion.

BUILDING IMPACT ON PROGRAM FUNCTION - The detailed report includes a long list of how the building works against the therapeutic model. These deficiencies have to do with both inadequate program space and various unsafe conditions as well as the fact that it feels like a detention center which leads to people acting like they are in a jail.

ACCESSIBILITY - Many of the doors are not accessible due to size or clearances - none of the rooms are accessible. Although there is an elevator, the only way to access it is through the dishwashing and kitchen areas which are not secure.

PROGRAM

At present the facility is licensed for 30 beds. The core elements are housing, education, counseling and support areas plus recreation. We started with an idealized program and then honed in on detailed 30 bed and 25 bed programs related to the design concepts.

Existing 25,000 sf 25 Bed 39,000 sf 30 Bed 46,000 sf

The program is larger than expected because the existing facility is so inadequate. Many of the program elements do not even have space. The staff are sleeping in storage closets (one infamously known as the Batcave). You go though other rooms to get to classrooms which causes disruption and can compromise confidential counseling or legal conversations. There is no secure medical intake area.

DESIGN STRATEGY

RENOVATION FEASIBILITY - Can the existing building be renovated and added to in a manner that creates a viable program? We concluded that the main building was not suitable to reuse, but that the gym could be integrated into a new structure. A summary of the reasons:

- assemble and train the existing, dedicated staff.
- Renovation. Renovating this building would be so extensive that the costs approach new

STRATEGY - Our design strategy is to build a new structure on site while the existing program remains functioning on site in order to save on the temporary, significant relocation costs. We will reuse the gym to reduce costs since this is a large program element. After the program occupies the new structure, the existing would be demolished and the recreation yard and parking would be completed.

CONCEPT - The organizing concept of program elements around a circular corridor and corridor works for both a 25 and 30 bed design. In fact it is flexible enough to allow us to keep the design concept and continue to adjust and refine the program based on more detailed feedback and budgeting.

• 500 Year Flood Plain. The main structure is 1.5' below the flood elevation. Given the type of structure that it is there is no way to raise the floor level. We believe the gym could be utilized since it is not a critical function. This alone is a primary reason to abandon this building.

 Renovation/Relocation Implications. Any renovation would be major involving replacing most of the systems. This cannot be done with the WS program remaining on site. The costs of finding, permitting, and retrofitting a secure, temporary facility are extremely high. Staff retention could suffer during this process which would be a major blow given the time and money it has taken to

construction. The building is not sympathetic to the rehabilitation program because it was made to be a detention center. Being mostly one story, it inefficiently utilizes the limited site footprint.

This concept appears to satisfy all the permitting issues which limit the developable area: Wetlands, Flood Plain and Stormwater. It satisfies the program elements is a straightforward manner and with relatively simple means creates an environment that is secure but the opposite of a detention center. There is plenty of natural light and views into the forest. We have avoided the curse of endless, artificially lit corridors.

MEP SYSTEMS & ENERGY ANALYSIS

The existing facility is not an energy efficient building. The median Energy Use Intensity (EUI) for an existing facility in the northeast is 90 kBtu/sf - but utility records indicate WS has an EUI of 115 kBTU/sf. Our projections assume an EUI of 60 and indicate that the 25 bed design would actually save money and the 30 bed would be quite similar, even though both are much larger than the existing facility.

PROBABLE COST

The preliminary design has not yet been developed enough to select structural and building systems. Our preliminary opinion of probable cost was developed with our local estimator - Tom Barden - and by comparing THL's experience with national averages.

Site work costs were calculated based on average of 10 - 15% of actual building costs on similar recent projects. Because this is a difficult site we used a factor of 18%. Building demolition cost was based on a somewhat larger, masonry structure in Waterbury. Our local estimator contacted a contractor who has done detention work and the sf numbers he provided coincided with what THL has seen in their national practice.

CONCLUSION

We quickly zeroed in on site issues which indicated that we had a very limited area to work with. The existing structure floor elevations were below the 500 year flood plain which is not acceptable for a critical facility. The building itself had many shortcomings besides the flood plain issue and we concluded it could not be reused. We also concluded that finding a temporary or permanent off site facility for the program would be very expensive and perhaps have a negative effect on the program if staff retention was harmed.

Therefore, the design strategy evolved to build a new structure incorporating the gym while the Woodside program continues to operate in the main structure. The building would then be demolished and the recreation yard and parking completed.

The design creates a secure environment that accommodates the program needed to fulfill the core mission of rehabilitation. It is a flexible concept that can work with a 25 or 30 bed program and many of the support spaces could be expanded or contracted around the central space.

END OF EXECUTIVE SUMMARY

oodside Juvenile Rehabilitation Center		_	
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mmary of Costs- Master Plan			
Program Name	Square Footage		erag /SF
25 BED - CONSTRUCTION (HARD) COSTS			
Housing	10,096	\$	300
Intake and Medical	2,426	\$	30
Staff Support	1,827	\$	30
Building Support	1,416	\$	30
Dining	2,016	\$	30
Public Entry and Meeting Rooms	2,028	\$	25
Visitation	569	\$	27
Administration	1,947	\$	25
Counseling	1,657	\$	30
Education and Programming	3,526	\$	30
Core and Primary Circulation	6,070	\$	25
Existing Gym	5,952	\$	9
SUB-TOTAL	39,530		
Site Work (Civil & Building) - Phase 1 & 2	18% of Blo	lg Sub	-tota
Phase 2 - Demolition & Disposal	18,500	\$	1
25 BED - TOTAL CONSTRUCTION BUDGET			
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30 BED - CONSTRUCTION (HARD) COSTS	10.005		0.0
	1 19 936 1	\$	30
Housing	12,235		20
Intake and Medical	2,426	\$	30
Intake and Medical Staff Support	2,426 1,827	\$	30
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Intake and Medical Staff Support Building Support Dining	2,426 1,827 1,416 2,016	\$ \$ \$	30 30 30
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Intake and Medical Staff Support Building Support Dining Public Entry and Meeting Rooms Visitation	2,426 1,827 1,416 2,016 2,028 569	\$ \$ \$ \$ \$	30 30 30 25 27
Intake and Medical Staff Support Building Support Dining Public Entry and Meeting Rooms Visitation Administration	2,426 1,827 1,416 2,016 2,028 569 1,947	\$ \$ \$ \$ \$ \$	30 30 30 25 27 25
Intake and Medical Staff Support Building Support Dining Public Entry and Meeting Rooms Visitation Administration Counseling	2,426 1,827 1,416 2,016 2,028 569 1,947 2,558	\$ \$ \$ \$ \$ \$ \$ \$	300 300 250 273 250 300
Intake and Medical Staff Support Building Support Dining Public Entry and Meeting Rooms Visitation Administration Counseling Education and Programming	2,426 1,827 1,416 2,016 2,028 569 1,947 2,558 4,771	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	300 300 250 273 250 300 300
Intake and Medical Staff Support Building Support Dining Public Entry and Meeting Rooms Visitation Administration Counseling Education and Programming Core and Primary Circulation	2,426 1,827 1,416 2,016 2,028 569 1,947 2,558 4,771 8,562	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	300 300 250 273 250 300 300 250
Intake and Medical Staff Support Building Support Dining Public Entry and Meeting Rooms Visitation Administration Counseling Education and Programming	2,426 1,827 1,416 2,016 2,028 569 1,947 2,558 4,771	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	30
Intake and Medical Staff Support Building Support Dining Public Entry and Meeting Rooms Visitation Administration Counseling Education and Programming Core and Primary Circulation	2,426 1,827 1,416 2,016 2,028 569 1,947 2,558 4,771 8,562	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	300 300 250 273 250 300 300 250
Intake and Medical Staff Support Building Support Dining Public Entry and Meeting Rooms Visitation Administration Counseling Education and Programming Core and Primary Circulation Existing Gym	2,426 1,827 1,416 2,016 2,028 569 1,947 2,558 4,771 8,562 5,952 46,307	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	300 300 250 273 250 300 300 250 90
Intake and Medical Staff Support Building Support Dining Public Entry and Meeting Rooms Visitation Administration Counseling Education and Programming Core and Primary Circulation Existing Gym	2,426 1,827 1,416 2,016 2,028 569 1,947 2,558 4,771 8,562 5,952	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	300 300 255 277 300 300 255 90
Intake and Medical Staff Support Building Support Dining Public Entry and Meeting Rooms Visitation Administration Counseling Education and Programming Core and Primary Circulation Existing Gym SUB-TOTAL Site Work (Civil & Building) - Phase 1 & 2	2,426 1,827 1,416 2,016 2,028 569 1,947 2,558 4,771 8,562 5,952 46,307 18% of Blo	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	300 300 255 277 300 300 255 90
Intake and Medical Staff Support Building Support Dining Public Entry and Meeting Rooms Visitation Administration Counseling Education and Programming Core and Primary Circulation Existing Gym SUB-TOTAL Site Work (Civil & Building) - Phase 1 & 2	2,426 1,827 1,416 2,016 2,028 569 1,947 2,558 4,771 8,562 5,952 46,307 18% of Blo	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	300 300 250 273 250 300 300 250 90

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CIVIL - 30 BED SITE PLAN
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EXISTING - SECOND FLOOR
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25 BED - FIRST FLOOR
25 BED - SECOND FLOOR
30 BED - SITE PLAN
30 BED - BUILDING DIAGRAM
30 BED - FIRST FLOOR
30 BED - SECOND FLOOR
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TREANORHL

TEAM & PROCESS

TEAM

Duncan • Wisniewski Architecture, Burlington, VT, responded to State Of Vermont RFP for design work at the Woodside Juvenile Rehabilitation Center. We formed a design team with TreanorHL, a national architectural firm known for their justice work including multiple juvenile rehabilitation centers as well a several critical consultants:

Architect - Duncan • Wisniewski Architecture - Michael Wisniewski & Sam Beall (DWA) Justice Architect - TreanorHL - John Eisenlau & Andy Pitts (THL) Civil - Krebs & Lansing - Bill Nedde (KL) Structural - Hardy Structural Engineering - Jared Waite (HSE) Mechanical/Electrical/Plumbing - Engineering Services of Vermont - Dan Dupras & Claus Bartenstein (ESV)

The core client team:

Department for Children and Families - Ken Schatz, Pam Dalley (DCF) Woodside Juvenile Rehabilitation Center - Jay Simon, Bill Cathcart, Kris Hoffman, Aron Steward (WS) Buildings and General Services - Peter Hack (BGS)

PROCESS

DWA began by gathering information about the site, the existing building and program requirements. We prepared base drawings from material provided by BGS. As the possible site constraints became apparent our civil engineer arranged for wetland delineation, surveying existing building elevations and a meeting with state and federal natural resource stakeholders to review site conditions.

Our first meeting with the client team occurred on October 6. We agreed on a strategy and schedule to complete this feasibility study in an accelerated time frame with the draft report complete by December 15 and the final by December 22.

DWA spent time on site shadowing staff and learning first hand how the facility and programs functioned. Along with the client team we also visited the John Sununu Youth Detention Center in New Hampshire, a 140 bed facility that models many of the program and physical facility aspects that WS is pursuing.

From November 8 through 11 TreanorHL architects John Eisenlau and Andy Pitts were present for a charrette (a charrette is a intense design exercise, typically within a short time frame) with DWA and the client team at which time we completed the following tasks:

Toured facility so THL can review existing conditions.

THL presented overview of Juvenile Rehabilitation design best practices nationwide with examples drawn from their own and others work. These designs showcased the creation of normative, familiar and residential environments that support rehabilitation programs rather than working against them. They compared these principles and examples to their assessment of the existing environment at Woodside.

Based on material sent by WS prior to charrette and through discussions with team, we developed a preliminary idealized program of needs and adjacencies with square footages. It was immediately apparent that this program was much larger than initially anticipated in terms of size and budget.

DWA and THL spent a day developing multiple design options which were presented to the team. At the conclusion of that session a preferred strategy and design direction were selected but because the program was larger than anticipated we agreed to also explore a similar option reducing the number of beds from 30 to 25, and exploring other ways to combine program elements to reduce overall SF and cost.

From November 11 to December 2 DWA worked to develop the two design options into preliminary site and floor plan sketches with regular input from THL. We met with the client team to review the design development on November 22 and December 2. During this time we were also working with our civil engineer and various state agencies to identify permitting and natural resource issues which would limit the scope of development on the site and shape the design.

After the December 2 meeting DWA continued to revise and develop the two design options and began to assemble this report.

EXISTING SITE



OVERVIEW

WS is sited on a ten acre site in Essex and is essentially invisible to the public. The facility is accessed via the almost hidden Woodside Dr. off Rt. 15 at the main entry and traffic light to Fort Ethan Allen. The winding drive descends somewhat steeply and crosses railroad tracks running along the northern border of the property. At the entry to the site there is a trailhead and parking for publicly accessible trails through the Woodside Natural Area, part of the Winooski Valley Park District.

The developed portion of the site is an open plateau surrounded by wooded, steep slopes ascending back up to Rt. 15 and down to the Winooski River. There are no adjacent or visible neighbors or structures. The access drive curves around the back of the structure ending at a service area. The two main structures, surface parking, service area and fenced in recreational vard essentially consume all of the existing open and level space. This developed area utilizes 5.4 acres of the 10 acre site.

The base site plan was developed by our civil engineer Krebs & Lansing (KL) from drawings provided by BGS and LIDAR topographic mapping. This is sufficient for our feasibility stage design but a full topographic and utility survey will be necessary as we move into a more detailed design phase.

Fire truck and emergency vehicle access appears adequate although turn radii and maneuvering space are not generous. Semi-trailers making deliveries can have a difficult time.

Parking is inadequate. Even utilizing unpaved areas outside the paved drive the parking is barely sufficient for daily use. Parking at times backs up onto Woodside Drive, especially during staff training times.

Please see attached report from our civil engineer. Bill Nedde of Krebs & Lansing for additional information.

NATURAL RESOURCES/WETLANDS

During project startup KL suggested that there were potential natural resource and permitting issues that could limit development on the site. We arranged a site visit with Mike Adams - Army Corps/Wetlands, Jennifer Mojo - ANR Agency Coordinator and Tina Heath - ANR Wetlands & Vernal Pools to walk the site and surroundings and identify natural resource and permitting issues on the site. Based on this feedback, KL retained Dori Barton of Arrowwood to conduct a wetland delineation which KL added to the site base plan. We then conducted a second site walk with Tina Heath for her to verify that she agreed with the delineation.

This work determined that much of the site consists of Class II wetlands and a small amount of Class III. The Class II wetland requires a 50' buffer shown with a bold dotted line on the site plan. There are other possible issues but most of them are congruent with the wetlands. Therefore a primary constraint on utilizing more of the site is the wetland buffer.

Some of the existing development falls within the 50' buffer. It is our understanding that we can likely redevelop existing disturbed areas within the buffer area based on meeting with Tina Heath who reviewed preliminary site development strategy sketches. Any disturbance of a Class II wetland or buffer will require a Wetland Permit.

No archaeological review or survey has been done as part of this feasibility study.

FLOOD PLAIN

A review of the 100 and 500 year flood plain was conducted by KL including consultation with ANR staff Jennifer Mojo and Rebecca Pfeiffer. Portions of the site are within the 100 year flood plain but it does not appear that it will be a major design constraint on the developable area of the site.

The 500 year flood elevation is 228' and the majority of the developable site is in the 500 year flood plain. KL's survey team verified existing structure floor elevations for both the main building and the gym at 226.5' +/-.

Critical facilities cannot be built below the 228' elevation. Rebecca Pfieffer, River Corridor & Floodplain Protection Program at ANR has confirmed that Woodside is a critical facility. Our interpretation is that the gym could be considered non-critical for operation of the facility.

STORMWATER

To date, KL has not found a record of a stormwater permit being issued for the original facility. There is minimal stormwater infrastructure on the existing site. The site has a few catch basins and a underground cutoff drain along the north side of the parking. The east side of the site drains to the east and the west to the west. There is a long drainage ditch that was installed to the east that eventually discharges to the water feature to the south. The existing impervious area - buildings, surface parking & walks, recreation area - is approximately 1.2 acres. The amount of impervious area being developed for the 30 unit design is approximately 63,632 sf (1.46 acres). A stormwater permit will be required because it exceeds 1 acre.

The detailed design of a stormwater system that can be permitted given the site constraints is beyond the scope of this feasibility study and will be a critical item to address early in the next phase. Test pits will need to be done in the spring to determine if the site is suitable for using infiltration chambers.

UTILITIES

WATER - A Champlain Valley Water District 20" diameter line runs across the north section of the site. We have not reviewed pressures or fire flows but this should be adequate to service the building and fire protection system. Any improvement within the 20' water easement will have to be coordinated with CWD.

SANITARY - The sanitary lines currently run from the main building to a grinder called a "Muffin Monster" that drains to a pump station located at the north side of the entrance to a pump station. A more detailed analysis of the condition and projected service life of this pump station should be undertaken in the next phase of design. The existing facility does have a Water/Wastewater permit and since we are not increasing the number of beds there should be no capacity issue. What is unclear is how the permit accounted for staff and if the staffing as a rehabilitation center adds any load beyond the original detention center. KL will determine this after the size and scope of the design is determined.

ELECTRIC - There is adequate power, including 3-phase for the elevator and future mech. & elec.

HEATING OIL - UG 12,000 tank installed in the late 1990's serving the existing building.

PROPANE - Above ground tank serving gym. There is no natural gas service, it's possibly available.

TELECOMMUNICATIONS - UG fiber optic serves the building from service pole at rear.

PERMITS

LOCAL - Our initial discussions with local zoning personnel indicate nothing that would prevent the site from being further developed per the proposed plans. As soon as a preliminary design has been approved they have requested that we meet informally with them to review the plan an receive more detailed feedback.

ACT 250 - This site has an existing Act 250 Permit which we would seek to amend. Per above, the stormwater and the 50' wetlands setback need to be addressed but we do not anticipate any irresolvable issues based on our preliminary meetings with ANR and Army Corps of Engineers.

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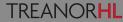
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EXISTING BUILDING

OVERVIEW

The existing facility was built as a 30 bed juvenile detention center in 1984. The gym, a pre-engineered steel building was added in 1997. There are two outdoor, fenced in recreational areas. Various modifications have been carried out over the years to address physical plant, functional and program requirements. Some bathroom work is scheduled in the near future to address maintenance and unsafe conditions.

BGS has provided excellent documentation of the building including the original construction drawings as well as the many projects that have been carried out over the years.



STRUCTURAL

Jared Waite of Hardy Structural Engineering (HSE) assessed the existing building based on existing documentation and a site visit. They focused on the two criteria noted below relating to capacity and flexibility. The actual report is included in the appendices.

The building has a slab on grade main floor with a frost wall concrete foundation. Exterior walls are a CMU with outboard wood studs. The majority of the interior walls are CMU and most are structural. The second floor consists of elevated, structural slabs and the roof is wood framing.

• Is the structure sound and in compliance with present day structural codes?

HSE indicates that the main structure is sound, in good shape and meets all present day codes for loading capacity for this type of use. There are no apparent major repairs or upgrades needed at this time.

The gym, a pre-engineered steel building is also structurally sound.

• Does the structure lend itself to re-purposing, modifications and changing the spatial layout?

Given that the majority of the rooms are quite small - 7' \times 10' - and they are all CMU and structural to support the elevated slabs above; this becomes a very difficult building to modify or change the layout. Any walls removed would need to be supported with steel beams. The rooms cannot even be reused in the present layout since the door openings are all too small to meet Life Safety and ADA requirements. The CMU opening would need to be increased and structural headers added.

The elevated slabs are very difficult to modify and represent a challenge for routing new building systems. As noted below the HVAC system is so enmeshed with the structure that it is difficult to remove or replace without structural modifications.

While the slab on grade and foundation are sound they are not easily modified to upgrade energy performance which is poor. and elevating the entire structure so that the floor is above the 500 year flood plain is virtually impossible.

MECHANICAL & ELECTRICAL

Dan Dupras (mechanical engineer) and Claus Bartenstein (electrical engineer) of Engineering Services of Vermont reviewed existing documentation and visited the building to produce their report. The actual report is included in the appendices. There is a separate section addressing energy use, which is high and a separate one addressing issues identified BGS staff.

MECHANICAL - The building is heated with an oil fired, three boiler, ducted system. A chiller was added in 2006 to provide cooling. Domestic hot water is supplied through its own boiler. The double walled, UG oil storage tank was installed in 1997.

The gym is heated with a propane fired boiler and ducted system. There is no cooling or dehumidification. In the summer the structure and flooring can become so damp and slippery that it has caused several injuries.

The ESV report notes that several of the building systems are at the end of their life span and will need to be replaced. The ductwork and air handling is so enmeshed with the structure that it will be challenging to remove and replace them. Structural modifications may be necessary.

PLUMBING - These are all original systems except for various fixtures which have been replaced and many are at the end of their expected life span. The gym has no plumbing.

FIRE PROTECTION - Both main building and gym have separate wet sprinkler systems supplied from a 6" service and connected to the alarm system and appearing to be adequate and code complying.

ELECTRICAL - Original electrical service is rated at 120/208v, 3 phase, 4 wire, 600 amp which is sufficient capacity for this use, including an elevator. Depending on the scope of renovations, additions or new this would need to be reviewed for sufficient capacity.

Wiring and general power systems are all original and appear adequate and generally code compliant. In 2014 the generator was upsized from 30kw to 125kw to handle the entire structure through a transfer switch. It is likely that this could be reused with an expansion or new structure although the 125kw may no longer be sufficient for entire building load. Lighting is mostly fluorescent and generally efficient and energy code compliant although it could be improved.

Life Safety includes exit and egress lighting as well as an alarm system. Some aspects of these systems no longer meet code and the fire alarm is no longer supported with UL listed replacement parts. These systems need to be replaced.

Telecommunications are provided building wide through CAT5 cabling connected to an UG fiber optic service.

The Gym has its own sub-panel for power and fire alarm system. Various upgrades are required to integrate with main building and meet code.

JUSTICE STANDARDS

The Council of Juvenile Correctional Administrators (CJCA) provides national leadership for improving juvenile correctional services, programs and practices. They have written a brief report summarizing why the existing building does not fit the WS program purpose or treatment model which is attached in the appendices.

The report notes that almost everything about the appearance and function of the building runs counter to and works against the treatment model that Woodside has implemented in moving from detention to rehabilitation.

The report notes areas where there is insufficient program space to serve the residents as well multiple deficiencies that create unsafe and non-therapeutic behavior for residents and expose other residents and staff to harm as well as spreading the behavior through trigger and contagion effects.

BUILDING IMPACT ON PROGRAM AND FUNCTIONALITY

GENERAL - The information developed during the course of this process and the CJCA report referenced above continually reinforce that the existing building not only lacks sufficient space to serve the program needs but the essential form, function and appearance create problems which undermine the rehabilitation goals. Woodside Program Director, Jay Simons, has written a summary of the challenges of this building which is attached in the appendices. The following bullet points summarize elements of his report as well as what we have learned in this process about the deficiencies of the existing building's impact on the Woodside Treatment Program.

- In spite of heroic staff efforts and an innovative rehabilitation program that reflects and even exceeds nationwide best practices, the building looks and feels like a jail and people act accordingly.
- The lack of natural light throughout and any connection to outdoors and nature is not positive.
- Existing outdoor space feels like a prison yard; all the hard surfaces can cause injury when a resident dysregulates.
- The outdoor space is difficult to access. Each of the yards is accessed through a residential unit which potentially means having to move residents of one unit through another in order to gain yard access.
- Residents undergoing dysregulation cannot easily be isolated from others triggering anxiety and spreading the behavior. More guiet spaces are needed.





FXISTING CLASSBOOM

EXISTING YARD

- The layout does not allow residents to be segregated by gender, age or needs.
- There are insufficient or non existent spaces for critical program elements such as counseling, treatment, family visits, legal counsel.
- The classroom layout does not work and there are insufficient spaces for critical program elements such as libraries, computers, art, music. The classrooms are spread on two floors and intermixed with other functions which makes it difficult for the residents to feel that they are leaving the unit and 'going to school' for the day.
- Because there is insufficient program space some rooms are used for multiple purposes but since they are interconnected passing through one to access another creates continual distraction and increases the possibility of dysregulation or exposure of private communications during treatment, family visits or meeting with counsel.
- There is insufficient nursing space and no dedicated intake or infirmary
- Medicine does not have a dedicated space or easy way to be distributed, presently they are distributed from the staff offices in each unit which is less secure.
- Staff space needs to be outside the secure zone so they can access personal items and use phones or computers not allowed in the secure area.
- Staff doing 59 hr. shifts do not have sleeping, bath or personal space and what does exist is not isolated from ongoing noise or movement. One infamous staff sleeping space is known as the Batcave. It is a storage closet not really large enough for a mattress off a series of interconnected program space rooms.
- For staff sleeping at night, going to the bathroom can become a journey through multiple locked doors which interrupts sleep cycle.
- The staff sleeping spaces, often closets, are within the secure zone which means they can't use their cell phones or computers to communicate with family.
- The kitchen cooler and freezer are freestanding outdoors requiring staff to go outside to access food. The grill is also outside instead of part of the cooking line.
- There is insufficient storage throughout.
- There is insufficient space for maintenance, housekeeping and BGS personnel and it doesn't have a direct connection to common space or exterior. You need to go through the boiler room and dining/dishwashing/kitchen.
- There are insufficient toilet spaces accessible from program spaces which requires additional staff resources to escort residents to bathrooms especially for the gym which does not have toilet facilities and is remote from the main facility.
- There is insufficient administrative space, only a small conference room and no space for ongoing training of staff.
- Central control is open to the entry lobby. This compromises security and creates distractions for the control personnel.

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SPECIFIC TO RESIDENTIAL UNITS

- Resident rooms feel like jail cells.
- Resident room doors swing in instead of out hindering access and safety. This is dangerous for both staff and youth if the staff needs to get a door open.

• Resident rooms have too many unsafe aspects including ligature points (defined as something that can be used to hang from). Rooms provide access to lighting and other elements which can be damaged or weaponized.

• Portions of common space and bathrooms also create unsafe conditions.



STAFF SLEEPING ROOM

EXISTING CONTROL CENTER

EXISTING RESIDENT SLEEPING ROOM

ACCESSIBILTY

There is a reasonable accessible route to the building on the site.

The existing building does have an elevator but it does not meet modern standards for size and the ability to accommodate a stretcher and rescue personnel.

There is no route to the elevator from common space. The only way to access it is to proceed through the dining room, through dishwashing (clearances do not meet ADA) and then through the kitchen. Not only is this a security issue but the elevator door is often blocked by supplies or the janitorial bucket since the kitchen has insufficient storage space and no janitorial closet.

Resident room doors are too small to meet ADA. The unit bathroom doors appear to meet ADA size but do not comply with all the approach clearances.

The rear egress stairs do not meet current life/safety requirements. The treads are uneven and the stair is too narrow. Ameliorating these problems is difficult as all elements are concrete or masonry.

BUILDINGS & GENERAL SERVICES RECOMMENDATIONS

BGS have been careful stewards of Woodside, but their stewardship cannot address some underlying core issues. Below is a list of deficiencies identified by BGS staff.

Site

- Parking lot too small.
- Outside lighting needed / maintenance shop.
- outbuilding BGS estimate cost of \$50k

Building

- Sleeping areas for staff need to be provided / renovated BGS estimated cost of \$75.
- Update entrance vestibule BGS estimated cost of \$5k
- Entrance to maintenance shop not adequate (need more space) maintenance shop should be separated from facility with sufficient workspace.
- Doors and locks in units not rated for the abuse.
- BGS staff needs a clerical office.
- machines and supplies.
- and possibly training to residents.

MEP Issues

- Attic spaces too small to service equipment.
- Smoke detectors in cells damage easily.
- Strobes and horn in bathrooms damage easily.
- Not enough isolation valves in plumbing system.
- Current bathroom surfaces and venting are not adequate.
- Plumbing access panels for service are inadequate.
- Dampers for supply air for boilers have had issues.
- Protected lighting in blue and green areas easily damaged.

Gym Issues

- Gym floor and walls not practical for use . They destroyed floor with hard shoes.
- equipment thru the other elements.
- Gym sprinkler heads not adequately protected.
- Protect gymnasium walls BGS estimated cost of \$15k

Need outside garage for maintenance equipment. Provide additional storage space with new

Windows and doors in sleeping rooms need to be replaced - BGS estimated cost of \$150k

Not enough custodial closets, floor sinks, or storage space. We need storage for custodial

• Woodside staff needs a floor sink and closet for custodial services carried out by Woodside staff

Facility bathrooms need additional venting and surfaces must be durable for this type of facility.

• Gym should be attached to the facility via a hallway or tunnel. Currently we have to push

PROGRAM

PROCESS

Before our design charrette we started gathering information from Woodside on their programmatic needs from an overall vision and mission down to details. We visited the building several times, shadowed staff for half a day and visited the Sununu Center in New Hampshire with WS staff.

At the design charrette TreanorHL showed examples of rehabilitation work throughout the country and then we were guided by THL through a detailed spreadsheet of programmatic spaces and sizes based on their ongoing work. We then had an idealized program to begin our design work.

Everyone realized that the square footage associated with this program would result in a budget larger than originally envisioned. We began our design work trying to find alternates to shrink the program size. During the design charrette we examined several options and settled on an approach that allowed for future flexibility in adjusting the design to larger and smaller programs.

This guest for reducing size and cost continued in subsequent weeks as we developed and revised the designs for this feasibility study which resulted in two designs: 25 beds and 30 beds.

The program summary and size are included in the text but the detailed idealized, 25 bed and 30 bed programs are included in the appendix. Excerpt from the ACA Standards for Juvenile Community Residential Standards, 3rd Edition, prepared by THL are also included as an appendix.

Woodside			12.22.2016
Juvenile Rehabilitation Center			
Summary of Program Areas		_	
Program Name	Existing	25 Bed SF	30 Bed SF
Program Name	Existing	25 Bed SF	SU Bed SF
PROGRAM SUMMARY	I		1
Housing	6,462	10,096	12,235
Intake and Medical	223	2,426	2,426
Staff Support	-	1,827	1,827
Building Support	3,888	1,416	1,416
Dining	1,373	2,016	2,016
Public Entry and Meeting Rooms	-	2,028	2,028
Visitation	-	569	569
Administration	1,739	1,947	1,947
Counseling	-	1,657	2,558
Education and Programming	3,234	3,526	4,771
Core and Primary Circulation	1,560	6,070	8,562
Existing Gym	5,952	5,952	5,952
TOTAL	24,431	39,530	46,307

PROGRAM OVERVIEW

The Woodside program is a therapeutic one whose goal is to rehabilitate troubled youth who are a danger to themselves and/or others and give them the skills they need to return to society. The program includes three core functions:

Housing - Safe housing is the core programmatic requirement. There are several levels based on need, age and gender ranging from Intense Stabilization Unit (ISU) to Transitional for residents close to leaving the program.

Education - The residents go to school every day and there is a need for multiple classrooms for academic and life skill education including a library/computer lab.

Counseling - Ongoing counseling requires counseling rooms as well as staff offices.

Supporting these core functions are administration, security, facilities, staff, medical, food service, visiting (family and legal counsel), training and indoor/outdoor recreation and exercise.

The challenge of this program is that it wants to be very secure, able to handle surprising abuse and yet feel welcoming and residential.

PROGRAM ANALYSIS

If you ask, 'Why is even the reduced 25 bed program so much larger than the existing facility?' The answer is that the existing facility was built as a detention center. All it needed was detention rooms, some day space and minimal support spaces. Many of the rehabilitative program spaces are largely compromised or don't even exist in the existing facility.

Part of the efficiency of the existing housing areas is that the day rooms have no exterior windows or views to the outside which means that circulation is minimized; housing units with true living rooms have more circulation. Likewise, classrooms that can be accessed without the disruption of going through another classroom add circulation.

A summary of some of the existing programmatic shortcomings: Staff doing 59 hour shifts are sleeping in converted storage closets in the middle of other activity spaces. There is no proper or secure intake area for residents arriving in crisis. Counseling space is almost non-existent. The control room is open to the reception lobby. Private conservations with family or legal counsel are impossible because staff and residents are transversing the space. There is no adequate training space. Food storage is in outdoor coolers and freezers that do not show up in the existing square foot calculations as is the fenced in grilling yard. The gym has no bathroom.

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OVERALL DESIGN STRATEGY

EXISTING BUILDING VIABILITY

GENERAL - Our very first task was to determine if the existing main building and/or gym could play a role in the design strategy. The analysis of how inadequate and inappropriate the existing structure is in supporting the rehabilitation mission of WS does not in itself preclude re-use and repurposing. A logical approach is to build an addition and renovate the existing building.

It rapidly became apparent that there is no feasible strategy for a multitude of reasons related to function and public safety. The costs to renovate quickly become so high as to not make sense. There was a telling statement made during the Vietnam war - "We had to destroy the village in order to save it." - which sums up our review. However, it appears possible to incorporate the gym which accounts for 22% of the existing sf total into a new and viable plan.

SPECIFIC BUILDING VIABILITY FACTORS

500 Year Flood Plain

- The entire useable site is in the 500 year flood plain elevation 228'. A survey crew verified that the existing building and gym slabs are at elevation 226.5'. As a result of the Vermont Flood Hazard Area and River Corridor Rule (effective March 1, 2015, a critical facility cannot be built in the 500 year flood plain. WS is a critical facility by the rule's definition. WS is unique in not only being a critical facility, but it is the only juvenile rehab center in the state. If a hospital is out of commission, patients could be served by other hospitals but this is not possible with WS.
- We considered raising the building 1.5' but given the type of construction slab on grade, multiple exterior and interior concrete masonry bearing walls, concrete second floor - this is not financially feasible or constructible.
- We believe that the gym could remain because it is not a critical function. The facility as a whole could continue to function without it.

Major Renovation Implications

- We do not believe WS can remain in place through major renovations. All the ongoing work done over the years has been been limited in scope. The needed upgrades to MEP systems (primarily ventilation) and the extensive structural work required to change the building layout are too extensive and disruptive for the program to continue to function.
- It would be very challenging to find and secure permits for such a specialized program. Where housing and/or offices might easily work short term in another structure, the complexities of the WS program and its security requirements suggests that finding and permitting a site would be difficult and very costly.
- As WS moved from detention to rehabilitation it took years to build a staff with the right mix of skills, compassion and the commitment necessary to limit turnover. WS is very concerned that moving to another location could create issues with staff retention and undo much of their good work.

How Could The Building Be Repurposed?

- costs would come close to equaling that of a new structure.
- which further dilutes any possible savings.
- more efficient.



DESIGN SKETCH

• If the program did move off site and an exception for the flood plain was granted, the building still resists re-purposing as a viable and useful space at a reasonable cost. The existing rooms are too small and their doors do not meet ADA. The concrete and CMU structure is very expensive to modify to create a more open and useful space. A majority of the rooms lack natural light or views. The building is not energy efficient. By the time you made it viable the

• In order to connect the renovated section with the new which would need to be at a higher elevation to meet the flood plain there would be excess circulation and square footage built

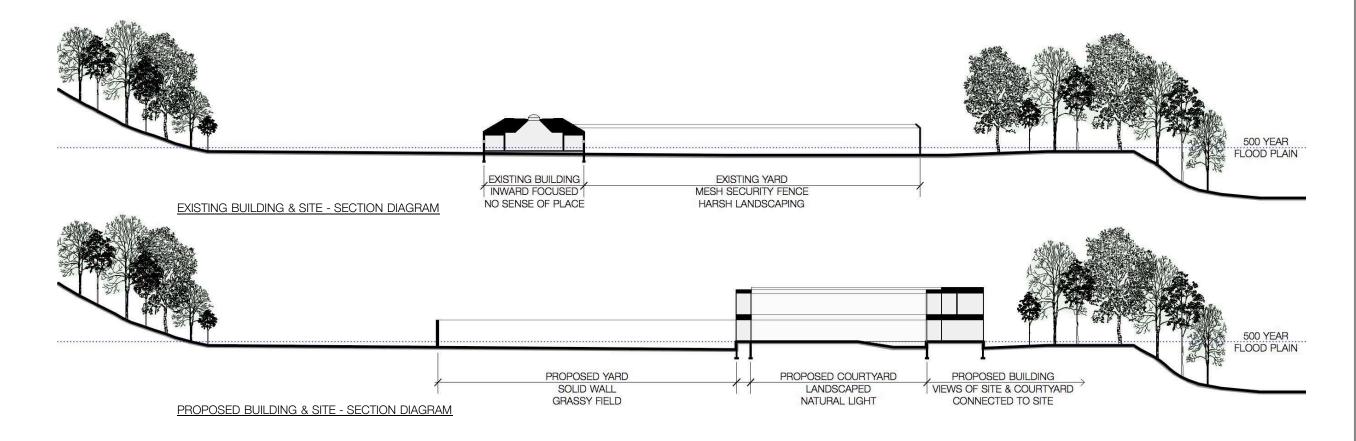
• Leaving this structure in place might complicate a solution to the inadequate parking and and poorly configured outdoor space on a site with development limitations. A two story scheme is

DESIGN STRATEGY

The design strategy selected during our charrette grew out of several factors and can be seen in the colored concept sketch.

- Keep the existing main building in place and functioning. In Phase 1, build a new structure to the east. When the new structure is occupied, Phase 2 demolishes the existing building and creates parking and outdoor recreation space. This saves the significant extra costs of temporarily relocating off site and takes away any 500 year flood plain concerns or trying to make a recalcitrant building work with the WS program.
- Because of the development constraints on the site we chose a two story scheme to minimize the footprint which allowed us to avoid the wetland setbacks both for structures and required stormwater treatment.
- During the charrette it became apparent that the actual square footage required to make the program fully functional was greater than anyone anticipated which translated into budget constraints before we even started drawing. We knew that the design concept had to be flexible enough to adjust to a smaller program both in the number of beds and support spaces.

- This initial sketch thought it might be necessary to include underground parking and that the existing gym would be demolished in Phase 1. As the design developed both of these ideas were abandoned. We had enough space on site to provide sufficient parking and recreational space on the surface and we found ways to keep the existing gym because it was a large program element and we could save significant money in new construction by doing this.
- The organizing design concept is a circular interior green courtyard wrapped with a corridor. Right off the curved corridor with natural light and a view to greenery immediately undercuts the notion of a detention center with endless, artificially lit corridors. It communicates to residents and family that this is a special place and that they mean something as human beings.
- The green courtyard provides an alternate outdoor space, quieter than the recreational yard. It means that two populations can be outdoors and separate from each other when necessary.
- We can maintain this central circulation system as a consistent organizer through the design process, but on the outside we are free to be flexible. The same basic design provides both a 25 bed and a 30 bed scheme. There can be more classroom, or counseling space or less. The edges can follow the contours and wetland setbacks without exceeding them. As we delve deeper into the design and budgeting we can make changes without having to start all over on the design. See below for more detailed information about the site and building design.
- Note that the circular courtyard would be made from smaller, angled, straight segments. The walls and glazing would not actually be curved.



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SITE DESIGN **OVERVIEW**

The site design for both the 25 and 30 bed structures is essentially the same; the 30 bed version has more impervious area and comes closer to the 50' buffer on south and east but we anticipate that design and permitting challenges are roughly equivalent.

This is a challenging site. Flood plain, wetland and stormwater are difficult to solve, especially while maintaining full functionality in the existing facility while the new structure is constructed. We want to emphasize that the design strategies depicted in this narrative and the plans are still conceptual and need to be tested in more detail to verify functionality and permit-ability. Part of the more detailed design will involve planning for two phases:

PHASE 1 - Major construction of facility while the existing facility remains functioning. Providing parking for staff, visitors and workers, as well as a staging area will be a challenge.

PHASE 2 - Demolition of the existing facility, completing new parking and associated sitework (walks, stormwater, landscaping) and adding the recreational field and its secure perimeter. Parking and staging area will again be a problem until this is complete.

NATURAL RESOURCES

The design as proposed avoids crossing the required 50' buffer except in an area on the north where the site is already developed and disturbed.

FLOOD PLAIN

The new building is proposed to be slab on grade set at an elevation of 228' to meet the 500 Year flood requirements. The existing gym will remain at 226.5' since we consider this is not a critical facility. Because the site begins to slope down rapidly on the south this will result in exposed, tall foundation walls and additional fill in this area.

Basements are not feasible because they would be in the flood plain. We also considered underground parking in this area to take advantage of the 'free' space and reduce fill but concluded that fill was less expensive than the garage and that it would not reduce our impervious area enough to avoid a stormwater permit.

STORMWATER

We do not have adequate room to provide a traditional stormwater pond in a single location. KL is proposing a variety of smaller interventions on different portions of the site. These include a bioretention area between the parking lots and a dry pond near the site entry and a separate treatment area to the north east. Infiltration basins may be feasible if test pits in the spring indicate the soil can support them.

The existing impervious area - buildings, surface parking & walks, recreation area - is approx. 1.2 acres. The amount of impervious area being developed is approximately 1.46 acres. A stormwater permit will be required because it exceeds 1 acre.

The detailed design of a stormwater system that can be permitted given the site constraints is beyond the scope of this feasibility study and will be a critical item to address early in the next phase. The conceptual strategy to address stormwater will be based on a combination of a bioretention area, dry stormwater pond, an extended wet stormwater pond and possible infiltration chambers. The Bioretention area would be located in the front parking area and collect runoff from only a portion of the front parking area. The Bioretention area will provide water quality requirements that comply with the State stormwater rules. Runoff will be directed from the Bioretention area to a dry stormwater pond to the south of the front parking lot. The dry pond will provide the requisite detention of stormwater flows. We are proposing a wet detention pond located to the east of the proposed building. This pond will collect runoff from a portion of the front parking as well as the loading dock/sally port area. The discharge location of this pond will have to be worked out with the Agency of Natural Resources. The final stormwater best management practice will be a possible infiltration area south of the proposed building. This will be dependent on future soil test pits and permeability tests. Test pits will need to be done in the spring to determine if the site is suitable for using infiltration chambers.

The challenges of the site suggest that a flat roofed scheme with internal drainage collected and piped would be simpler than collecting water off of sloped roofs.

UTII ITIFS

As noted above existing utilities appear to be adequate and we anticipate that we will be able to tie into the existing systems. How staff is accounted for in the original wastewater permit must be verified and the pump station should be evaluated for expected life span.

Water - Under the new site plan, we would provide water services to one or multiple building. We do not anticipate any pressure/volume issues but will verify at the next stage of site development. Any improvement within the 20' water easement will have to coordinated CWD. The project may not need a Water Supply permit if we do not have to install another fire hydrant. We will get a jurisdictional opinion from the Water Supply division of the Agency of natural Resources later in the design process.

Sewer – Under the new site plan, we would provide sewer services to one or multiple building. Since the use of the building does not appear to be changing at this point, we do not anticipate any capacity issues with pump station or grinder. We will need to amend the Wastewater permit to reflect the new sewer and water services to the building(s).

SITE CIRCULATION

Sufficient parking is provided in two main lots and two service lots - 62 spaces total. Turning radii are laid out so that large semi-trucks can back up to the loading dock at the northeast corner. This whole service area is screened from the view of visitors. There are areas to plow and store snow.

Police and emergency personnel can drive up a ramp on the north side into a vehicular sally port with direct access to the intake area.

There is adequate HC parking and an accessible route to the building.

LANDSCAPING DESIGN

This is only conceptual but the intention is to disturb the natural elements of the site as minimally as possible and allow views into the surrounding forest.

The entry to the site is nicely landscaped and welcoming to visitors. The two lots are separated by landscaping. The recreation field wall will be solid (materials to be determined) and lined with trees and benches. This immediately reduces the sense of a detention facility with chain link and barbed wire. It also means that visitors and staff are not under visual scrutiny as they arrive and leave the premise from the recreational yard or most of the building which minimizes the dysregulation that can occur when residents see staff outside the secure perimeter.

BUILDING DESIGN

OVERVIEW

The design starts from the circular corridor/courtyard and preservation of the existing gym. Both the 25 and 30 bed designs share the main concept as well as several other program pieces; only the residential (partial), counseling and education areas are different. The 25 bed design realizes cost savings with fewer beds (losing a full unit), less circulation, and square footage reductions in the classroom, education and counseling area. As we moved from the idealized program we discovered that there were areas where sizes could be reduced and rooms could be utilized for more than one program use - for instance the large counseling room could also serve as the staff conference space.

PUBLIC/ENTRY/ADMINISTRATION/STAFF

The main entry is a welcoming porch in a one story addition to the south of the gym. It is accessed along a treed walk from the parking area. TreanorHL communicates that how the entry sequence looks and feels sets the tone for the entire facility. Great care will be devoted to this area as the design develops.

Inside the vestibule is a waiting hall with skylit south light, a reception area and access to administration and a large meeting room for staff training.

From administration a stair provides access to staff quarters on the second floor which provides small rooms shared through the week by three people doing 59 hour shifts. They have a small lounge, private baths and laundry. They also have immediate access to the residential area through a sallyport.

FIRST FLOOR SECURE AREA

Proceeding through a sallyport one enters the circular corridor and can see the central courtyard. There is immediate access to visiting rooms and a stair and the elevator to the second floor.

The first block is counseling with staff offices and counseling conference rooms. The counseling block also contains the control room with an emergency access to outside.

The education block is next with a series of individual classrooms, a multipurpose room and the computer lab/library. All of the classes have natural light and views into the forest.

The dining room can look out to the east as well as toward the courtyard. In all likelihood both dining and classrooms will have limited views into the corridor to prevent distractions.

The Intake area connects with this corridor as well as the vehicular sallyport. It includes the actual intake area, nurse offices, meds, property storage and a two room infirmary overlooked by one of the nurses. The main intake area has natural light.

The courtyard is primarily green. It has a porch to be outside in the rain and a small amphitheater which is both a design element and it minimizes the cost of fill in this area. There is also the possibility of gardening to provide food to the dining area.

The recreational yard will likely have a small soccer field, possibly outdoor basketball and other elements to be determined.

The gym is accessed by a ramp from the corridor. We have also added a bathroom. We imagine it will have new flooring, upgraded insulation and finishes and a new mechanical system with dehumidification to solve the sweating problem experienced in warmer weather.

SERVICE AREA

The loading dock is oversized so supplies can be stored there before going through the sallyport. An office for BGS and Maintenance also exists outside the secure zone. A commercial kitchen, Mechanical/Electrical and IT are also provided in this area.

SECOND FLOOR RESIDENTIAL

There are multiple residential units serving different populations and needs. Besides the resident rooms, each contain a staff room, laundry, living room with natural light and views, bathroom, guiet room and porch. The porch will be a tremendous asset because residents can have access to the outdoors separate from the larger areas which can be valuable for safety and staff efficiency - staff can monitor them while still attending to others in the unit.

The ISU contains 4 beds and a safe room. This is the typical destination upon arrival to the facility. It is adjacent to a 6 bed unit which can function as gender or other specific population. These two units share a staff room which increases staff efficiency.

The 10 bed unit has five beds on either side of the living space. This allows partial gender or other segregation.

The 5 bed transitional unit is for residents preparing to leave the facility. It contains its own kitchen and rooms that are slightly larger and more residential.

The second floor also contains a fitness room, the Operation office and two small counseling rooms.

WOODSIDE

WOODSIDE JUVENILE REHABILITATION CENTER

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MEP SYSTEMS AND ENERGY ANALYSIS

EXISTING BUILDINGS

Woodside uses a large amount of energy. The median Energy Use Intensity (EUI) for this building type is 90 kBtu/sf. EUI is a measure of how much energy a building uses on a per square foot basis. Woodside uses 115 kBtu/sf. The existing heating system uses fuel oil and propane, two unregulated fuels that can create a large variance in operational cost.

Existing	Current Utility Cost	Consumed	Annual Cost
Fuel Oil	\$2.30	10,614.8	\$24,414.04
Propane	\$3.00	5,248	\$15,743.40
Electricity	\$0.14	287,514	\$40,252.01
Square Feet	25,282	Total:	\$80,409.45
Actual EUI	119		
25 Bed	Current Utility Cost	Consumed	Annual Cost
Fuel Oil	\$2.30	8,590	\$19,756.00
Electricity	\$0.14	347,409	\$48,637.28
Square Feet	39,512	Total:	\$68,393.28
Target EUI	60		
30 Bed	Current Utility Cost	Consumed	Annual Cost
Fuel Oil	\$2.30	10,057	\$23,131.50
Electricity	\$0.14	406,767	\$56,947.42
Square Feet	46,263	Total:	\$80,078.92
Target EUI	60		

ROPOSED DESIGN

Working with ESV we propose a 4 pipe heating and cooling system. This is similar to the existing distribution system, though advances in technology in the past 30 years mean a new system will be much more efficient. This system is simple and easy to maintain and is used at many other state facilities.

Buildings that operate 24 hours tend to use more energy than buildings that operate only on weekdays. As such, Woodside will never be a low energy building. That said, there's much in the new design that may help Woodside cut operational costs.

- New mechanical systems will be more efficient than the existing 1984 systems.
- New building envelope will be tighter and better insulated than the existing building.
- Efficient LED lighting with occupancy control will help cut down electricity use.
- Better daylighting will help cut down on the use of artificial lighting.
- Efficient glazing with shading can allow us to passively capture solar energy.

PROJECTED COSTS

Though the proposed designs are larger than the existing building, a more efficient building leads to a similar or reduced operation cost (depending upon the size of the building). Furthermore, we assume the new building will continue to operate with the same fuel mix (fuel oil and electricity). It's possible that we could see further reductions in energy use and/or cost if the building used heat pump technology in lieu of fossil fuels. It's also possible that Woodside could reduce electrical costs with rooftop PV solar. Bringing natural gas to the site is also possible, though the upfront costs of bringing a pipe down the hill from Route 15 may make this option less attractive.

CONCLUSIONS

Despite being a larger facility, the proposed design's higher efficiency will allow the state's operational budget to either stay flat or be reduced.

PROBABLE COST

OVERVIEW

At this point in the process we have preliminary site and floor plans which demonstrate that both 25 and 30 bed designs appear feasible on this site even with the limited development envelope. The new structure can be built while the WS operates in the existing building. The existing gym is retained, renovated and incorporated into the new design.

The civil drawings are very preliminary and no detailed engineering has been done. KL has identified the main permitting and design issues. Although this is a challenging site nothing seems insurmountable. Stormwater is the most challenging in terms of the design and project phasing. Instead of a single wet pond it will likely be broken into sections with different treatments. In the spring we will evaluate tests pit results to determine if infiltration chambers can be used.

The buildings are hardlined floor plans and general massing but no work has been yet done on building elevations, materials, systems or finishes except to assume it is slab on grade with concrete frostwalls and foundations.

We do have accurate square foot numbers to work with and they have been broken down by program element. We know that on the south side additional fill and taller foundation walls will be required.

We assumed the gym would receive a new floor, new siding, roofing and insulation, upgrade finishes and a new mechanical system. Electrical would have only minor changes.

• Housing is separated from other program, allowing parts of the building to be setback at night.

These opinions of probable cost are based on present day numbers. With no clear schedule for starting construction we did not build in an inflation factor. We have, however, taken our probable cost totals and then added 15% to provide a high range which might reflect some inflation and estimating contingency.

SITE - METHODOLOGY

DWA met with our regular estimator, Tom Barden. We identified that site utilities (water, sanitary, electric, telecommunications) are straightforward and the new building will be connecting to them at minimal cost. We assumed that the pump station does not need and work or upgrading at this time and that electric transformer is sufficient. These factors will keep sites costs below average in this area.

Stormwater, fill on the south side, maintaining existing operation and phasing are more complicated and will have higher than average costs.

We analyzed a variety of recent projects to produce an average site cost (both civil and building related) as a percentage of the building costs. For Example, Bright St. was 40 units of housing of similar sf size on a tight urban site surrounded by existing structures with a large infiltration system for stormwater but simple utility hookups.

The costs to demolish and dispose of the existing building were pulled out as a separate line item and were based on the SF numbers of a recent, larger, structure Tom Barden was involved with in Waterbury. We assumed that there are no hazardous materials.

On these projects the site costs, not including demolition, ranged from 10 - 15%. Reflecting the complications of this project we used an 18% factor for estimating site costs.

BUILDING - METHODOLOGY

We created a building spreadsheet which breaks down each area by gross sf and then assigned. TreanorHL's experience around the country indicates that similar facilities are costing around \$300/sf. Tom Barden's source, familiar with detention work in this area, confirmed that \$300/sf was a typical cost. We accept that detention and rehabilitation work are not exactly the same but this was the closest metric we could utilize.

For all the secure spaces we used this number. For some of the public, non-secure spaces, we used \$250 and \$275/sf. To renovate the gym we used \$90/sf since much of the it will be retained and it is a wide open space.

PROBABLE COST SUMMARY

Based on the above factors, our preliminary opinion of probable cost is that at present day prices the 25 bed design will cost between 12M and 13.2M. The 30 bed design will cost between 14.3M and 15.7M.

The next step would be to develop the design in more detail including elevations, structural, envelope and MEP as well as detailed civil design suitable for permitting and retain a professional cost estimator, to estimate probable cost in detail.

odside Juvenile Rehabilitation Center			
mmary of Costs- Master Plan			
Program Name	Square		erage
riogram Name	Footage		\$/SF
25 BED - CONSTRUCTION (HARD) COSTS			
Housing	10,096	\$	300
Intake and Medical	2,426	\$	300
Staff Support	1,827	\$	300
Building Support	1,416	\$	300
Dining	2,016	\$	300
Public Entry and Meeting Rooms	2,028	\$	250
Visitation	569	\$	275
Administration	1,947	\$	250
Counseling	1,657	\$	300
Education and Programming	3,526	\$	300
Core and Primary Circulation	6,070	\$	250
Existing Gym	5,952	\$	90
SUB-TOTAL	39,530		
Site Work (Civil & Building) - Phase 1 & 2	18% of Blo	lg Suk	o-total
Phase 2 - Demolition & Disposal	18,500	\$	11
25 BED - TOTAL CONSTRUCTION BUDGET			
		Avg	\$/SF
		\$	300
30 BED - CONSTRUCTION (HARD) COSTS	12 235	Ψ	
Housing	12,235		- 300
Housing Intake and Medical	2,426	\$	
Housing Intake and Medical Staff Support	· · · ·	\$ \$	300
Housing Intake and Medical	2,426 1,827 1,416	\$	300 300
Housing Intake and Medical Staff Support Building Support	2,426 1,827	\$ \$ \$	300 300 300
Housing Intake and Medical Staff Support Building Support Dining	2,426 1,827 1,416 2,016	\$ \$ \$ \$	300 300 300 250
Housing Intake and Medical Staff Support Building Support Dining Public Entry and Meeting Rooms	2,426 1,827 1,416 2,016 2,028	\$ \$ \$ \$ \$	300 300 300 250 275
Housing Intake and Medical Staff Support Building Support Dining Public Entry and Meeting Rooms Visitation Administration Counseling	2,426 1,827 1,416 2,016 2,028 569	\$ \$ \$ \$ \$ \$ \$	300 300 250 275 250
Housing Intake and Medical Staff Support Building Support Dining Public Entry and Meeting Rooms Visitation Administration	2,426 1,827 1,416 2,016 2,028 569 1,947	\$ \$ \$ \$ \$ \$ \$ \$ \$	300 300 250 275 250 300
Housing Intake and Medical Staff Support Building Support Dining Public Entry and Meeting Rooms Visitation Administration Counseling	2,426 1,827 1,416 2,016 2,028 569 1,947 2,558	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	300 300 250 275 250 300 300
Housing Intake and Medical Staff Support Building Support Dining Public Entry and Meeting Rooms Visitation Administration Counseling Education and Programming	2,426 1,827 1,416 2,016 2,028 569 1,947 2,558 4,771	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	300 300 250 275 250 300 300 250
Housing Intake and Medical Staff Support Building Support Dining Public Entry and Meeting Rooms Visitation Administration Counseling Education and Programming Core and Primary Circulation Existing Gym	2,426 1,827 1,416 2,016 2,028 569 1,947 2,558 4,771 8,562 5,952	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	300 300 250 275 250 300 300 250
Housing Intake and Medical Staff Support Building Support Dining Public Entry and Meeting Rooms Visitation Administration Counseling Education and Programming Core and Primary Circulation Existing Gym	2,426 1,827 1,416 2,016 2,028 569 1,947 2,558 4,771 8,562 5,952 46,307	\$ \$	300 300 250 275 250 300 300 250 90
Housing Intake and Medical Staff Support Building Support Dining Public Entry and Meeting Rooms Visitation Administration Counseling Education and Programming Core and Primary Circulation Existing Gym SUB-TOTAL Site Work (Civil & Building) - Phase 1 & 2	2,426 1,827 1,416 2,016 2,028 569 1,947 2,558 4,771 8,562 5,952 46,307 18% of Blo	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	300 300 250 275 250 300 300 250 90
Housing Intake and Medical Staff Support Building Support Dining Public Entry and Meeting Rooms Visitation Administration Counseling Education and Programming Core and Primary Circulation Existing Gym	2,426 1,827 1,416 2,016 2,028 569 1,947 2,558 4,771 8,562 5,952 46,307	\$ \$	300 300 250 275 250 300 300 250 90
Housing Intake and Medical Staff Support Building Support Dining Public Entry and Meeting Rooms Visitation Administration Counseling Education and Programming Core and Primary Circulation Existing Gym SUB-TOTAL Site Work (Civil & Building) - Phase 1 & 2	2,426 1,827 1,416 2,016 2,028 569 1,947 2,558 4,771 8,562 5,952 46,307 18% of Blo	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	300 300 300 250 275 250 300 250 90 -total

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			201	7 Dollars
	Average			High Sub-Total
	Sub-Total			(x1.15)
				(ATTTC)
\$	3,028,800		_	
\$	727,800			
\$	548,100	-		
\$	424,800			
\$	604,800	-		
\$	507,000	-		
э \$	156,475	-		
Ф \$	486,750	-		
ֆ \$	480,750	-		
ծ \$	497,100	-		
э \$	1,517,500	-		
		-		
\$	535,680	-		
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\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	3,670,500 727,800 548,100 424,800 604,800 507,000 156,475 486,750 767,400 1,431,300 2,140,500 535,680 12,001,105 2,160,199 203,500		\$ \$	13,801,271 2,484,229 234,025
\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	3,670,500 727,800 548,100 424,800 604,800 507,000 156,475 486,750 767,400 1,431,300 2,140,500 535,680 12,001,105 2,160,199 203,500 14,364,804		\$ \$ \$	13,801,271 2,484,229 234,025 16,519,524
\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	3,670,500 727,800 548,100 424,800 604,800 507,000 156,475 486,750 767,400 1,431,300 2,140,500 535,680 12,001,105 2,160,199 203,500		\$ \$	13,801,271 2,484,229 234,025

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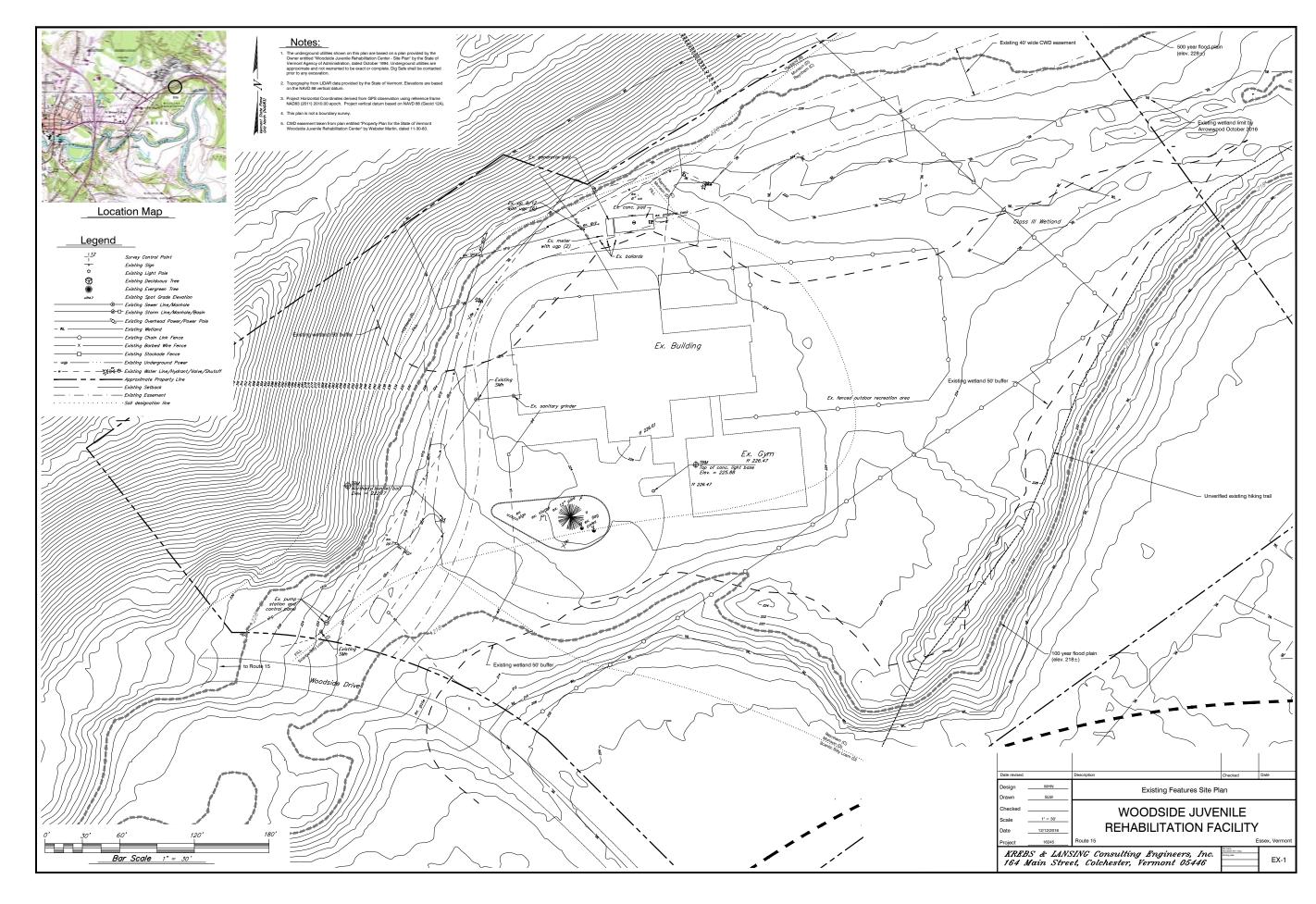
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CIVIL - 30 BED SITE PLAN
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EXISTING - SECOND FLOOR
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25 BED - BUILDING DIAGRAM
25 BED - FIRST FLOOR
25 BED - SECOND FLOOR
30 BED - SITE PLAN
30 BED - BUILDING DIAGRAM
30 BED - FIRST FLOOR
30 BED - SECOND FLOOR
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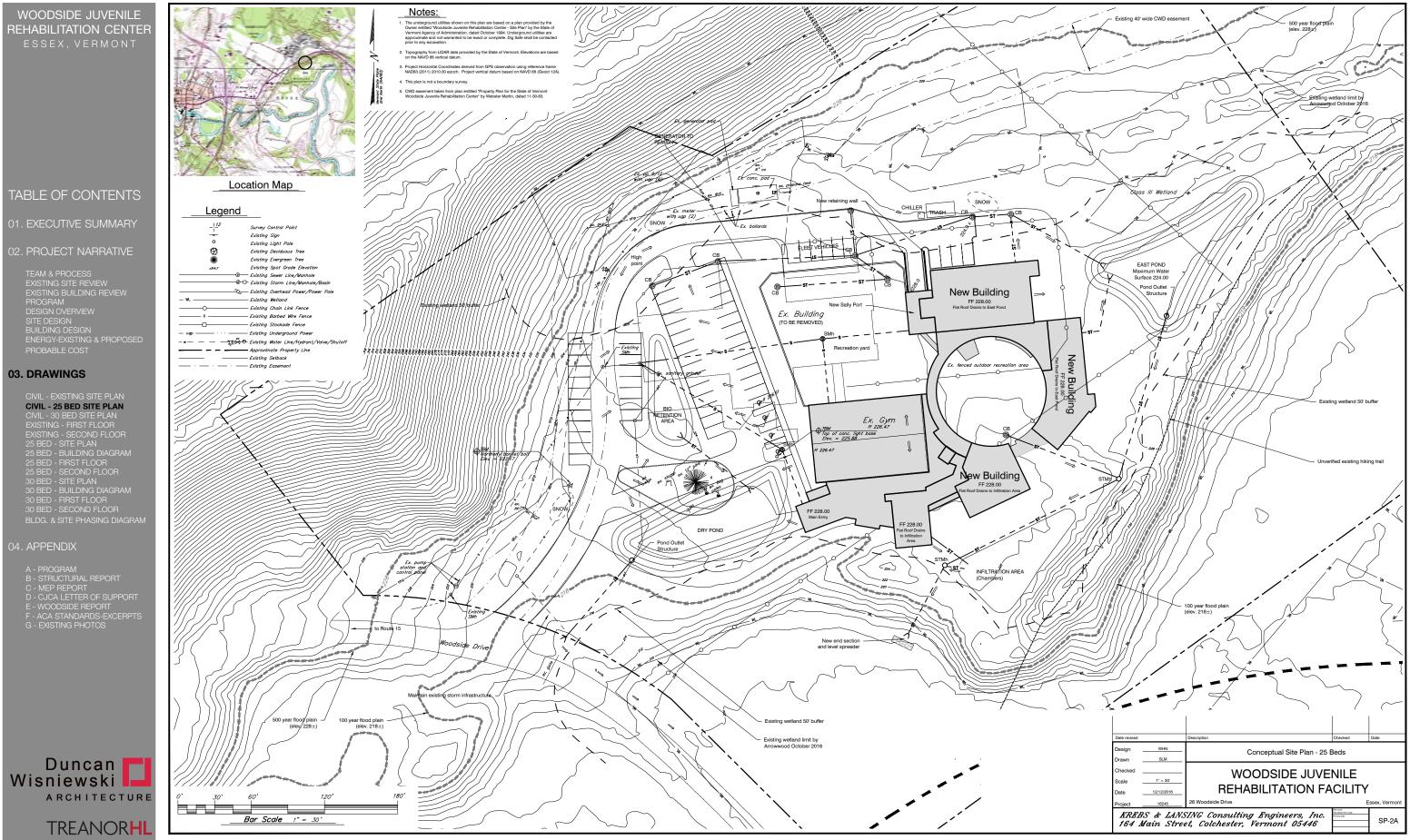
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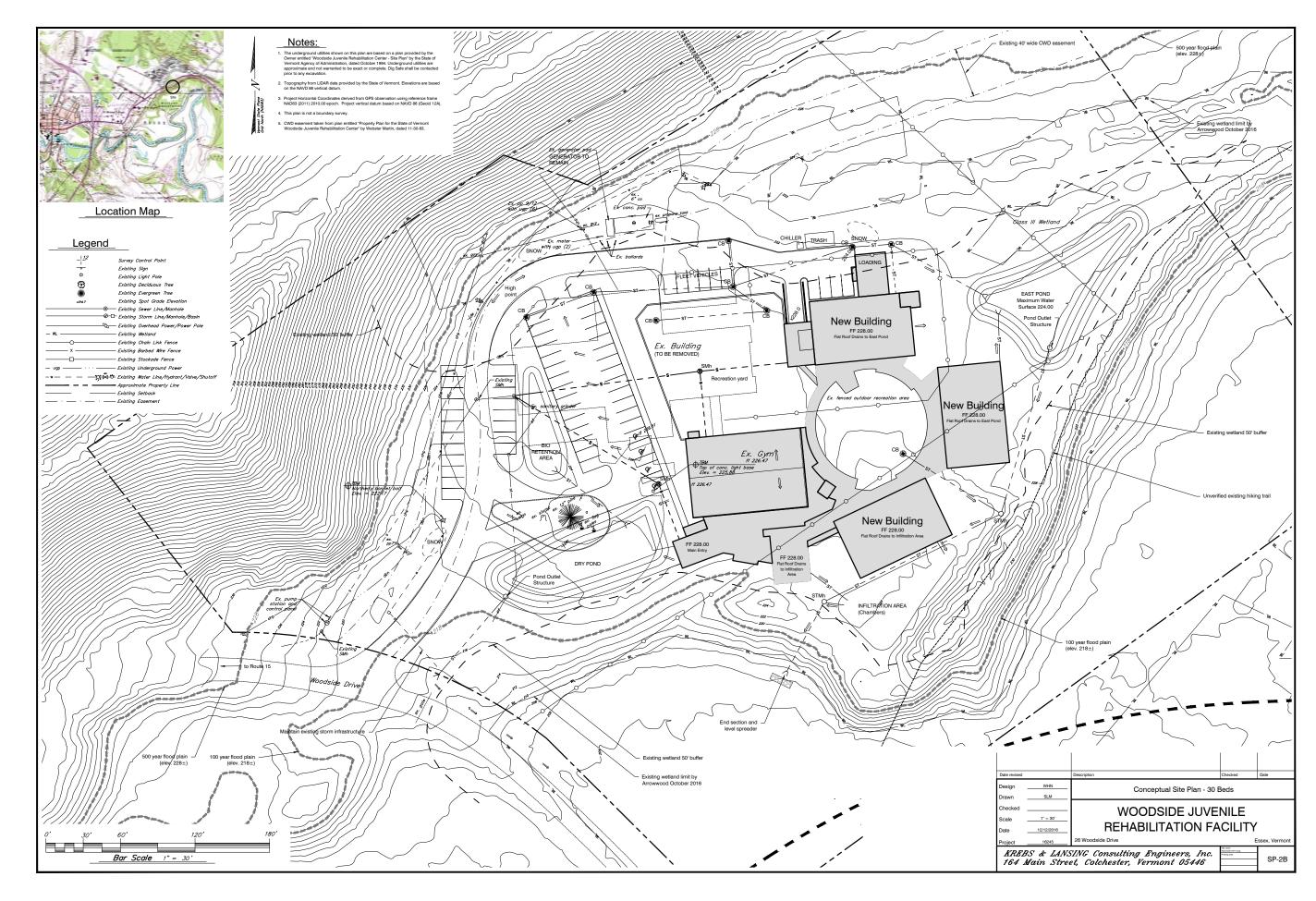
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25 BED - FIRST FLOOR
25 BED - SECOND FLOOR
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30 BED - BUILDING DIAGRAM
30 BED - FIRST FLOOR
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CIVIL - 30 BED SITE PLAN
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EXISTING - SECOND FLOOR
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25 BED - FIRST FLOOR
25 BED - SECOND FLOOR
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30 BED - BUILDING DIAGRAM
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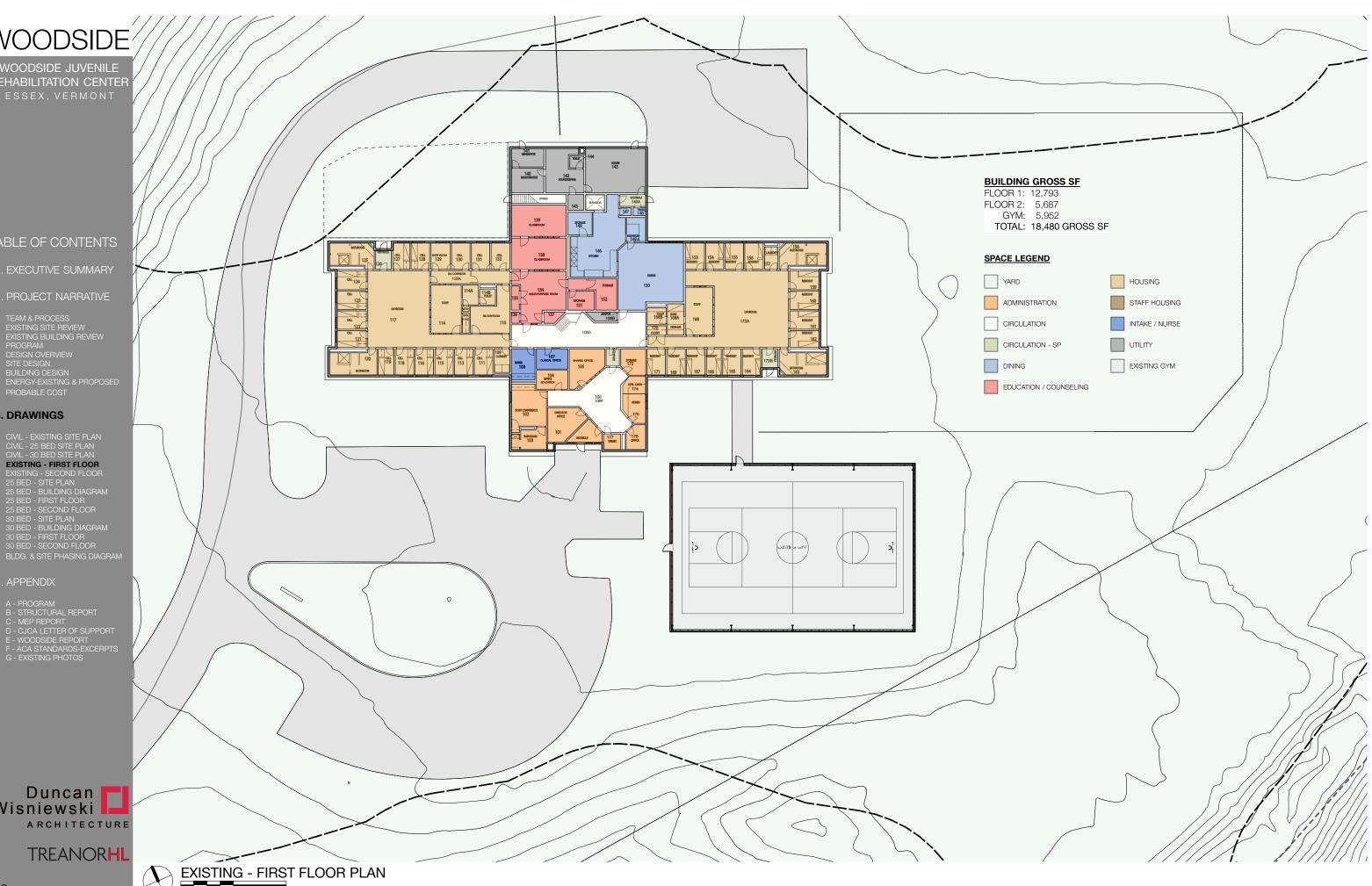
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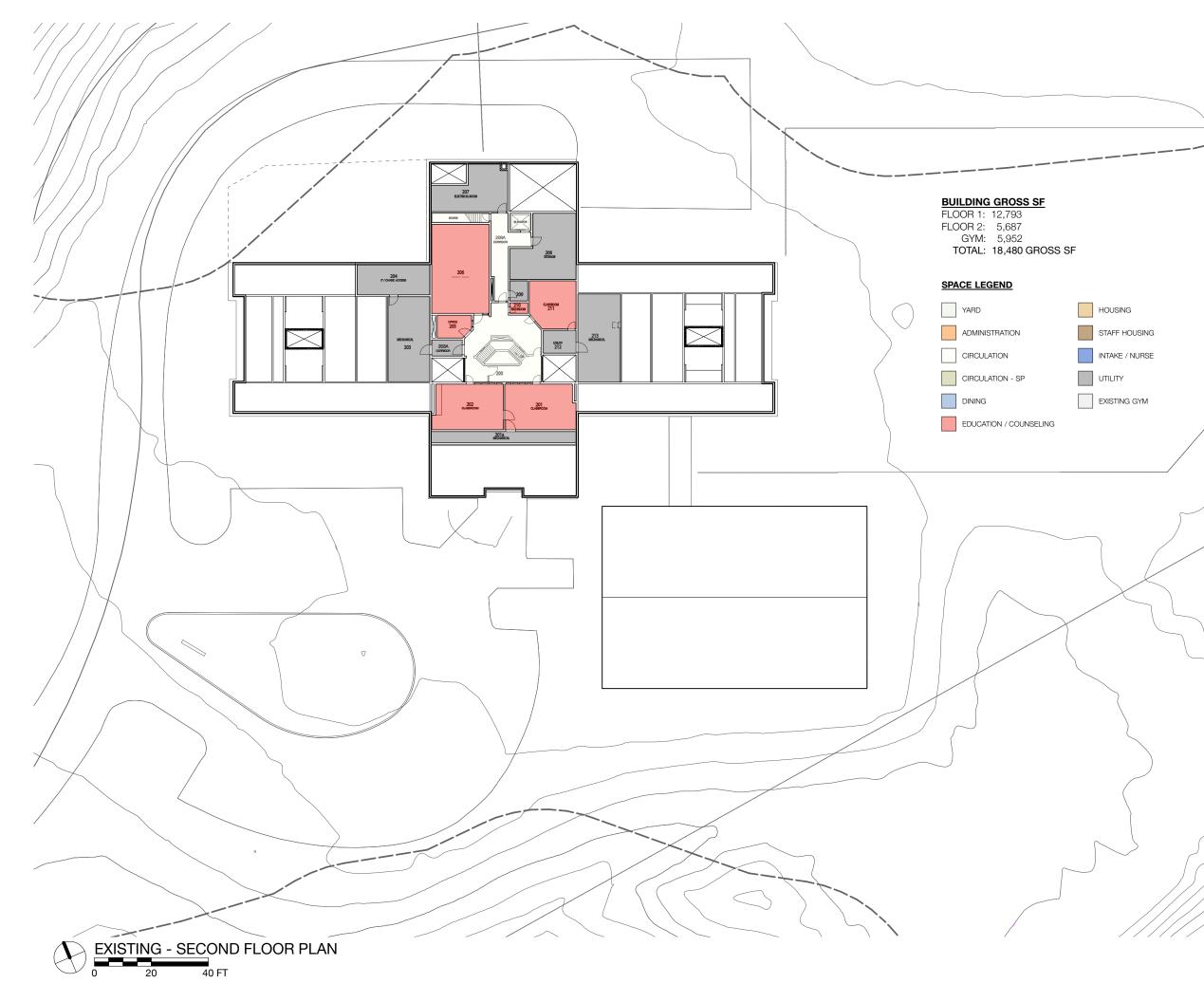
CIVIL - EXISTING SITE PLAN CIVIL - 25 BED SITE PLAN CIVIL - 30 BED SITE PLAN

EXISTING - FIRST FLOOR

Δ	PRC)GR4	71/2		

- ۵ Duncan Wisniewski ARCHITECTURE TREANORHL EXISTING - FIRST FLOOR PLAN Y





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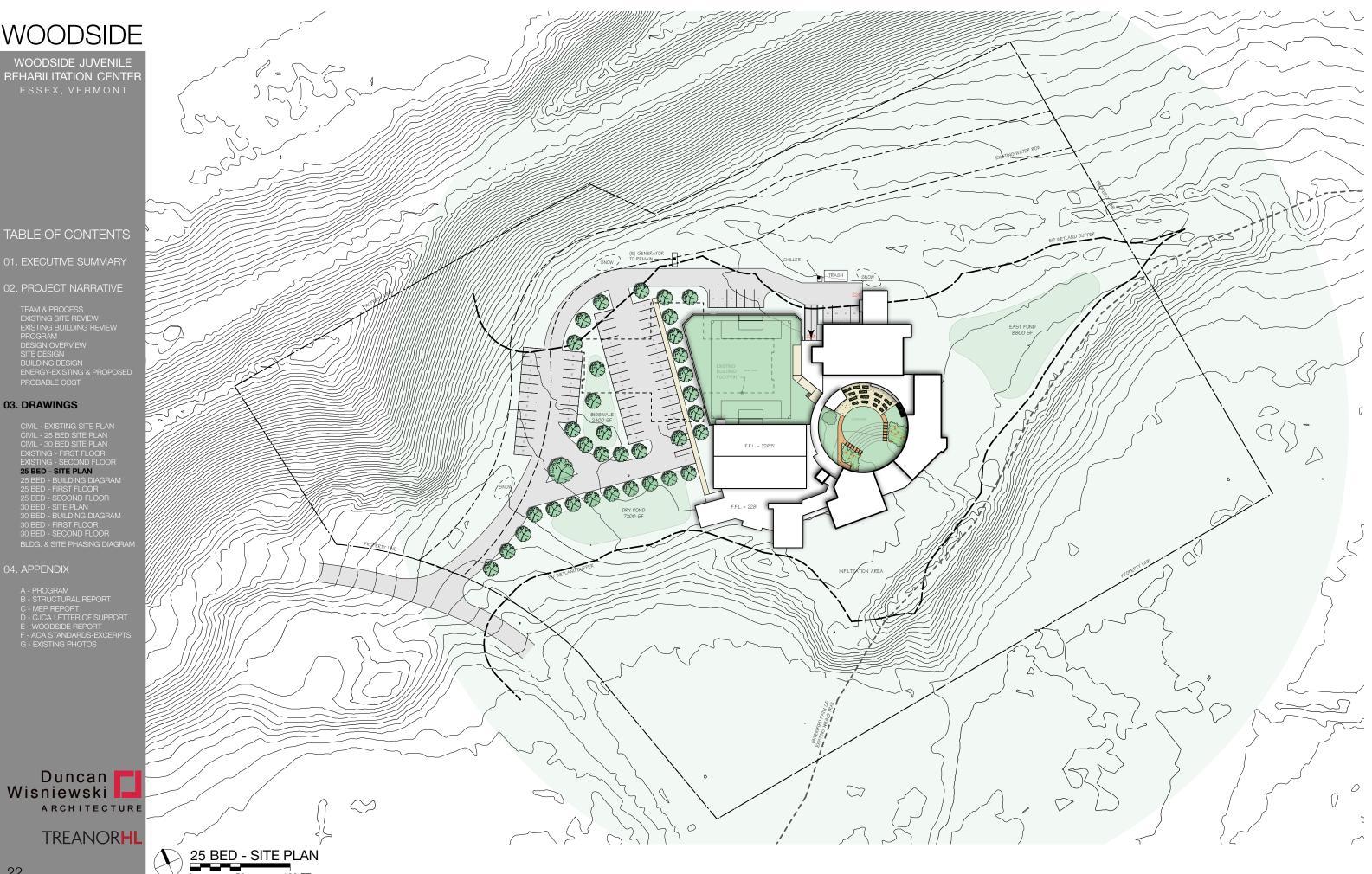
25 BED - SITE PLAN

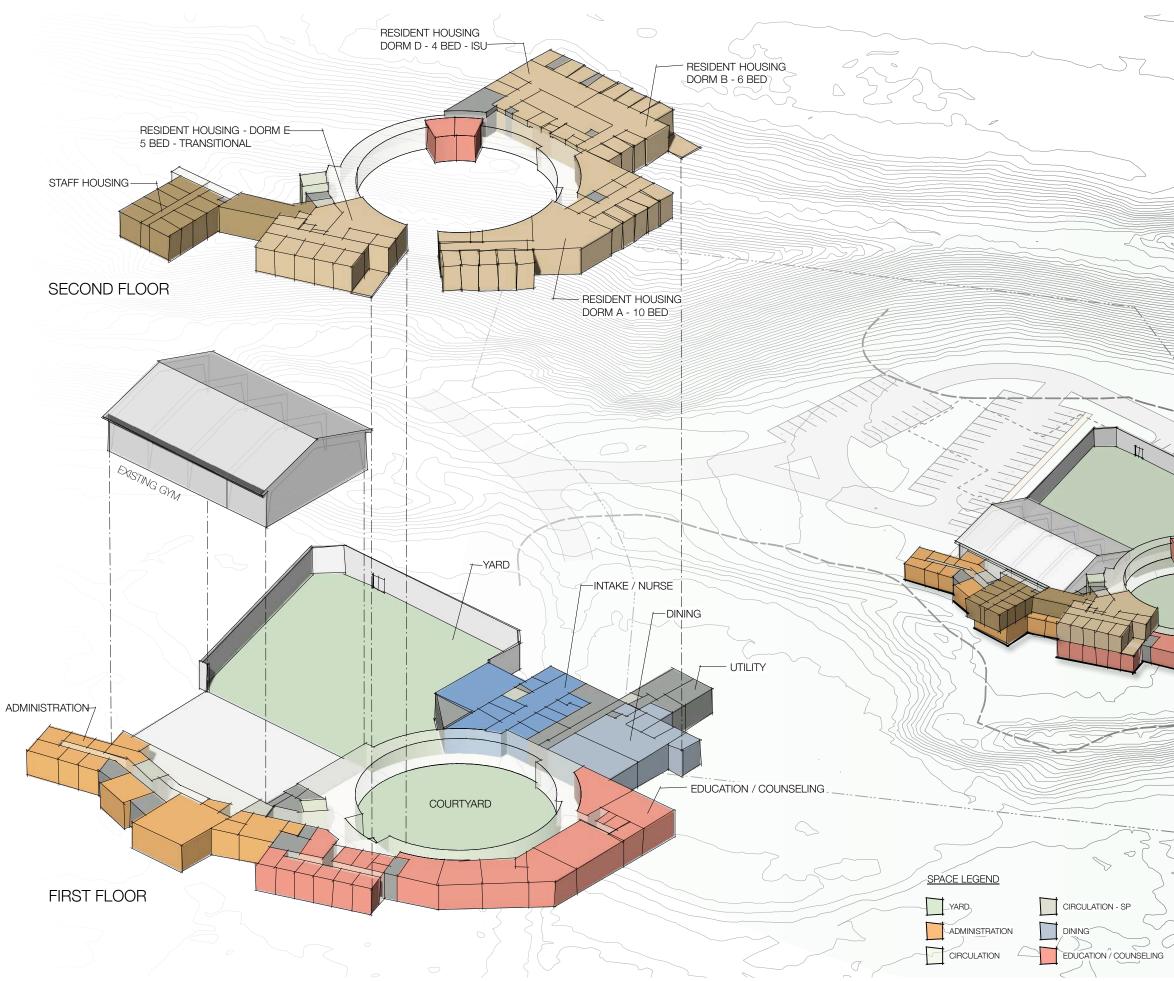
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100 FT

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25 BED - BUILDING DIAGRAM

WOODSIDE

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A - PROGRAM B - STRUCTUR

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UTILITY

EXISTING GYM

a

HOUSING

STAFF HOUSING

- B STRUCTORACTIET OF C MEP REPORT D CJCA LETTER OF SUPPORT E WOODSIDE REPORT F ACA STANDARDS-EXCERPT G EXISTING PHOTOS



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25 BED - FIRST FLOOR

4. APPENDIX



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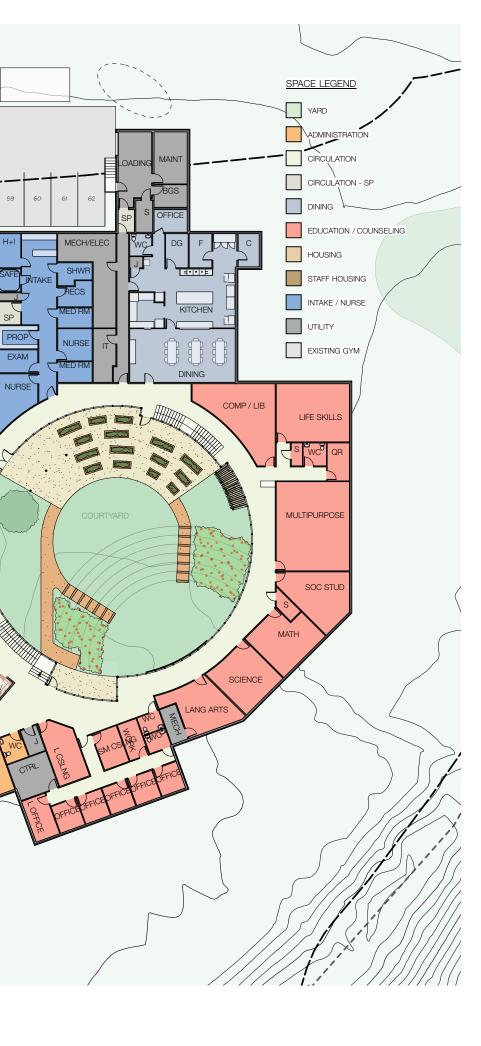
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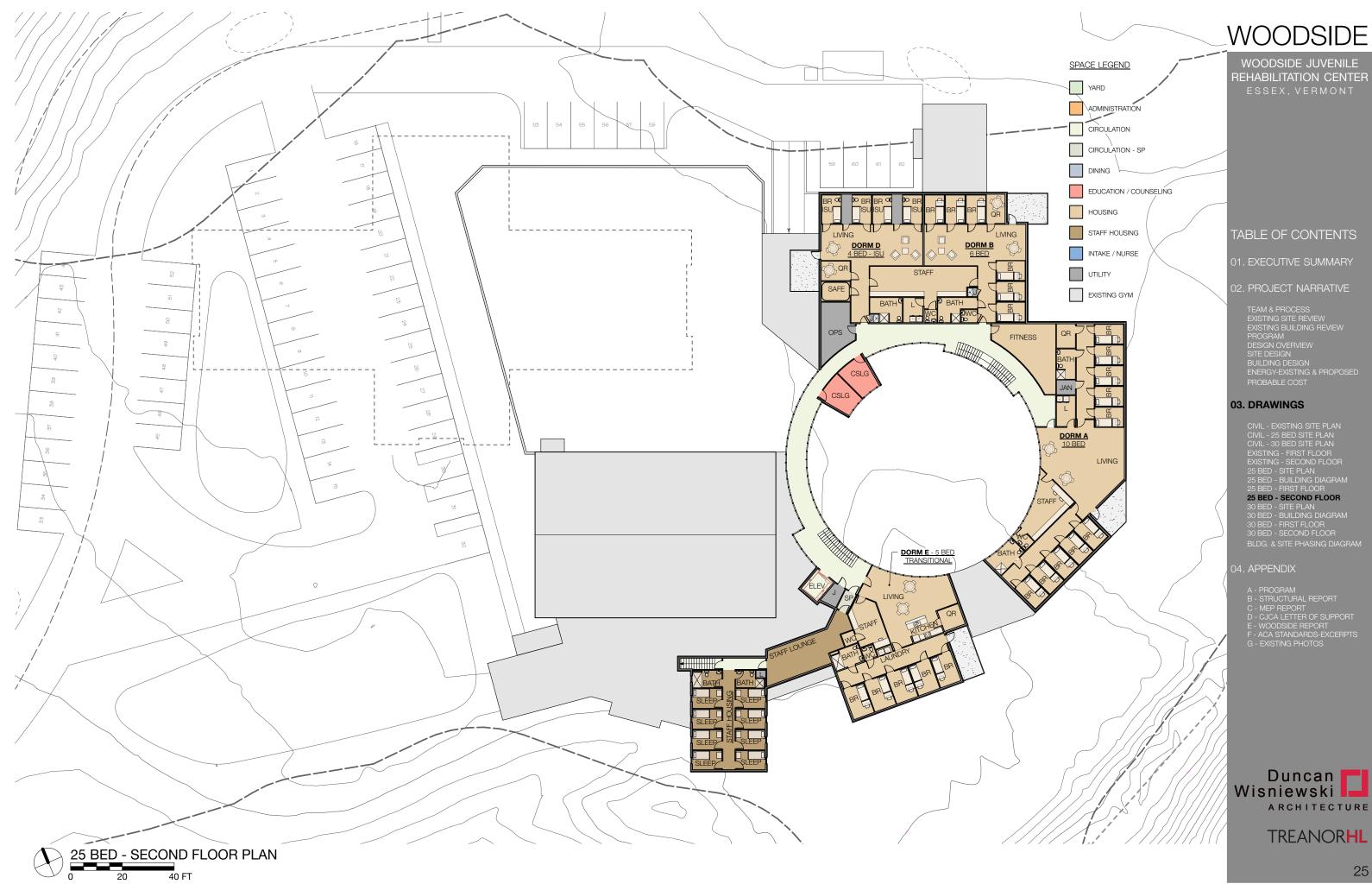
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CIVIL - EXISTING SITE PLAN
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CIVIL - 30 BED SITE PLAN
EXISTING - FIRST FLOOR
EXISTING - SECOND FLOOR
25 BED - SITE PLAN
25 BED - BUILDING DIAGRAM
25 BED - FIRST FLOOR
25 BED - SECOND FLOOR
30 BED - SITE PLAN
30 BED - BUILDING DIAGRAM
30 BED - FIRST FLOOR
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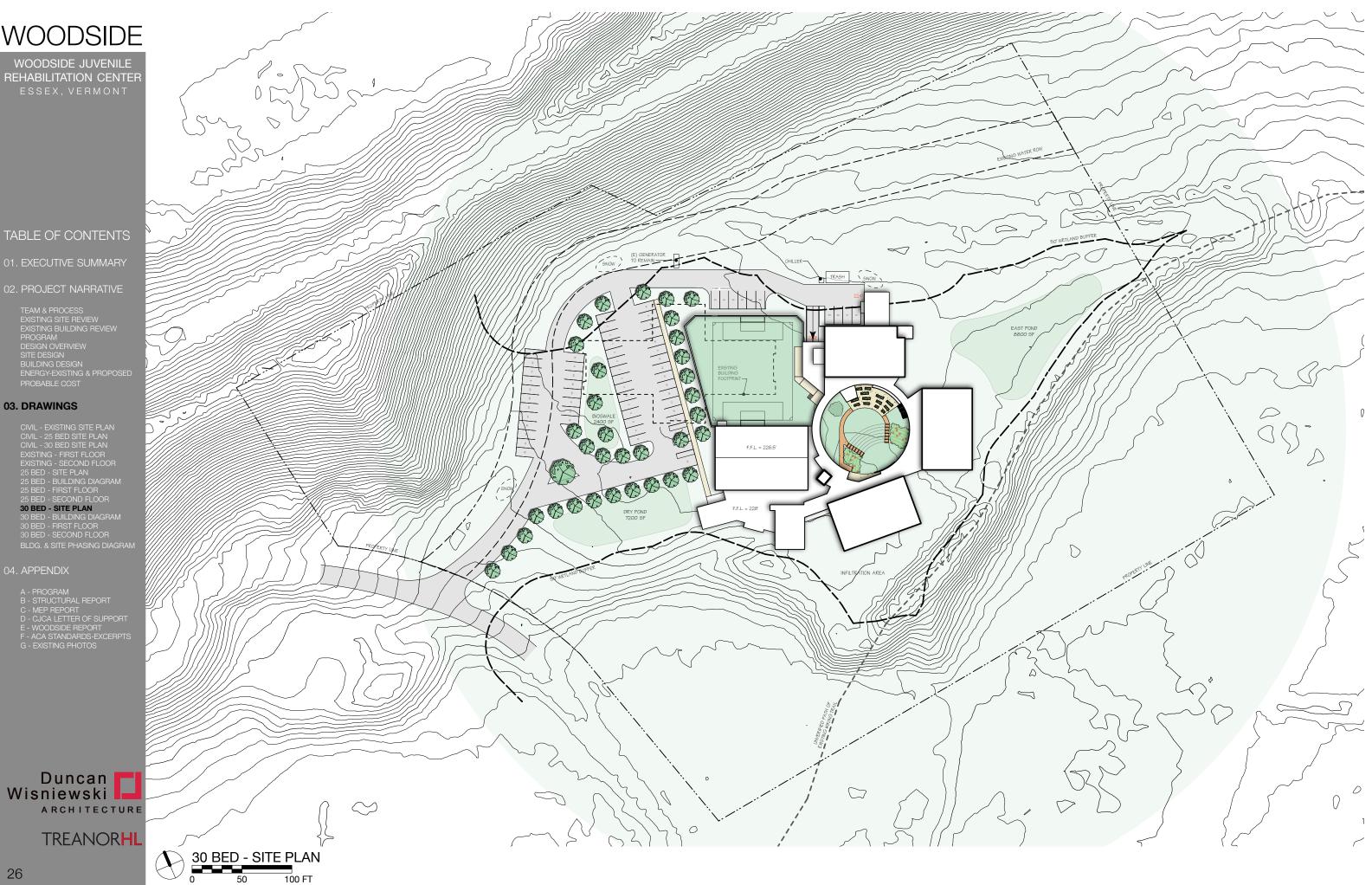
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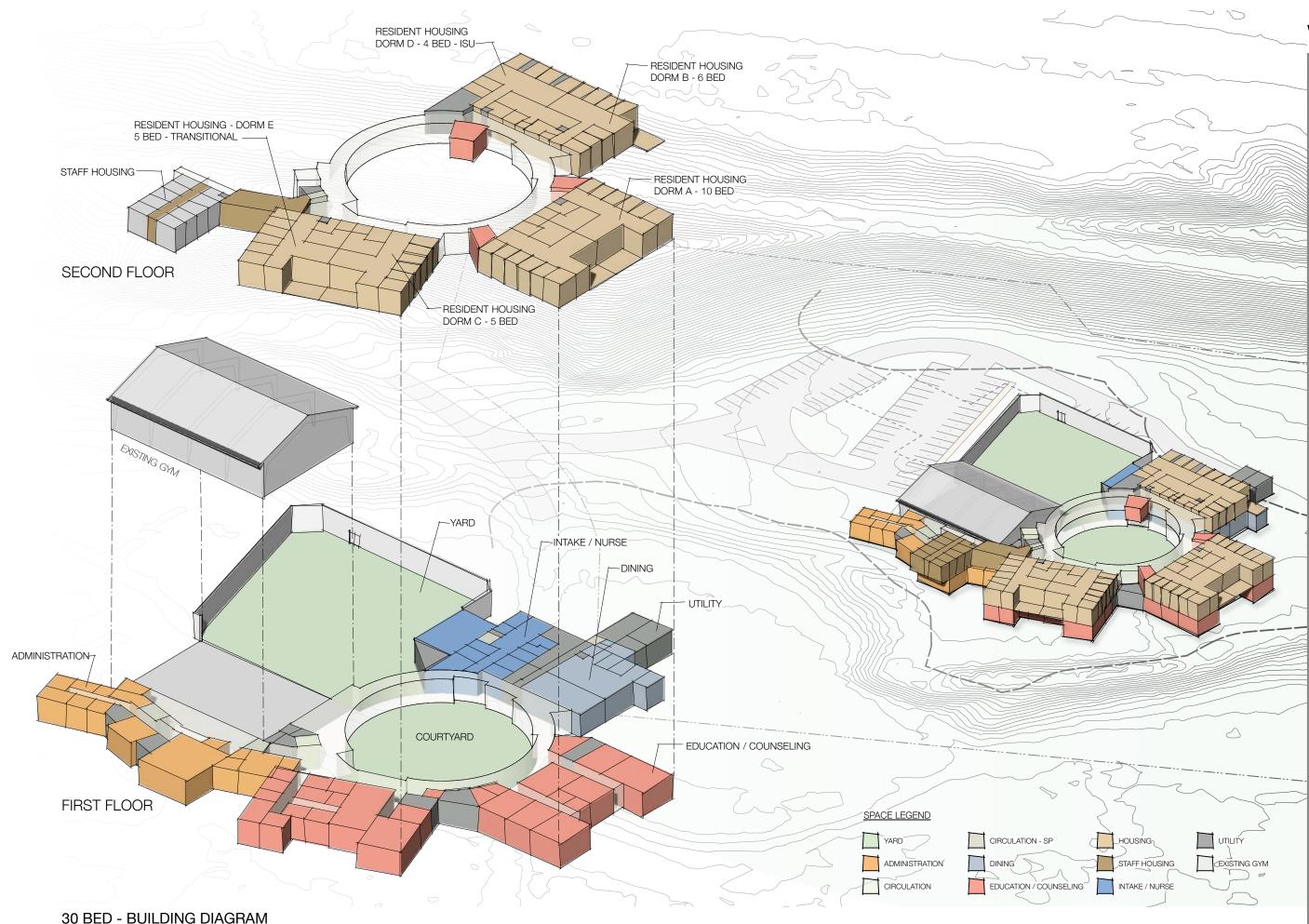
03. DRAWINGS

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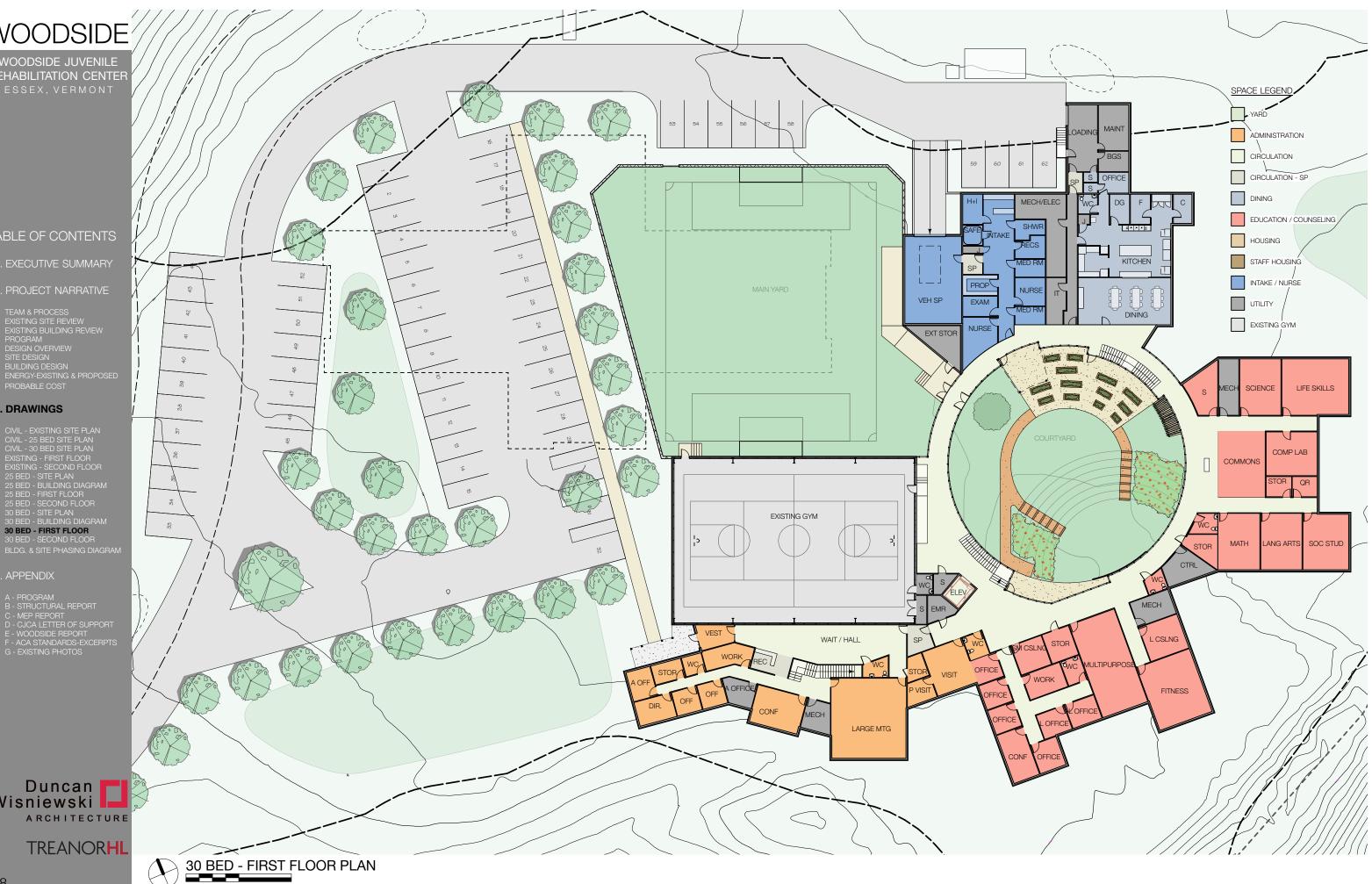
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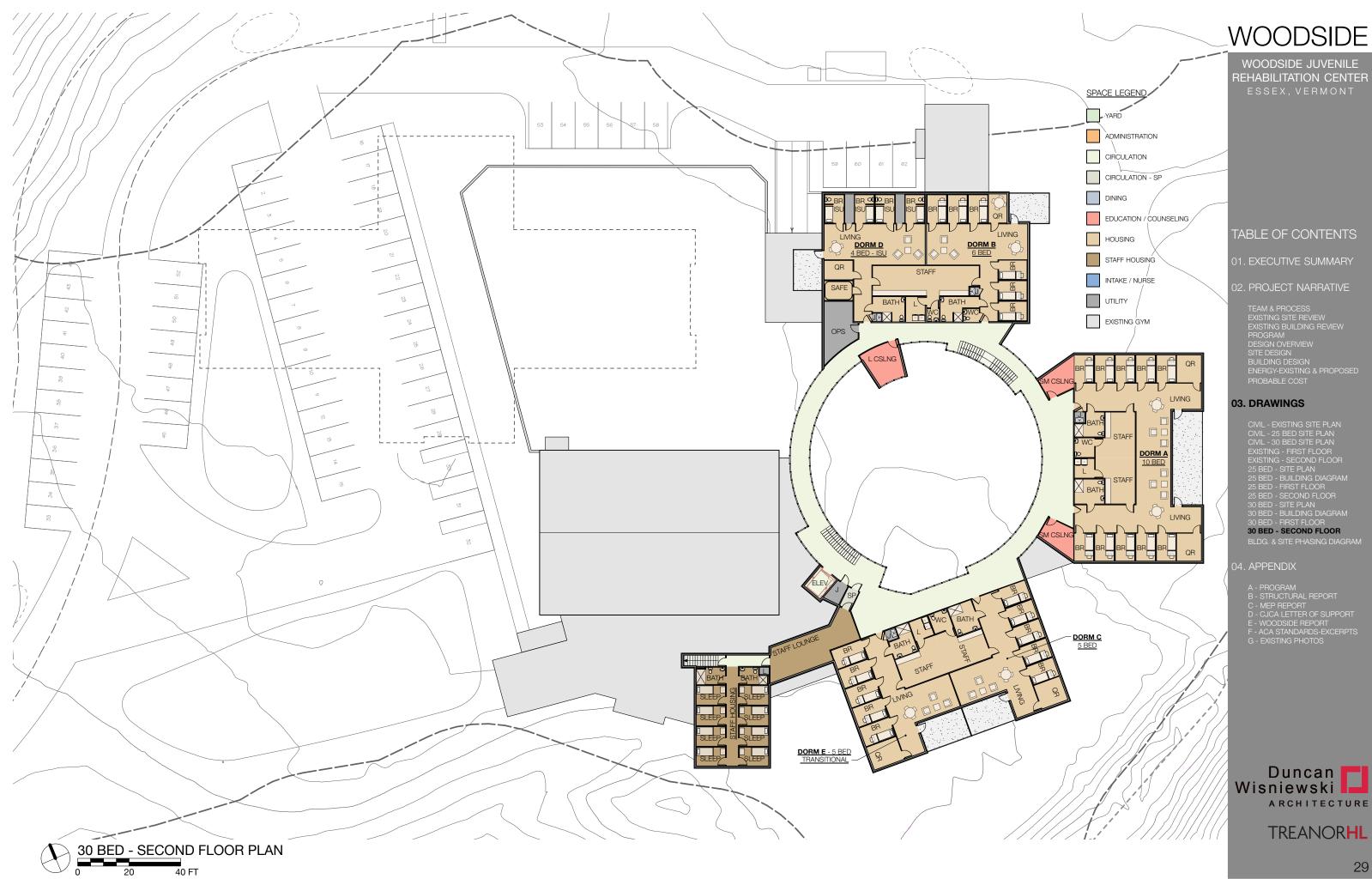
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30 BED - FIRST FLOOR

30 BED - SECOND FLOOR BLDG. & SITE PHASING DIAGRAM







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CIVIL - 25 BED SITE PLAN
CIVIL - 30 BED SITE PLAN
EXISTING - FIRST FLOOR
EXISTING - SECOND FLOOR
25 BED - SITE PLAN
25 BED - BUILDING DIAGRAM
25 BED - FIRST FLOOR
25 BED - SECOND FLOOR
30 BED - SITE PLAN
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30 BED - FIRST FLOOR
30 BED - SECOND FLOOR

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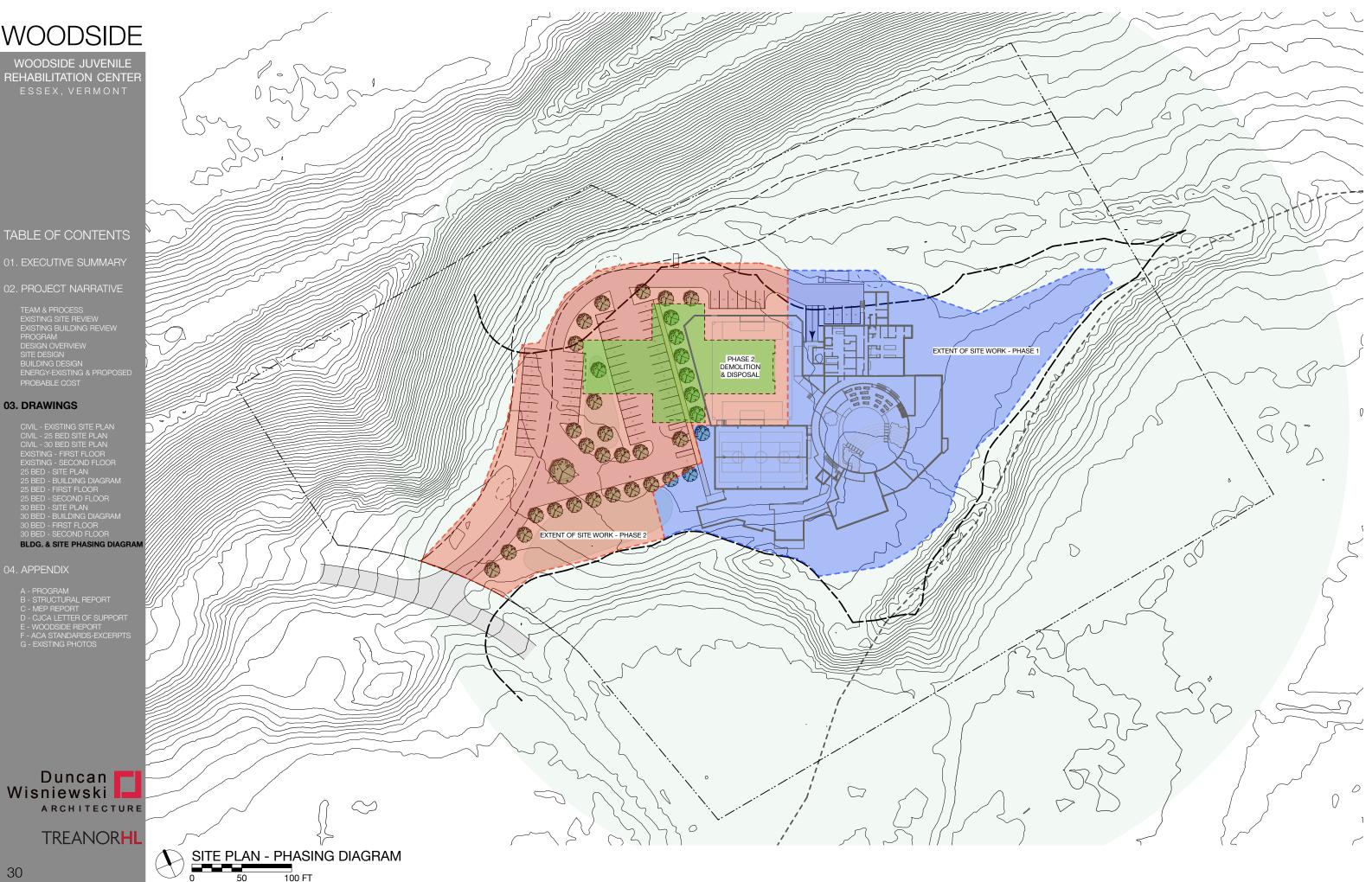
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APPENDIX A - PROGRAM

oodside			12.22.2016
venile Rehabilitation Center			
mmary of Program Areas			
Program Name	25 Bed SF	30 Bed SF	NET
Housing	1.000	4 4 9 9	
Support Spaces	1,033	1,166	130
Dorm A - 10 bed, general occupancy	3,141	3,644	503
Dorm B - 6 bed, general occupancy	1,904	1,904	-
Dorm C- 5 bed, general occupancy	-	1,824	1,824
Dorm D - 5 bed, special occupancy, ISU	1,894	1,894	-
Dorm E - 5 bed, transitional	2,124	1,803	(32
Sub-Total	10,096	12,235	
Grossing Factor (included)	-	-	_
TOTAL	10,096	12,235	2,139
Intake, Medical, and Support			
Intake, Medical, and Support	2,426	2,426	
Grossing Factor (included)	2,420	2,420	
TOTAL	2,426	2,426	
	2,420	2,420	-
Staff Housing		1 1	
Staff Housing	1,827	1,827	
Grossing Factor (included)	-	-	
TOTAL	1,827	1,827	-
Building Support	0.400	0.400	
Building Support	3,432	3,432	
Grossing Factor (included)	- 0.400	-	
TOTAL	3,432	3,432	-
Public Entry and Meeting Rooms		1	
Public Entry and Meeting Rooms	2,028	2,028	
Grossing Factor (included)		-	_
TOTAL	2,028	2,028	_
TOME	2,020	2,020	
Visitation		1 1	
Visitation	569	569	
Grossing Factor (included)	-	-	
TOTAL	569	569	-
Administration	1017	1017	
Administration	1,947	1,947	
Grossing Factor (included)	-	-	
TOTAL	1,947	1,947	-
Counseling			
Counseling	1,657	2,558	
Grossing Factor (included)	1,001	2,000	

TOTAL	1,657	2,558	901
Education and Counseling			
Education and Counseling	3,526	4,771	
Grossing Factor (included)	-		
TOTAL	3,526	4,771	1,245
Core and Primary Circulation			
First Floor Primary Circulation	3,859	4,611	
Second Floor Primary Circulation	1,873	3613	
First Floor Core	187	187	
Second Floor Core	151	151	
TOTAL	6,070	8,562	2,492
Existing Gym			
Existing Gym	5,952	5,952	-
PROGRAM SUMMARY			
Housing	10,096	12,235	2,139
Intake, Medical, and Support	2,426	2,426	-
Staff Housing	1,827	1,827	-
Building Support	3,432	3,432	-
Public Entry and Meeting Rooms	2,028	2,028	-
Visitation	569	569	-
Administration	1,947	1,947	-
Counseling	1,657	2,558	90-
Education and Counseling	3,526	4,771	1,245
Core and Primary Circulation	6,070	8,562	2,49
Existing Gym	5,952	5,952	-

WOODSIDE

WOODSIDE JUVENILE REHABILITATION CENTER

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CIVIL - 30 BED SITE PLAN
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EXISTING - SECOND FLOOR
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25 BED - BUILDING DIAGRAM
25 BED - FIRST FLOOR
25 BED - SECOND FLOOR
30 BED - SITE PLAN
30 BED - BUILDING DIAGRAM
30 BED - FIRST FLOOR
30 BED - SECOND FLOOR
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WOODSIDE JUVENILE		Quantity	SF/area
REHABILITATION CENTER	Housing		25 Bed SF
ESSEX, VERMONT	Support Spaces		
	Gym Storage	1	46
	Gym WC	1	51
	Fitness	1	439
	Ops Office	1	262
	Central Control	1	182
	Staff safety equipment	1	53
	Sub-Total		
	Grossing Factor (included)	0%	
TABLE OF CONTENTS	TOTAL		
01. EXECUTIVE SUMMARY	Dorm A - 10 bed, general o	ccupancy	
	Single Bed Sleeping	10	96
02. PROJECT NARRATIVE	Living room	1	901
TEAM & PROCESS	Quiet Room 1	1	82
EXISTING SITE REVIEW	Quiet Room 2	1	-
EXISTING BUILDING REVIEW PROGRAM	Staff office	1	275
DESIGN OVERVIEW	Laundry	1	100
SITE DESIGN BUILDING DESIGN	Staff Toilet	1	44
ENERGY-EXISTING & PROPOSED	Toilet/Shower 1	1	96
PROBABLE COST	Toilet/Shower 2	1	109
03. DRAWINGS		· · ·	
	Circulation	1	526
CIVIL - EXISTING SITE PLAN CIVIL - 25 BED SITE PLAN	Storage	1	
CIVIL - 30 BED SITE PLAN	Janitor	1	48
EXISTING - FIRST FLOOR EXISTING - SECOND FLOOR	Sub-Total		
25 BED - SITE PLAN 25 BED - BUILDING DIAGRAM	Grossing Factor (included)	0%	
25 BED - FIRST FLOOR	TOTAL	0,0	
25 BED - SECOND FLOOR 30 BED - SITE PLAN			
30 BED - BUILDING DIAGRAM 30 BED - FIRST FLOOR	Dorm B - 6 bed, general oc	cupancy	
30 BED - FIRST FLOOR 30 BED - SECOND FLOOR	Single Bed Sleeping	6	96
BLDG. & SITE PHASING DIAGRAM	Living room	1	560
	Quiet Room	1	96
04. APPENDIX	Laundry	0.5	80
A - PROGRAM	Staff office	0.5	620
B - STRUCTURAL REPORT C - MEP REPORT	Staff Toilet	0.5	48
D - CJCA LETTER OF SUPPORT	Toilet/Shower	1	116
E - WOODSIDE REPORT F - ACA STANDARDS-EXCERPTS			
G - EXISTING PHOTOS	Circulation	1	168
	Storage	-	-
	Janitor	1	14
	Sub-Total		
	Grossing Factor (included)	0%	
	TOTAL	0,0	
	Dorm C- 5 bed, general oc	cupancy	
	Single Bed Sleeping	5	-
Duncan 🗖	Living room	1	-
Wisniewski		•	j

					Oreclation	,	
					Storage	-	
					Janitor	1	
					Sub-Total		
					Grossing Factor (included)	0%	
	SF/area	Sub-Total	Sub-Total		TOTAL	Quantity	S
	30 Bed SF	25 Bed SF	30 Bed SF		Housing		2
					Dorm C- 5 bed, general occ	upancy	
	46	46	46		Giviel Stored Gleeping	5	
	51	51	51			0.5	
	572	439	572	weights, mat area	Sitatéssfice	0.5	
			-		Staff Toilet	0.5	
	262	262	262	central to facility	Ditlet(23ficever	1	T
	182	182	182	within secure perimete	Central Control	1	\top
_	53	53	53	adjacent to elevator	Staffusation equipment	1	$^+$
_	00	1,033	1,166		SaboTage	1	+
		-	-		Garoissing Factor (included)	01%	+
_		1,033	1,166		SJIQ TAtal	000	+
		1,000	1,100		Grossing Factor (included)	0%	+
	1	1			Doon A - 10 bed, general of		+
	96	960	960		Single Bed Sleeping	10	+
	1,066	900	1,066		Doixin Drogrograd, special occ	-	
_					Single Real Steeping		
_	115	82	115			4	+
_	115	-	115		Qvilleg Room 2	1	+
_	452	275	452	includes storage area	Staifftofficem	1	+
_	65	100	65		BatenBigom	1.0	+
_	65	44	65		Stauffidio ilet	0.5	+
_	120	96	120		Staleft.cShicever 1	0.5	+
_	120	109	120		Statet/Ohetwer 2	0.5	+
_					Toilet/Shower	1	_
	526	526	526		Circulation	1	_
	20	-	20		Stratalgation	1	
	20	48	20		Plaunitubring Access	2	
		3,141	3,644		SatoToget	1	
		-	-		Groteling Factor (included)	0%	
		3,141	3,644		SJI@TAtal		
					Grossing Factor (included)	0%	
					DomAB - 6 bed, general oc	cupancy	
	96	576	576		Single Bed Sleeping	6	
	560	560	560		Down Erectinbed, transitional	l 1	
	96	96	96		SingleReadSleeping	5	
	80	40	40	shared with Dorm D	Liavingdroom	0.5	
	620	310	310	shared with Dorm D	Staff office	0.5	
	48	24	24	shared with Dorm D	Staff WoDet	0.5	1
	116	116	116		Tailet@Bhower	1	\top
		-	_		WC	1	+
	168	168	168		Coitett/Athowver	1	+
		-	-	within office	Stored Room	-1	+
	14	14	14		Janitor	1	+
	1-7	1,904	1,904		Sairadation	1	+
		1,904	1,904		Strowsgieg Factor (included)	Θ%	+
		1,904	1,904		Janal	1	+
		1,904	1,904				+
			I		Sub-Total Dorns Grop Foed rgporral occ		+
	96		480		SolgALBed Sleeping	5	+
_	533	-	533			1	+
_	033	-	533		Living room		

TREANORHL

ARCHITECTURE

100	100	100	Ī
-	-	- within office	
14	14	14	
	1,904	1,904	

-

SF/area

25 Bed SF

area				
	SF/area	Sub ₁ Total	Sub-Togal4	
ed SF	30 Bed SF	25 Bed SF	30 Bed SF	
46	1 96	46	446	
51	5 63	51	56335	shared with Dorm E
439	\$52	439	5 22 6	sheigedswithaDanea E
-	65	-	32.5	shared with Dorm E
262	2 280	262	200	central to facility
182	182	182	182	within secure perimete
53	263	53	265	adjacent to elevator
-	-	1,033	1,166	within office
-	20	-	20	
		1,033	1,826	
		-	-	
		-	1,824	
96	96	960	960	
901	1,066	901	1,066	
<u>90</u>	196	3 84	385	Toilets in bedrooms
560	566	560	566	
2 96	498	296	490	includes storage area
196	86	196	86	in long de brond go al ou
80	86	40	66	
626	620	396	320	
100	128	109	120	
116	116	116	116	
526	526	526	526	
168	108	168	100	
48	20			
48	40	88	80	within office
14	- 14	3,141	3,644	
14	14			
		3,894	3,694	
		-	-	
06	96	1,894 576	1,894 576	
96		1 1		
560	560	560	560	
196	196	596	596	Kitalaab, idth Dlada D
788	380	748	3840	
820	820	220	2260	
28	48	28	-24	shared with Dorm D
126	136	126	136	
30	30	30	30	
108	168	106	108	
81	130	81	130	within office
14	14	14	14	
315	336	1,905	1,906	
-	-	-	-	within office
-	20	1,904	1,9 20	
		2,124	1,803	
		-	-	
	96	2,124	1,880	
-	533	,	533	

	Quantity	SF/area	Sub-Total	Total	Notes
Intake, Medical, and Sup	-				
Intake and Medical					
Vehicle Sallyport	1	748	748		large enough for ambulance
Sallyport	1	64	64		
Holding / Interview	1	96	96		
Open Intake Area	1	518	518		Includes waiting and booking desk
Shower/Dress-Out	1	84	84		
Property Storage	1	112	112		
Janitors Closet	1	24	24		admin area
Record Storage	1	96	96		
Exam Room	1	112	112		
Safe Room	1	64	64		
Medical Room	2	84	168		
Nurse Office & Med Dispensary	1	208	208		
Nurse Office & Med Dispensary	1	132	132		
Sub-Total				2,426	
Grossing Factor (included)			0%	-	
TOTAL				2,426	
Staff Housing					
Breakroom/Lounge	1	483	483		
Toilet/Shower	2	84	168		Laundry Closet associated
Sleeping Quarters	8	96	768		Single Occupancy
Circulation	1	365	365		
Sallyport	1	43	43		
Sub-Total				1,827	
Grossing Factor (included)			0%	-	
TOTAL				1,827	
Building Support	1 1	1 1			
Loading Dock	1	312	312		
Sallyport	1	48	48		adjacent to loading dock
Maintenance Room	1	216	216		
BGS Office	1	96	96		
Outdoor Storage Closet	1	24	24		
Kitchen	1	1,164	1,164		
Janitors Closet	1	20	20	_	
WC	1	64	64		
Kitchen office	1	120	120		With storage
Dining Room	1	648	648		
Mech / Elec	1	376	376		
Data / IT	1	138	138		
Circulation	1	206	206		
Sub-Total				3,432	
Grossing Factor (included)			0%	-	
TOTAL				3,432	

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REF

	Quantity	SF/area	Sub-Total	Total	Notes
ATION CENTER Entry, Administration, a	nd Visitatio	on			
VERMONT Public Entry and Meeting Roo					
Vestibule	1	120	120		secure interior door
Public Waiting	1	871	871		screening/lockers towards SP
Public Restroom	1	68	68		
Large Meeting Room	1	899	899		50 persons classroom style
Meeting Room Storage	1	70	70		
Sub-Total				2,028	
Grossing Factor (included)			0%	-	
TOTAL				2,028	
ENTS Visitation		000	000		
RY Contact Visitation	1	298	298		
Private Contact	1	98	98		
	1	74	74		
Public Sallyport/Queing	1	99	99		
Sub-Total			_	569	
Grossing Factor (included)			0%	-	ļ
TOTAL				569	
ED Administration					
Reception	1	120	120		secure
Workroom/copy	1	154	154		
Records Storage	1	96	96		
Director's Office	1	150	150		
Asst. Director's Office	2	120	240		
Office	2	100	200		
Conference	1	293	293		
Staff Restroom	1	64	64		
Mechanical	1	127	127		
Circulation	1	503	503		Includes break area
Sub-Total				1,947	
Grossing Factor (included)			0%	-	
TOTAL				1,947	
TOTAL				4,544	
AT					

04.

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ORIGINAL IDEALIZED PROGRAM FOR 30 BEDS BEFORE DESIGN WAS: 54,112 SF

	SF/area	SF/area	Notes
Education and Counseling	25 Bed SF	30 Bed SF	
Education		00 20u 01	
Library Commons	-	450	
Computer Lab	-	340	
Computer Lab / Library	501	340	
Science Classroom	343	352	
Life Skills Classroom	500	572	
Social Studies Classroom	367	396	
Language Arts Classroom	329	352	
Math Classroom	344	352	
Multipurpose Classroom	750	704	
Storage	32	199	
Storage	50	80	
Storage	-	122	
Quiet Room	104	80	
Youth WC	64	78	
Youth WC	52	58	
Principal Office	90	120	
Mechanical Space	-	176	
Sub-Total	3,526	4,771	
Grossing Factor (included)	-	-	
TOTAL	3,526	4,771	
Counseling			
Large Counseling 1	228	224	
Large Counseling 2	-	210	
Small Counseling 1	117	142	
Small Counseling 2	153	139	
Small Counseling 3	153	150	
Conference Room	-	220	
Staff Toilet	52	80	
Storage	-	132	
Workroom	91	155	
Counseling Office	135	115	
Traveler's Office	90	132	
Office	90	110	
Office	90	110	
Office	90	110	
Circulation	290	369	
Mechanical Space	78	160	
Sub-Total	1,657	2,558	
Grossing Factor (included)	-	-	
TOTAL	1,657	2,558	
TOTAL	5,183	7,329	



APPENDIX B - STRUCTURAL REPORT

HSE Project #: 16-118.00

STRUCTURAL REPORT

November 8, 2016

Mr. Sam Beall Duncan Wisniewski Architecture 255 South Champlain Street Burlington, VT 05401

RE: Woodside Juvenile Rehabilitation Facility (Essex, Vermont) **Existing Building Assessment**

Dear Sam:

At your request, I have performed a structural assessment of the existing building at the Woodside Juvenile Rehabilitation Facility in Essex, Vermont. My assessment was based on the existing drawings as well as a walkthrough of the building on November 2, 2016. My goal is to assess the building in terms of structural capacity as well as the logistics of re-purposing the existing building for future use.

From a structural loading standpoint, the building has adequate capacity for its current use, and most reasonable future uses. Based on the Design Loads shown on S-2 of the 1983 drawings, I have found the following:

- > The roof has been designed to accommodate 40 psf of Snow Load, which is adequate per Code.
- > The typical design Live Load on the 2nd Floor is 80 psf, which is adequate for most commercial uses such as classrooms and offices, as well as residential loading. This loading is not adequate for public or assembly loading, which would require 100 psf design Live Load.
- > The Storage Room 208 has been designed for 125 psf, which is adequate for light storage per Code, which is good for most commercial storage applications. This area would also be adequate to accommodate a public or assembly space (although it is not that large). Note that Rooms 201 and 202 are labelled Storage on the DWA Floor Plan, but appear to be originally designed as classrooms on the 1983 drawings, so would meet the 80 psf typical Live Load, not the 125 psf storage Live Load.
- > The Gym 206 is designed for 100 psf Live Load. This area was a 2-story racquetball court originally, and the 2nd Floor was added in 2007 to create office space on the 1st Floor and a Gym on the 2nd Floor. This new Gym floor was designed for 100 psf Live Load, which would be adequate for public/assembly space.
- > The Mechanical areas have been designed for 40 psf Live Load, which should be adequate for most mechanical equipment. Any new equipment that is relatively heavy may need to be spread out strategically to maintain a floor loading below the 40 psf design load.
- The 1st Floor is a 6" slab-on-grade, and is adequate to accommodate a wide variety of structural loading conditions, including 125 psf storage Loading and any lighter loads.

Based on the walk-through, the structure appears to be in good condition, and does not show signs of undue wear and tear. I anticipate that the structure is in adequate condition to perform to its design loading.



Although the structure is in good condition, the structural system utilized for the construction of this building makes it difficult to re-program. The 2nd Floor and Attic floors (1st Floor and 2nd Floor ceilings) are constructed with 6" and 8" structural cast-in-place reinforced concrete slabs. These structural slabs rely on the masonry bearing walls for support. The ceiling of the 1st Floor (2nd Floor and lower Attic floor structure) relies on MOST of the 1st Floor masonry walls for support, including all of the Resident/Cell walls. Refer to the attached Floor Plan by DWA, on which I have highlighted the bearing walls. Since most of the walls are utilized for slab bearing above, any re-configuration for programming (removing bearing walls, new openings in bearing walls, etc.) would require new structural support. Depending on the extent of wall re-configuration required for the new program, this could be prohibitively expensive.

The most difficult areas logistically would be the current Resident/Cell spaces, which are 7'x10' rooms around the perimeter of the east and west wings. By taking out alternate bearing walls (i.e. doubling the room size), these wings could potentially be converted to office space, but at the expense of replacing alternate bearing walls with steel beams.

In general, any re-programming that requires significant adjustment to the building layout and traffic flow on the 1st Floor would likely be cost prohibitive. The upper Attic Floor (2nd Floor ceiling) is supported on with concrete beams rather than bearing walls, so this space provides more flexibility from a programming standpoint.

The Gym building, added in 1997, is a pre-engineered steel frame building. This provides an open floor plan, and is adequate for a wide variety of design loading on the slab-on-grade system. The height of this building could allow for a full or partial 2nd Floor within, but any new floor would need to be independently supported on a steel frame, which would involve some foundation work at the floor slab level to support the new floor.

Please feel free to contact me if you have any questions regarding the content of this letter or if we can be of further assistance at this time.

Best regards, HARDY Structural Engineering, LLC

Jared Waite, PE **Project Engineer**



Tim Hardy, PE Owner

WOODSIDE

WOODSIDE JUVENILE REHABILITATION CENTER

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WOODSIDE JUVENILE REHABILITATION CENTER



9 Washington Street Rutland, Vermont 05701 802-855-8091 www.EngineeringVermont.com

Mechanical-Electrical Consulting Engineers

MEP REPORT

December 8, 2016 ESVT Project No. 16110

Duncan Wisniewski Architecture 255 South Champlain Street

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APPENDIX C - MEP REPORT

Burlington, Vermont 05401

Attn: Sam Beall

Woodside Juvenile Rehabilitation Center Re: MPE Existing Conditions Report

Sam,

On Monday, November 7, 2016, we performed an inspection of the existing mechanical, plumbing and electrical systems at the Woodside Juvenile Rehabilitation Center in Colchester, Vermont. Our report on our findings follows.

- 1. Mechanical
 - a. General: the majority of the mechanical equipment installed in the building dates from 1984. The equipment is in reasonably good condition, but is at or near the end of its useful life. In 2006 a new chiller and DDC control system was installed.
 - b. Boilers: The building is provided with three (3) sectional, cast iron, oil fired boilers ranging in age from 1997 to 2015. One boiler is utilized for domestic hot water and the other two are lead- lag controlled for space heating. The heating system is a hot water system served by two lead-lag heating pumps located in the boiler room. Piping is distributed through the building in mechanical attic spaces. The heating pumps and piping systems dates from 1984 and is at or near the end of its useful life. The new boiler appears to be adequate and can be expected to provide 20 years of useful life, the other two boilers have around 10 years of useful life remaining.
 - c. Domestic hot water heater: Hot water is provided by a dedicated oil fired boiler and hot water heat exchanger with buffer tank located in the boiler room. The heat exchanger and tank dates from 1984, both are at or near the end of their useful lives.
 - Oil Tank: The facility is provided with a 12,000 gallon double walled underground oil d. tank with oil leak detection system. Oil lines run underground to the oil fired boilers. This tank appears to have been installed in 1997 and appears to be in good repair and can be expected to provide useful life for 10 additional years.
 - e. Heating Ventilation Systems: In general, the building is heated using warm air heating systems served by air handling units located in the mechanical mezzanines. The building is zoned using hot water heating coils with individual control thermostats. Toilet rooms are provided with dedicated exhaust fans located in the mechanical mezzanines. The air handling equipment and duct systems date from 1984. These systems are at the end of their expected useful life.

- with no code deficiencies noted.
- at least 10 more years of useful life.
- condensation in this area.
- 2. Plumbing

 - as required by current codes.

 - codes.
 - of the fixtures appear to be worn.
 - the future.
 - g. Gym Building: There is no plumbing in this building.
- 3. Fire Protection
 - have been installed in the early 2000's
 - boiler room.
 - c. This system appears to be complaint with no deficiencies noted.
 - appears to be code compliant with no deficiencies noted.

f. Kitchen Ventilation: The kitchen is provided with a kitchen exhaust hood with dedicated exhaust fan and make-up air. The system appears to be adequate for its current use

g. Chiller: The building is provided with an air cooled outdoor chiller with pump package. This unit was installed in 2006. Chilled water is pumped from this outdoor chiller to the attic and to individual chilled water duct coils to provide cooling throughout the facility. This system should be expected to provide at least 10 more years of useful life.

h. Temperature controls: The controls for the building were upgraded when the new chiller was installed in 2006. The controls are in good repair and can be expected to provide

i. Gym Building: The Gym building is heated by a separate warm propane fired warm air furnace, with ducted air distribution and fresh air intake louver. There is no cooling or dehumidification in this building. The is at the end of its useful life and equipment installed in the building will need to be replaced to support the proposed renovations, including new heating, cooling and dehumidification to address high humidity and

a. Domestic Water: The building is provided with a 2" domestic water service with meter and pressure reducing valve. The service is located in the boiler room, water is distributed throughout the building in the mechanical mezzanines.

b. Domestic water Heater: Hot water is provided by the boiler system using a heat exchanger and buffer tank. The water heater is provided with a thermostatic mixing valve

c. Sanitary waste and Vent Systems: The building is provided with an outdoor sewage lift station and pump, this pump appears to be original to the building. There is also an additional lift station south the building which lifts the sewage to the municipal main.

d. The kitchen appears to be provided with a grease trap which complies which current

e. Plumbing fixtures and faucets, flush valves, traps and china appear to be original, most

f. The plumbing systems at the end of their expected useful life, upgrades to fixtures, water heating equipment, valves, piping is required to provide reliability and extended use into

a. The building is provided with a complete wet pipe sprinkler system which appears to

b. A 6" water service with backflow preventer, alarm valve and alarms is located in the

d. The Kitchen Exhaust hood is provided with an Ansul fire suppression system, this system

e. Gym Building: The Gym building is provided with a separate wet pipe sprinkler system.

This system could remain and can be integrated into the new system.

- 4. Electrical
 - a. Electrical Service and Distribution: The electrical service and distribution systems are original, circa 1984. There were no apparent deficiencies in the equipment and wiring and it appears that the systems have been properly maintained over its lifetime. Although equipment is 32 years old, it is still serviceable and replacement parts are available.
 - i. Electrical service is rated 120/208V, 3 phase, 4 wire, 600 Amp.
 - ii. Present building demand has not been confirmed, but based on the replacement generator size, the building load is less than 125KW (350 Amp at 208V, 3 phase).
 - b. Generator: The generator was replaced in 2014, upsizing from a 30KW which powered a portion of the building load to a 125KW generator which can power the entire building load. Electrical distribution was changed as part of the generator replacement to install a transfer switch allowing the entire building electrical system to be energized by the generator upon loss of utility power.
 - c. Wiring Methods: The existing wiring methods are appropriate for the building construction and use. There did not appear to be any drastic Code violations other than an open junction box and unsupported cable.
 - d. General Power: General use receptacles exist where necessary and needed, and receptacles installed during original construction have been removed from many of the occupied living spaces. Connections to the mechanical and building equipment appears correct and appropriate including disconnects where required and labeling of equipment.
 - e. Lighting: The lighting utilizes mainly T8 and compact fluorescent luminaires. The luminaires are not as energy efficient as present day LED products, but they are fairly efficient and the building would likely meet present day Energy Code power density requirements. In many spaces which are not occupied on a constant basis, occupancy sensors and occupancy sensor switches have been installed as an energy savings measure and they seem to work well, based on our time in the building.
 - f. Life Safety Systems:
 - i. Exit Lighting: Some exit signage exists at main egress doors. Exit sign coverage seems minimalistic, and inadequate. Exit signage that was observed appeared to have integral batteries for self-powering.
 - ii. Egress Lighting: Emergency egress lighting mainly occurs through generator powered general use luminaires. This was acceptable emergency lighting until the generator replacement, causing the system to change from a "life safety" power system to a "standby" power system. Powering the luminaires from the generator works fine, but to be considered life safety lighting, it must be powered through a separate, dedicated, life safety transfer switch. Battery powered emergency lighting does exist at a few locations, but is minimal and does not provide adequate coverage.
 - iii. Fire Alarm: The fire alarm system is a zoned system, original to the building. It appears to have been well maintained and in proper working order. However, we understand that this particular manufacturer/model cannot be supported

with UL Listed replacement parts, any longer. Any parts installed at this time to maintain operation of the system would not be UL Listed. Replacement of the fire alarm system with a modern, addressable fire alarm system is recommended.

- g. Telecommunications: The building is served with fiber optic underground from the service pole at the rear of the building. There is CAT5 cabling and jacks throughout the building and it appears that the voice and Ethernet systems are regularly maintained on properly operational.
 - i. It should be noted that it appears that there is a large amount of abandoned telecom cabling routed through the accessible attic spaces of the building. All abandoned telecom cabling is required to be removed as per Electrical Code.
- h. Gym Building: The Gym is provided with a Fire Alarm system including supervision of the sprinkler system. There is a separate power distribution panel in the Gym for lighting and receptacles, this panel is served from the existing MDP panel in the main building. The existing electrical systems will need to renovated, in order to integrate the existing systems into the proposed project and for compliance with current codes and standards.

If you have any questions or comments on this report, please contact us at your convenience.

Respectfully, **Engineering Services of Vermont**

Daniel W. Dupras, P.E. Mechanical Engineer, Principal

Claus Bartenstein, P.E., LEED-AP Electrical Engineer, Principal

Transmitted: Via Email, only (sam@duncanwisniewski.com)

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D - CJCA LETTER OF SUPPORT



APPENDIX D - CJCA LETTER OF SUPPORT



President Fariborz Pakseresht Oregon

Vice President North Dakota

Treasurer Cindy McKenzie Montana

Secretary

Regional **Representatives:**

Midwest

Northeast Kevin M. Brown New Jersey

South Steven Lafreniere Alabama

West Ross Armstrong Nevada

Executive Director



TREANORHL

Dec. 5, 2016

To Whom it May Concern:

Lisa Bjergaard

Terri Williams Kansas

Phyllis Becker Missouri

Michael Dempsey

The Council of Juvenile Correctional Administrators (CJCA) is a national non-profit organization formed in 1994 to improve juvenile correctional services, programs and practices and to provide national leadership development for the individuals responsible for the systems. CJCA represents the youth correctional chief executive officers in 50 states, the District of Columbia, Puerto Rico and major metropolitan counties.

I am writing to you now to support a proposal for funding to build a new facility for the Woodside Juvenile Rehabilitation Center (WJRC) located in Colchester, Vermont.

The Woodside Juvenile Rehabilitation Center currently utilizes a facility built in 1984 primarily as a detention facility. Since that time the mission of WJRC has changed to one of a treatment model rather than "detention" model. They are currently a Commission on Accreditation of Rehabilitation (CARF) accredited treatment facility providing trauma informed psychiatric and risk-reducing treatments. They serve the State's most difficult to manage residents and have experienced an increase in acute cases since the program was repurposed as a treatment facility in 2011. As a result the building no longer fits their purpose or treatment model. Some reasons to support a new facility are as follows:

- The facility looks like an outdated detention facility. The physical structure requires detention like practices that interfere with risk-reducing treatments and community reintegration.
- Significant life safety issues have arisen in the old building. Rooms and bathrooms have many ligature points. Room fixtures are easily damaged providing material for maladaptive behavior.
- There is limited private spaces for private therapy sessions. Limited program spaces for individualized treatments.
- Only two main units to house residents requires all genders are housed in the units together making gender specific treatment very difficult.
- Limited living units makes PREA requirements to separate residents difficult.
- There is limited space to separate residents in crisis from others. As a result dangerous behavior takes on a contagion effect. Residents become triggered which drives high-level interventions. Even residents who are not triggered spend time in rooms while staff work with affected residents. Residents and staff feel unsafe and no one does their best work.
- The building looks like a jail, feels like a jail and residents, therefore, often act like they are in a jail. They feel like inmates and therefore, at times act like inmates.

639 Granite Street, Ste 112, Braintree, MA 02184 Phone: (781) 843-2663; Fax: (781) 843-1688 E-Mail: info@cjca.net; Web: www.cjca.net

Woodside is providing evidence-based trauma informed treatment to their residents in accordance with a national best-practice approach. They are currently a participant in the Performance-based Standards Project (PbS) and recently achieved Level 4 status. While the residents are receiving outstanding treatment the building does not provide a therapeutic environment conducive to wellness. The Woodside team has made an incredible change from a detention model to a clinical model. While the treatment provided is excellent the facility design is hampering the program's ability to reach as many youths as possible and limiting its effectiveness on long-term positive youth outcomes and reducing further reductions in recidivism rates. It is clear to me, that the next logical step is to provide a facility matching their treatment and trauma informed care program model.

Thank you for your consideration of this matter. Please contact me at the CJCA office at 781-843-2663 if you need further information.

Sincerely,

Michael Dempsey, Executive Director

Council of Juvenile Correctional Administrators

639 Granite Street, Ste 112, Braintree, MA 02184 Phone: (781) 843-2663; Fax: (781) 843-1688 E-Mail: info@cjca.net; Web: www.cjca.net



DEPARTMENT FOR CHILDREN AND FAMILIES

Family Services Division Woodside Juvenile Rehabilitation Center

To: Michael Wisniewski

From: Jay W. Simons, Woodside Program Director

Date: December 6, 2016

Subject: Impact of Existing Building

Background

Woodside Juvenile Rehabilitation Center, located in the town of Essex, Vermont, is a 30 bed secure residential treatment facility that provides in-patient psychiatric, mental health, trauma, substance abuse and educational services for youth ages 10 to 18 years of age who have been charged or adjudicated as delinquents.

When this facility opened in 1986 it was considered a "juvenile detention facility" with a longterm treatment program. In 2011, as a result of a change to V.S.A., title 33 § 5801, Woodside was repurposed as a cost effective alternative to hospitalization (therapeutic residential treatment facility).

The original construction consisted of one detention wing constructed to medium security (1984 Corrections) specifications, one treatment wing built to community based treatment specifications, one racket ball court and three classrooms. Over the years, several modifications have been made to the physical structure to accommodate the changing population and program. Unfortunately, even with these modifications, and some major maintenance projects, the current facility does not meet the needs of a residential treatment facility.

In 2011 when Woodside was repurposed as a cost effective alternative to hospitalization (became a therapeutic residential treatment facility as opposed to a detention facility), this change in designation resulted in significant changes in the treatment standards that the Woodside program must meet, as defined by the Centers for Medicare and Medicaid Services (CMS) in the Code of Federal Regulations (CFR) for Psychiatric Residential Treatment Facilities (PRTF).

The Woodside program has evolved to such a degree that the current physical plant no longer meets the needs of Vermont's youths who are a danger to themselves or others and cannot be served safely in community based settings or less secure residential placements. The current facility has no space to provide gender specific programming as males and females are housed together on the same units. Also, the layout of the facility prevents the separation of sub-groups so that all are safe and dangerous behavior easily spreads. **Program Needs**

Woodside will continue to provide the highest level of care in the State for youths who are adjudicated or pre-adjudicated delinquent and whose needs for supervision cannot be safely addressed in a less secure setting. Woodside is serving a population that is becoming increasingly violent, self-harming and destructive. The youth served by Woodside have high rates of psychiatric disorders, and trauma. Dangerous behaviors are treated clinically to achieve long lasting change; however, the physical structure and condition of our current building is an obstacle to effective risk reducing treatment.

The Woodside program has enjoyed a partnership with Buildings and General Services where everyone has worked to keep residents safe within the confines of what is essentially a detention facility design. Despite our best efforts to address life safety issues the building continues to look, and feel like a "juvey jail." The physical plant at Woodside offers very little natural light in common areas. The residents' rooms look and feel like prison cells. Access to nature is limited and non-existent for residents who cannot cope safely with other residents. There is limited treatment space leaving staff to conduct groups in common areas that are not private and have many distractions. Too few group spaces also limit the number of types of specialized topics that can be delivered requiring residents to attend groups that may not target their priority risk. The limited treatment spaces often require residents to meet in private therapy sessions in areas where others pass through. Limited space also negatively impacts family visiting and family counseling. There is no dedicated visiting space at Woodside. Families gather in the dining room, conference spaces and classrooms when available. Others frequently pass through these areas causing distractions. Without time and space to practice and become comfortable together as a family resident permanency is placed in jeopardy. There is no private visiting space for family therapy sessions and no space for residents with children of their own to practice parenting skills. All but one staff office has no windows. The Woodside facility was designed as a detention facility with a focus on keeping people in. Treatment facilities are designed with a focus on wellness and rehabilitation.

Modern juvenile facilities are built in a manner that increases exposure to sunlight. Residents live in rooms with views of nature and have increased access to nature throughout their stay, even when dysregulated. Quiet spaces are provided for residents to learn to calm themselves when escalated instead of isolating and secluding. Facility furniture is built to enhance safety while looking more like the furniture that kids are accustomed to in the community. Lines of sight are such that residents can have more autonomy when moving about the facility. Family

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Duncan Wisniewski

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visiting spaces have a more home like feel. Visiting spaces are equipped with space and items needed for families to practice new skills and for young parents to practice parenting appropriately. Modern facility design allows residents to experience the natural rhythm of life in the community while receiving treatment in a safe, supportive and secure setting.

While Woodside employs a best practice approach to treating the youths in our care our services are provided in a facility design that does little to inspire hope. Youths and staff spend long hours in rooms with little or no natural light. Lines of sight require residents to be escorted throughout the building with little autonomy. There is little space to separate residents in crisis so all the other residents experience the noise associated with their pain. Non-affected residents are often secluded themselves while staff work to calm a resident behaving dangerously. In order to move a dysregulated resident outside for space and exercise that resident has to move through living areas and hallways that are filled with others. The risk to others is often too great to grant this type of access to the outside. Many other residents then become triggered and escalate. During periods of escalation people are impacted and do not feel safe. People who do not feel safe do not do their best work and treatment suffers.

The Northwest Juvenile Project studied 1829 detained youths age 10 to 18 years. The report found that one third of male incarcerated youth and nearly half of female incarcerated youth reported feeling hopeless. They found that 1 in 10 youths who were detained thought about suicide in the 6 months prior to the study. Of those approximately half had not disclosed to anyone that they were thinking about suicide. This finding matches those that show that residents in facilities post adjudication (spending more time in) are more likely to feel hopeless and attempt suicide. The youth that Woodside serves have the same characteristics associated with an increased risk of suicide, high rates of psychiatric disorder and trauma. Placing residents inside a small jail like facility with limited opportunities for exposure to sunlight, lots of confined spaces and little freedom negatively impacts the ability to stay hopeful.

While Woodside has not suffered the tragedy of a completed suicide the physical structure does not inspire a sense of wellbeing and hope. The impact of the current building design is apparent in the Woodside program intervention numbers. From 2013 through 2016 Woodside experienced 197 instances of self-harm or suicide ideation. High level dangerous behavior often requires high level interventions to reestablish safety. From April 2014 to August 2015 Woodside used an average of 8 physical interventions and 31 instances of seclusion per month. While these high-level interventions kept residents alive, physical intervention and seclusion can worsen trauma. Research shows that kids do not get better while in seclusion, in fact seclusion is contraindicated but necessary in the current environment to keep residents and staff safe.

To reduce the use of high level interventions Woodside requested 9 additional staff positions to provide more direct care to residents in early 2015. The plan was for staff to provide one to one care to residents who struggle with being safe in the milieu so the residents could stay in the milieu longer. Establishing a trusting relationship with these residents is critical to their success.

These staff were to be positioned to both develop a trusting relationship and to adequately recognize the antecedents to dangerousness and intervene before the resident escalated. In August of 2015 Woodside was successful in acquiring 9 additional staff to enhance services and support of residents. Between September 2015 to November 2016 Woodside experienced huge success in reducing seclusion without increasing instances of physical intervention. Physical intervention numbers remained at approximately 8 on average per month; however, instances of seclusion dropped from 31 per month on average to 8. The kids are out of their rooms more and are more available to receive risk reducing treatment.

While the Woodside team is seeing success in reducing high level interventions, the physical structure of the building does not promote wellness. The layout of the units allows for the rapid spread of dysregulated behavior. As stated earlier a high percentage of Woodside residents suffer from extensive trauma histories. Antecedent to violence in most of their homes was the noise associated with domestic violence and crisis. The yelling, screaming and banging often culminated in harm to them and/or their loved ones. When a resident at Woodside is escalated s/ he often creates many of the same sounds the other residents associate with harm. The result is multiple residents becoming triggered and dysregulated. The spreading dangerousness requires staff to employ high level interventions to keep residents safe before too many residents are triggered with too few staff to address the spreading escalation. If Woodside staff had access to safe quiet spaces to work with escalated residents the contagion effect of escalation would be prevented and the need to move quickly to high level interventions would be alleviated. Nonaffected residents could continue to participate in programming uninterrupted. The triggered resident would get the staff support that they need to practice coping safely. In a building that promotes wellness residents will get better quicker.

Woodside has adopted an education model that is designed to mimic what youths experience in the community, including Individual Education Plan and 504 Plan accommodations. The current physical plant has been modified to create five separate classrooms that the residents rotate through during the day. While the retrofit provided classroom space for science, social studies, mathematics, English and life skills it does not provide space for a library, computer lab, art, music and individual tutoring. The youths that Woodside serves are most often non-traditional learners. The detention model facility in which we currently reside does not provide adequate flexibility to adapt to their needs. Currently Woodside has no space to deliver vocational education/training, experiences that many of the Woodside youth would benefit from.

Woodside provides individual tutoring to every resident at Woodside through an agreement with the Stern Center. Stern Center teachers are at Woodside 5 days per week providing individual tutoring in mathematics and literacy. Currently there is no designated space for these teachers to do this work. They work in dayrooms, small office space and a conference room as they become available. These spaces are not conducive to educational services. Most of the Woodside residents have learning disabilities and work better in space that prevents distractions. Currently if a student in math class needs to use the restroom they must walk through the science class and

the conference room to get to a restroom. As they pass through students in those areas become distracted and staff must work to keep residents focused. Learning time is forfeited each time other residents pass through.

Youths with high instances of psychiatric disorder and trauma do not do well with transitions, particularly with transitions that involve caretakers. Woodside reduces the number of transitions that Woodside youth experience during their stay by utilizing a unique staffing schedule. Traditional programs utilize staff schedules with 8 hour shifts that require three staff transitions per day or 21 transitions per week. Woodside uses 56 and 59 hour shifts so that residents see a reduction in staff transitions to three per week. This schedule allows staff to more quickly build rapport and therapeutic relationships with the youth. When youths do struggle, they work through the crisis with the same staff that will support them with feedback after the youth regains control. These relationships are often the first that our residents feel safe in.

One consequence of having this creative staff schedule is that staff sleep in the building. The staff get up before the residents and plan for the needs of the individuals before the residents get up. They stay with the residents throughout the day and support them through crisis and success. The staff are with the residents every waking hour. After the residents go to bed the staff complete treatment documentation and process the day. When the sleep over staff are relieved by the awake overnight staff they go to the staff sleeping areas to rest for the next day. The staff sleeping areas at Woodside do not provide for the needs of the staff that are spending up to 16 hours per day with the residents. They are tucked into closets, storage rooms and offices. Using a restroom requires staff to pass through multiple locked steel doors that require the staff person be out of bed for longer than one normally is at home. The sleep spaces in the same areas that awake staff are operating. Banging doors and the normal activity with the facility make rest difficult. The conditions do not provide space for adequate rest, especially considering that these staff are working with Vermont's most difficult to manage teenagers.

The physical design of the facility has wide reaching impact on the treatment of the youths we serve, from how they develop relationships with us to how they follow the rules. Youths are much more likely to engage in treatment and follow the rules when there is a trusting relationship with an adult who can motivate them and research shows that simply having one safe adult who cares in their life greatly reduces their risk. Trusting relationships develop better in an environment that allow them to grow through pro-social activity in a therapeutic setting. The building that the Woodside program currently uses looks and feels a certain way, and informs the type of relationships that develop. With an outdated design with poor lines of sight we can say we are building trust, but still needing to escort a person to the bathroom sends a different message.

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TREANORHL APPENDIX F - ACA STANDARDS - EXCERPTS

ACA Standards for Juvenile Community Residential Standards 3rd Edition

Section A - Building and Safety Codes

Building Codes 3-JCRF-2A-01 The facility conforms to all applicable state and local building codes.

Zoning Ordinances

3-JCRF-2A-02 The facility conforms to all applicable zoning ordinances or, through legal means, is attempting to comply with or change such laws, codes, or zoning ordinances.

Fire Safety Codes 3-JCRF-2A-03 Exits in the facility are in compliance with state or local fire authorities or the authority having jurisdiction.

Section B - Size, Location and Organization

Staff/Juvenile Interaction 3-JCRF-2B-01 Staff offices are located so that the staff is readily accessible to juveniles.

Facility Size 3-JCRF-2B-02 Written policy, procedure, and practice provide that no more than 25 juveniles are housed in each housing unit.

Rated Capacity 3-JCRF-2B-03 The number of juveniles does not exceed the facility's rated bed capacity.

3-JCRF-2B-04 The facility is located to facilitate the use of community based services and continued contact between the juvenile and his/her family.

Section C - Juvenile Housing

Sleeping Areas 3-JCRF-2C-01 Each sleeping room has at a minimum, the following:

- Some degree of privacy for the juvenile
- 35 square feet of unencumbered space per occupant; sleeping area partitions are required if more than four people are in one sleeping area
- Access to toilets and a wash basin with hot and cold running water 24 hours a day
- A bed, mattress, pillow, desk, chair or stool and adequate storage space.
- Natural light
- · Temperatures that are appropriate to summer and winter comfort zones

"Unencumbered space" is usable space that is not encumbered by furnishings or fixtures. At least one dimension of the unencumbered space is no less than 7 feet. All fixtures must be in operational position.

Dayrooms 3-JCRF-2C-02 Living rooms with space for varied activities are available

Furnishings 3-JCRF-2C-03 Written policy, procedure, and practice provide that the facility permits juveniles to decorate their living and sleeping quarters with personal possessions. Regulations concerning the rules are available to juveniles and staff. The rules are reviewed annually and revised, if indicated.

Toilets 3-JCRF-2C-04 The facility has, at a minimum, one operable toilet for every eight juveniles. Urinals may be substituted for up to one half of the toilets in all male facilities.

Showers 3-JCRF-2C-05 The facility has, at a minimum, one operable shower or bathing facility with hot and cold running water for every eight juveniles. Water temperatures are thermostatically controlled.

Wash Basins 3-JCRF-2C-06 The facility has, at a minimum, one operable wash basin with hot and cold running water for every eight juveniles.

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Laundry

3-JCRF-2C-07

Written policy, procedure and practice provide that the facility has one operable washer and one operable dryer for every 16 juveniles, or equivalent laundry capacity is available.

Housing for Disabled Juveniles

3-JCRF-2C-08

Written policy, procedure and practice provide that disabled juveniles are housed in a manner that provides for their safety and security. Appropriate facility programs and activities are accessible to disabled juveniles in the facility according to applicable law.

Section D - Environmental Conditions

Housing Areas

3-JCRF-2D-01

Written policy, procedure, and practice provide that all sleeping quarters in the facility are well-lighted and properly ventilated. Natural lighting should be provided wherever possible. Documentation shall be provided by an independent, qualified source that lighting is at least 20 foot-candles at desk level and air circulation is at least 15 cubic feet of outside or recirculated filtered air per person per minute.

Heating and Cooling 3-JCRF-2D-02 Temperatures in indoor living and work areas are appropriate to the summer and winter comfort zones.

Section E - Program and Services Areas

Program Areas 3-JCRF-2E-01 Adequate space and furnishings to accommodate activities, such as group meetings of juveniles, are provided in the facility.

3-JCRF-2E-02 Adequate private counseling space is provided in the facility.

Visiting

3-JCRF-2E-03 Written policy, procedure, and practice provide for adequate and appropriate areas for visiting and recreational programs.

Dining 3-JCRF-2E-04 Adequate dining space is provided for juveniles.

Food Service 3-JCRF-2E-05 When the facility has a kitchen, the kitchen, dining, and food storage areas are properly ventilated, properly furnished and clean.

Sanitary and Hygiene 3-JCRF-2E-06 Toilet and wash basin facilities are available to food service personnel and juveniles in close proximity of the food preparation area.

Housekeeping 3-JCRF-2E-07 Adequate space is provided for janitorial supplies, which is accessible to the living and activity areas.

Clothing and Supplies 3-JCRF-2E-08 Space is provided in the facility to store and issue clothing, bedding, cleaning supplies, and other Items required for daily operations.

Personal Property 3-JCRF-2E-09 Adequate space is provided for storing the personal property of juveniles.

Section F – Administrative and Staff Areas

Administrative Areas 3-JCRF-2F-01 Adequate space is provided for administrative, juvenile care, professional, and clerical staff. This space includes conference areas, storage room for records, and toilet facilities.

Accessibility to the Handicapped 3-JCRF-2F-02 All parts of the facility that are accessible to the public are accessible to and usable by disabled staff and visitors in accordance with the Americans with Disabilities Act.

Section G - Safety/Security

Juvenile Safetv 3-JCRF-2G-01 The facility is controlled by appropriate means to provide that juveniles remain safely within the facility and to prevent access by the public without proper authorization.

END



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ACA Standards for Juvenile Detention Facilities -3rd Edition

Section A - Building and Safety Codes

change such laws, codes, or zoning ordinances.

Section B - Size, Location and Organization

Building Codes 3-JDF-2A-01 The facility conforms to all applicable state and local building codes.

and places of public assembly are in accordance with recognized codes.

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Fire Safety Codes 3-JDF-2A-03

Facility Size

3-JDF-2B-02

3-JDF-2B-01

Staff/Juvenile Interaction

3-JDF-2A-04

Zoning Ordinances 3-JDF-2A-02

The detention facility operates with living units of no more than 25 juveniles each. The detention facility does not exceed a bed capacity of 150 juveniles.

The facility conforms to all applicable zoning ordinances or, through legal means, is attempting to comply with or

There is documentation by a qualified source that the interior finishing materials in juvenile living areas, exit areas

Exits in the facility are in compliance with state or local fire authorities or the authority having jurisdiction.

3-JDF-2B-03

If the facility is on the grounds of any other type of correctional facility, it is a separated, self-contained unit.

3-JDF-2B-04

Written policy and procedure provide that a new detention facility or special purpose institution be constructed or an existing facility be expanded only after a needs evaluation study has been completed by the parent agency or other appropriate agency.

3-JDF-2B-05

The facility location is selected with participation from the community in which it is to be located.

Physical plant design facilitates personal contact and interaction between staff and juveniles.

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Rated Capacity 3-JDF-2B-06 The number of juveniles does not exceed the facility's rated capacity.

3-JDF-2B-07 The facility is located to facilitate use of community-based services and continued contact between juveniles and family.

3-JDF-2B-08 The facility is designed and constructed so that juveniles can be grouped according to a classification plan.

Section C - Juvenile Housing

Sleeping Areas 3-JDF-2C-01 Living units are primarily designated for single occupancy sleeping rooms; multiple occupancy rooms do not exceed 20 percent of the bed capacity of the unit.

3-JDF-2C-02 Rooms or sleeping areas in which juveniles are confined conform with the following requirements:

- 1 occupant 35 square feet per occupant of unencumbered space
- 2 50 occupants 35 square feet per occupant of unencumbered space

"Unencumbered space" is usable space that is not encumbered by furnishings or fixtures. At least one dimension of the unencumbered space is no less than 7 feet. All fixtures must be in operational position.

3-JDF-2C-03 Each sleeping room has at a minimum, the following:

- assistance 24 hours a day
- A wash basin with hot and cold running water
- A bed, desk, hooks or closet space, chair or stool
- Natural light
- Temperatures that are appropriate to summer and winter comfort zones

Dayrooms 3-JDF-2C-04

Dayrooms with space for varied juvenile activities are situated immediately adjacent to the juvenile sleeping areas but are separated from them by a floor-to-ceiling wall. Dayrooms provide a minimum of 35 square feet of space per juvenile for the maximum number expected to use the dayroom at one time.

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Sanitation facilities, including access to toilet facilities that are available for use without staff



Furnishings

3-JDF-2C-05

Dayrooms provide sufficient seating and writing surfaces for every juvenile using the dayroom at one time. Furnishings are consistent with the security needs of the assigned juveniles.

Toilets

3-JDF-2C-06

Toilets are provided at a minimum ratio of one for every 12 juveniles in male facilities and one for every 8 juveniles in female facilities. Urinals may be substituted for up to one-half of the toilets in male's facilities. All housing units with five or more juveniles have a minimum of two toilets.

Wash Basins

3-JDF-2C-07

Juveniles have access to operate wash basins with hot and cold running water in the housing units at a minimum ratio of one basin for every 12 occupants.

Showers

3-JDF-2C-08

Juveniles have access to operate showers with temperature-controlled hot and cold running water at a minimum ratio of one shower for every eight juveniles. Water for showers is thermostatically controlled to temperatures ranging from 100 to 120 degrees to ensure safety of juveniles and to promote hygienic practices.

Housing for the Handicapped

3-JDF-2C-09

Handicapped juveniles are housed in a manner that provides for their safety and security. Rooms or housing units used by the handicapped are designed for their use and provide for integration with the general population. Appropriate facility programs and activities are accessible to handicapped juveniles confined in the facility.

Special Management Housing

3-JDF-2C-10

When there is a security room separate from the living unit, it is equipped with plumbing and security furniture.

3-JDF-2C-11 If the facility houses male and female juveniles, space is provided for co-educational activities

3-JDF-2C-12

Male and female juveniles do not occupy the same sleeping room.

Section D - Environmental Conditions

Housing Areas 3-JDF-2D-01 Written policy, procedure, and practice require at a minimum the following:

- Lighting of at least 20 foot-candles at desk level and in the personal grooming area
- Natural light available from an opening or window that has a view to the outside, or from a source within 20 feet of the room
- Other lighting requirements for the facility determined by tasks to be performed
- ٠ Access to drinking fountain
- Heating, ventilation and acoustical systems to ensure healthful and comfortable living and working conditions for juveniles and staff

3-JDF-2D-02

Ventilation is available in the event of a power failure.

Heating and Cooling 3-JDF-2D-03 Temperatures in indoor living and work areas are appropriate to the summer and winter comfort zones.

Section E - Program and Services Areas

3-JDF-2E-01

The total combined indoor activity area, which includes the gymnasium, multi-purpose room(s), library, arts and crafts room(s) and all other leisure areas outside the living unit, provides space equivalent to a minimum of 100 square feet per juvenile.

3-JDF-2E-02

Outdoor and covered/enclosed exercise areas for general population juveniles are provided in sufficient number to ensure that each juvenile is offered at least one hour of access daily.

Visiting

3-JDF-2E-03

Sufficient space is provided for a visiting room or areas for contact visiting. There is adequately designed space to permit screening and searching of both juveniles and visitors. Space is provided for the proper storage of visitor's coats, handbags, and other personal items not allowed in the visiting area.

3-JDF-2E-04

There is interview space available in or near the living unit.



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Classrooms 3-JDF-2E-05

3-JDF-2E-06

Food Service

preparation, and methods of meal service.

3-JDF-2E-07

3-JDF-2E-08

3-JDF-2E-09

Housekeeping 3-JDF-2E-10

3-JDF-2E-11

Personal Property 3-JDF-2E-12

3-JDF-2E-13

Mechanical Equipment

area.

Sanitary and Hygiene

Clothing and Supplies

Items required for daily operations.

Dining

School classrooms are designed in conformity with local or state education requirements.

for group dinning except where security or safety considerations justify otherwise.

equipped with a sink, cleaning implements, and a system of ventilation.

There is at least 15 square feet of floor space per person using the dining room or dining area; space is provided

The food preparation area includes a space for food preparation based on population size, type of food

Toilet and wash basin facilities are available to food service personnel and juveniles near the food preparation

Adequate space is provided for janitorial closets that are accessible to the living and activity areas. Each closet is

There are provisions for adequate storage and loading areas and garbage disposal facilities.

Space is provided in the facility to store and issue clothing, bedding, cleaning supplies, and other

Space is provided for storing the personal property of juveniles in the facility safely and securely.

Separate and adequate space is provided for mechanical and electrical equipment.

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Section F - Administrative and Staff Areas

Administrative Areas 3-JDF-2F-01 Adequate space is provided for administrative, security, professional, and clerical staff. This space includes conference rooms, storage room for records, a public lobby and toilets.

Accessibility to the Handicapped 3-JDF-2F-02 All parts of the facility that are accessible to the public are accessible to and usable by handicapped staff and visitors.

Section G – Security

Control Center 3-JDF-2G-01 In secure facilities, space is provided for a 24-hour control center for monitoring and coordinating the facility's security, safety and communications systems. The control center provides access to wash basin and toilet.

Perimeter Security 3-JDF-2G-02 The facility's perimeter is controlled by appropriate means to provide that juveniles remain within the perimeter and to prevent access by the public without proper authorization.

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EXISTING BUILDING

APPENDIX G - EXISTING PHOTOS



EXISTING BUILDING ENTRY



EXISTING PARKING



EXISTING BUILDING WEST WING



EXISTING YARD



EXISTING STAFF SLEEPING ROOM



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