Appendix I: Preliminary Options and Design Criteria for The Ric Edelman College

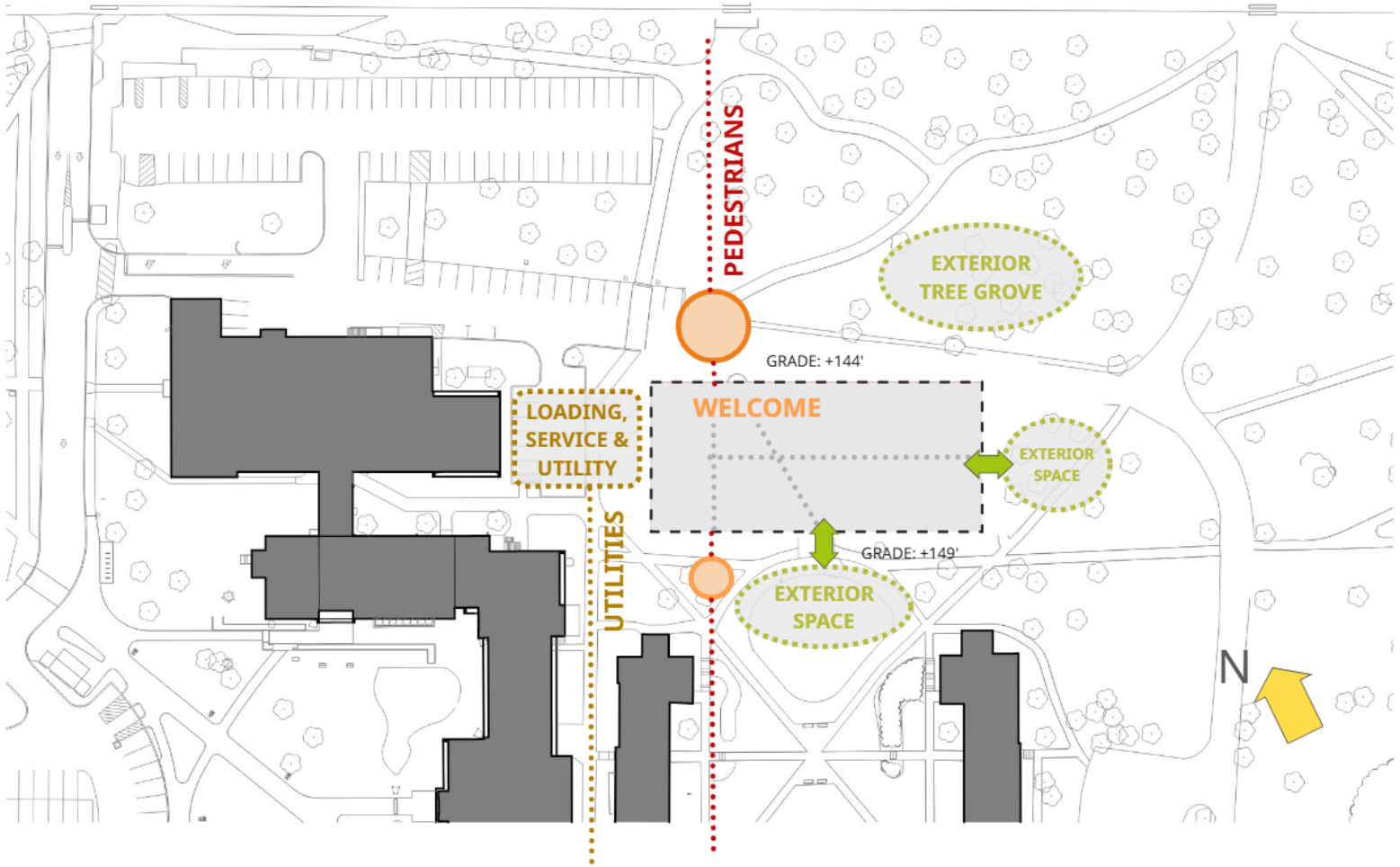
*To be utilized for RFP 26-11 Construction Manager Opinion of Cost

Please note that the information contained in this document reflects early concepts, high-level assumptions, and Rowan University's current understanding as the team progresses through the Schematic Design Phase.

Rowan is presently evaluating multiple options for certain building systems. The preferred options—based on information available at this time—have been indicated with a red cloud where applicable. The information in this document, including the preferred options, should be used in preparing the Construction Manager's Opinion of Cost for the proposal submission. Rowan will issue an addendum with updated information as needed.

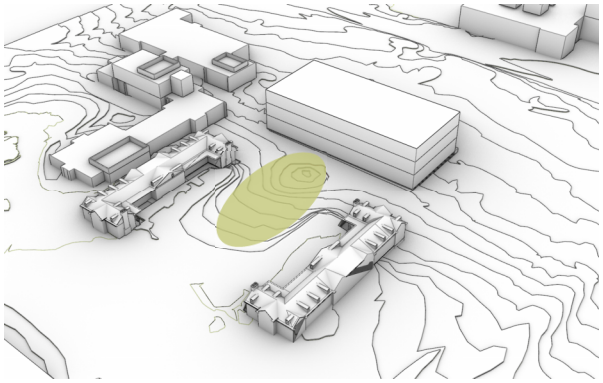
Rowan has developed an initial construction estimate using the William G. Rohrer College of Business as the basis of design.

Site + Building | Site Conditions Diagram

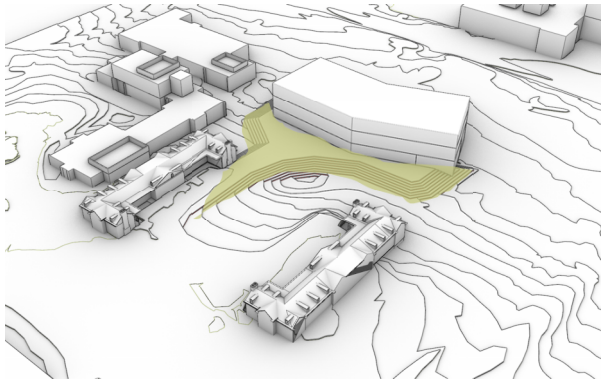


Site + Building | Site Strategy – Comparison

Fill + Raised

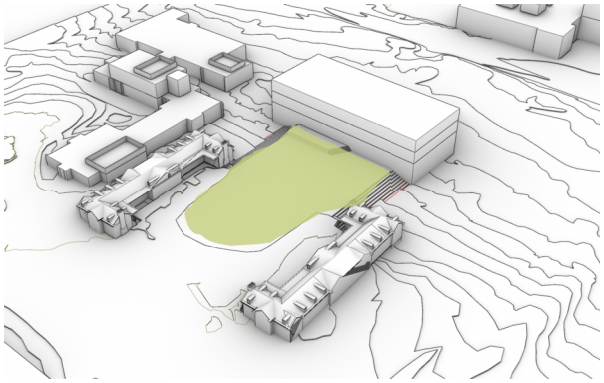


Balance Cut/Fill



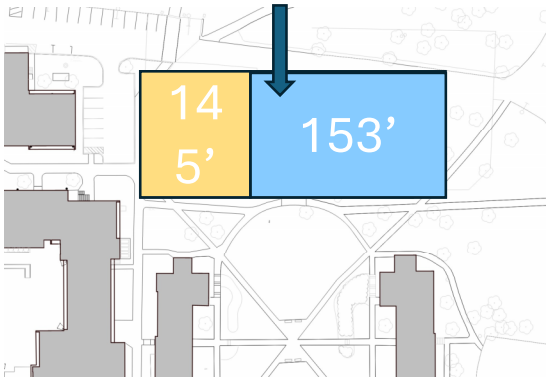
Rowan's preferred option for CM opinion of cost

Full Level Change



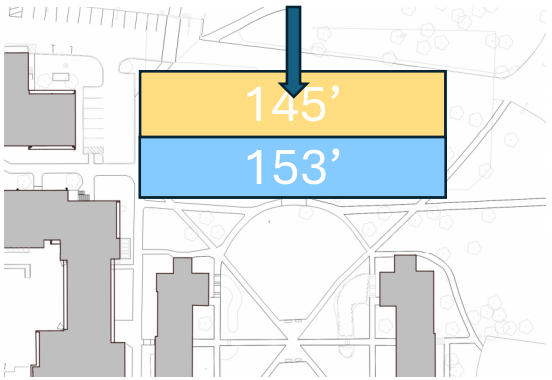
Site + Building | Site Strategy – Comparison

East / West Split



Navigate grade externally

North/South Split



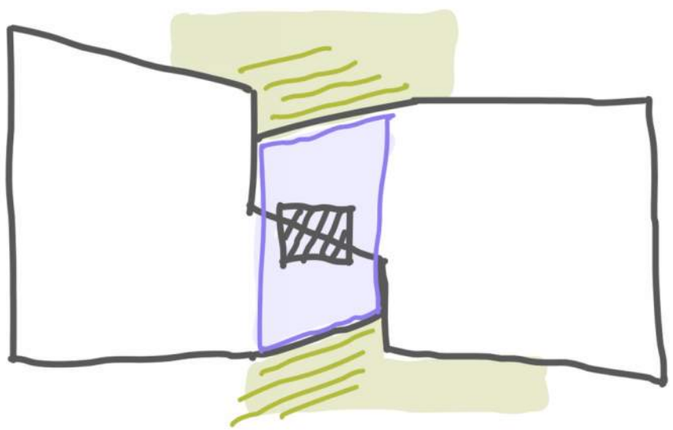
Navigate grade internally

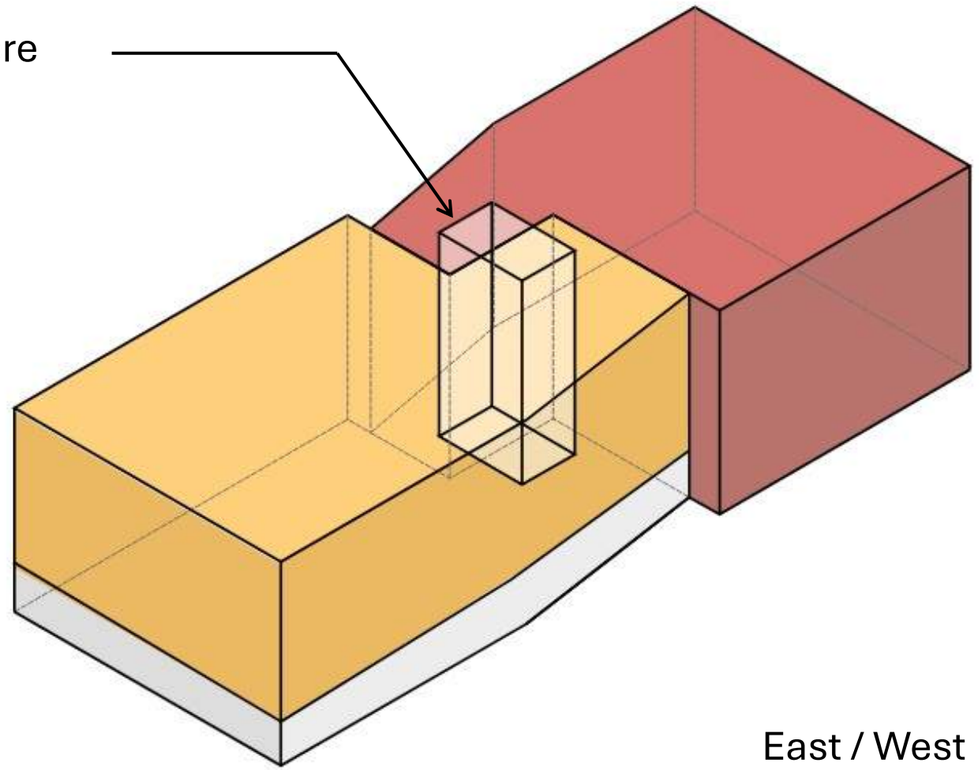
Rowan's preferred option for CM opinion of cost

Exterior | Design Parti and Massing

Massing
Joinery & Connection

- Joining of Two Colleges
- The Art and Practice of Connecting
- Multiple pieces are shaped to coalesce into a Strong Connection



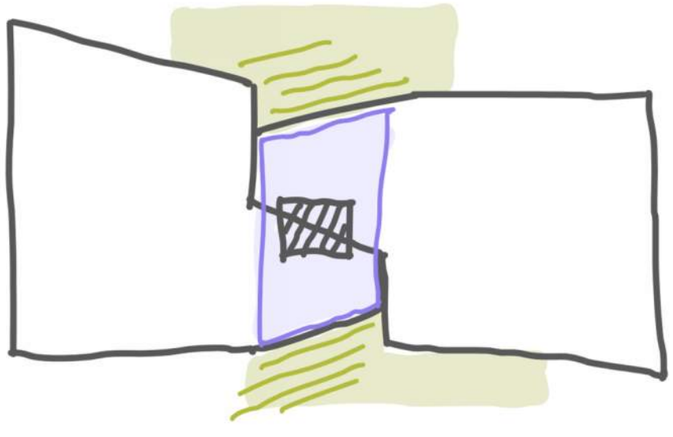


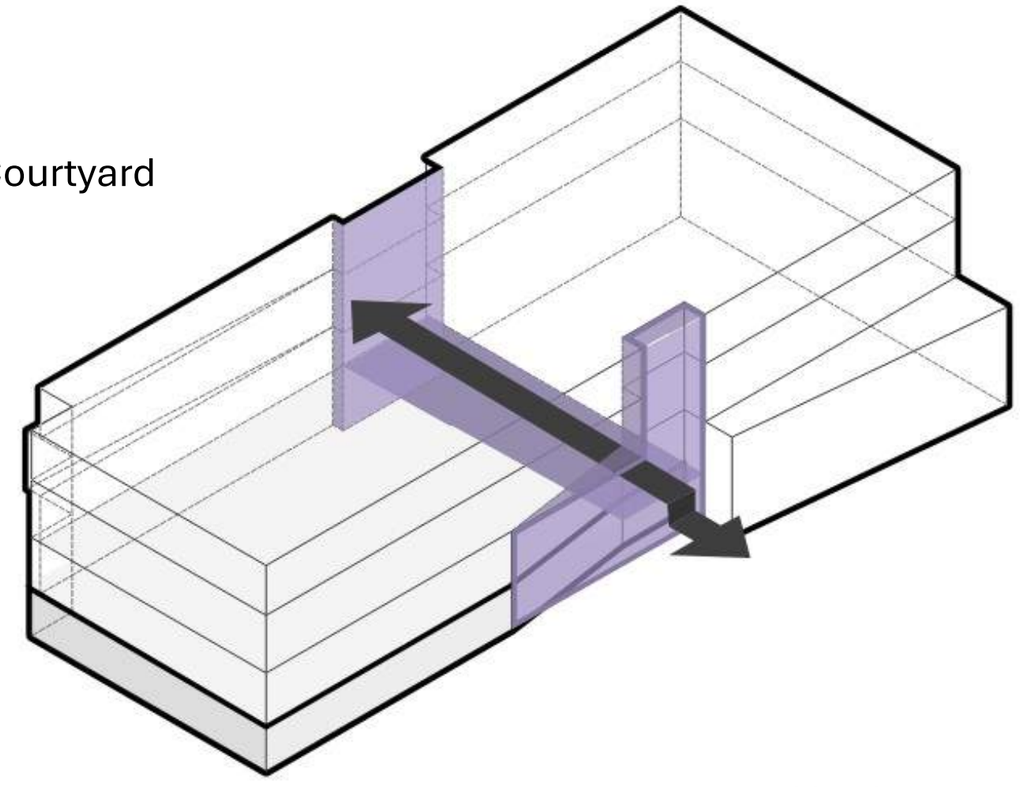
East / West
Building Split

Exterior | Design Parti and Massing

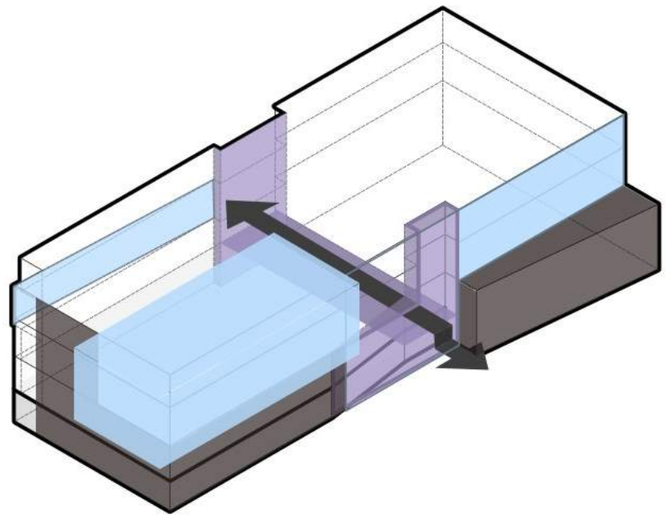
Experience
Gateway & Portal

- Gateway between North Campus and South
- Portal between landscapes
- Welcomes People Inside
- Gathering Experience

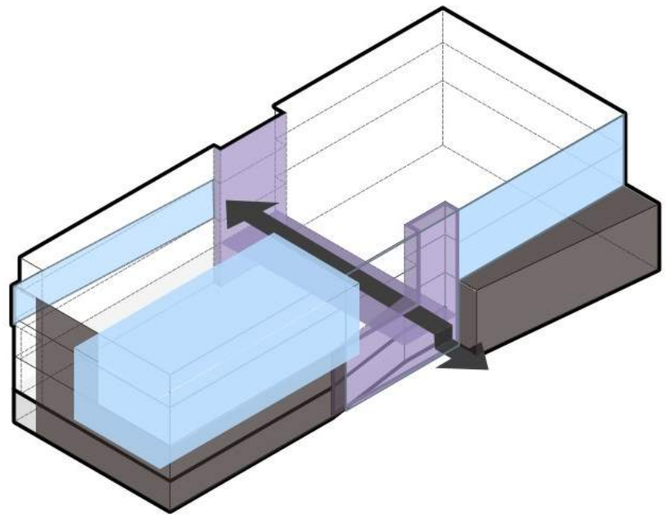




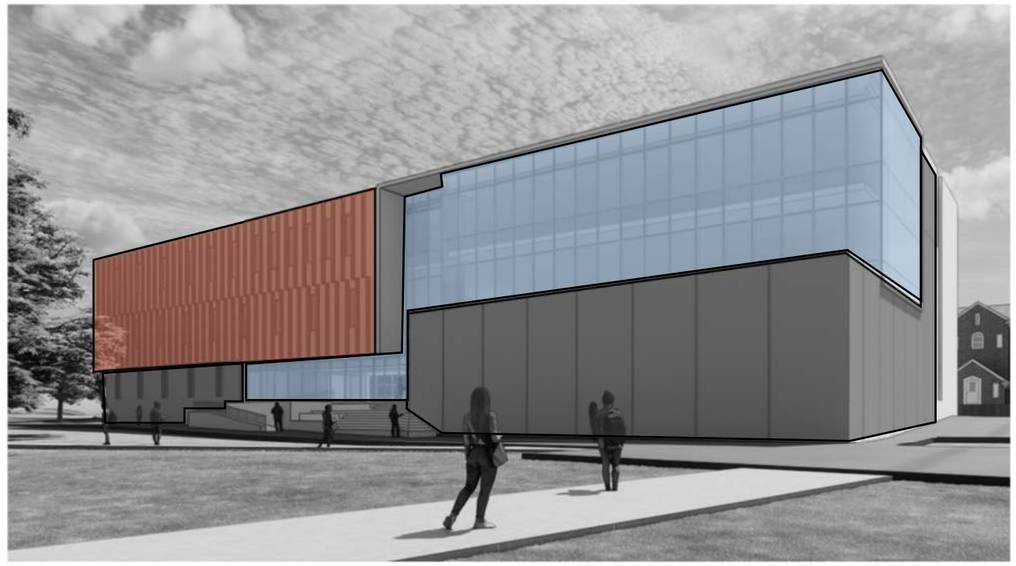
Exterior | Massing - North

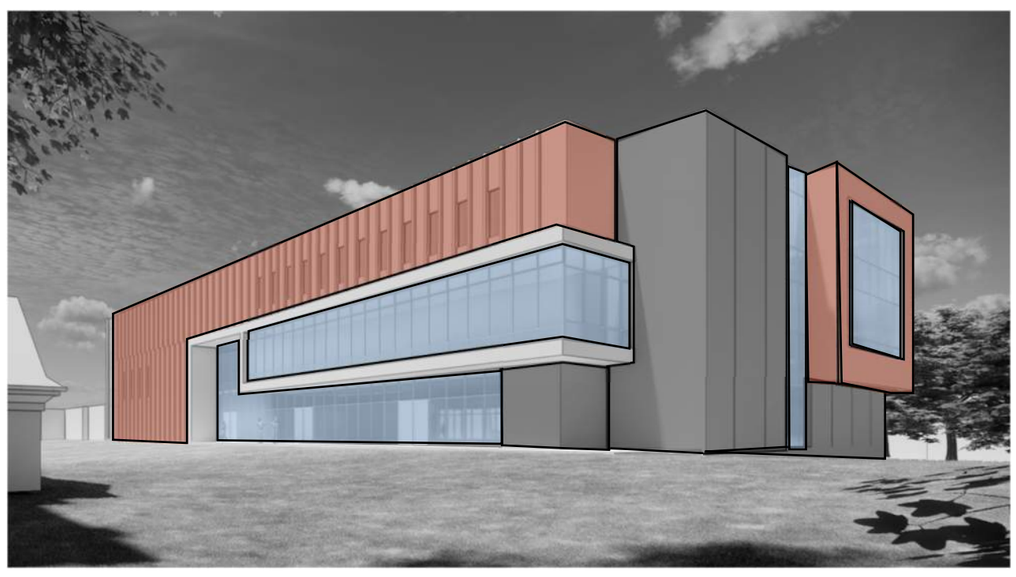


Exterior | Massing - South

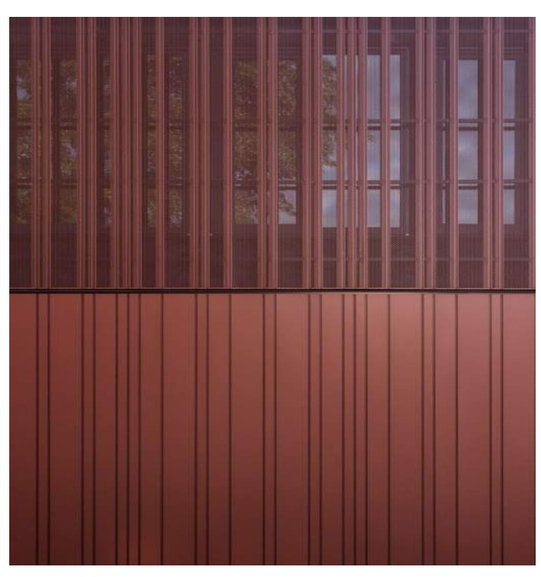


Exterior | Character Palette





Material 1 | Warm, Texture, Openings, Relating to Oak & Laurel

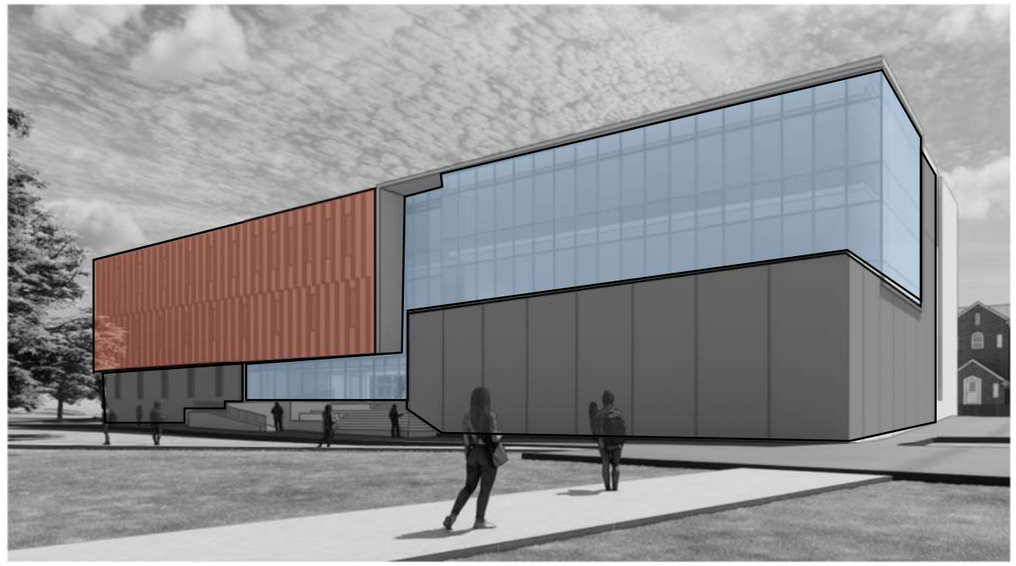


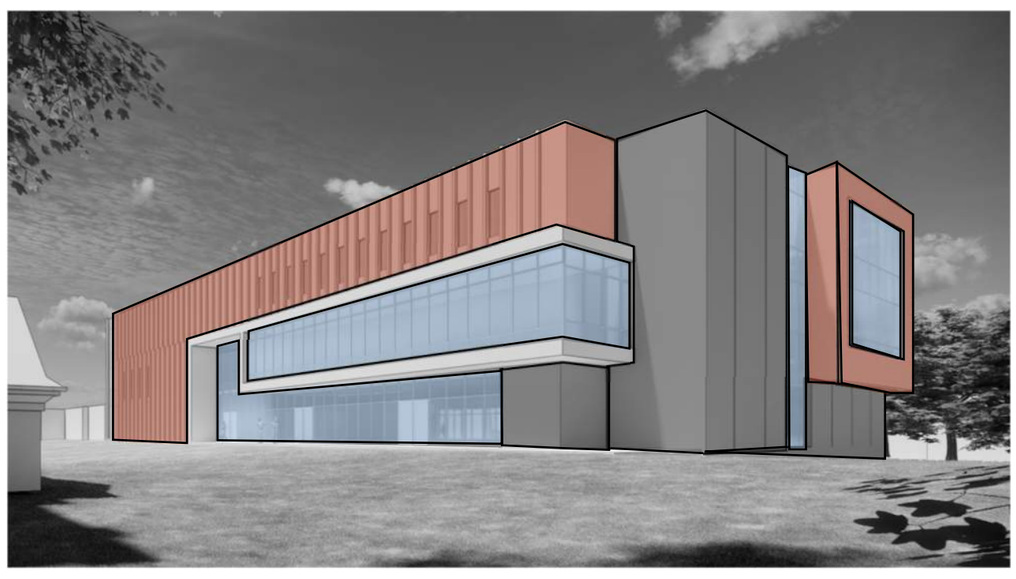
Glass Wall

Material 1

Material 2

Exterior | Character Palette



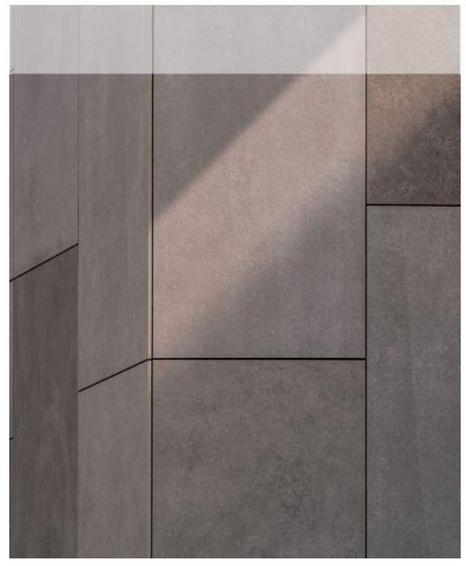


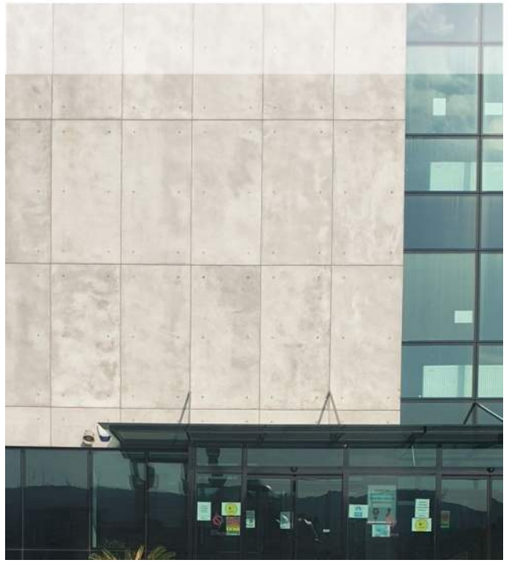
Glass Wall

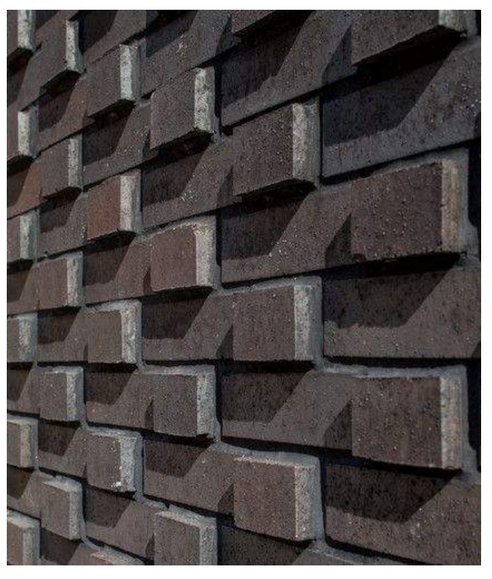
Material 1

Material 2

Material 2 | Heavy, Solid, Subtle Texture & Scale, Clean





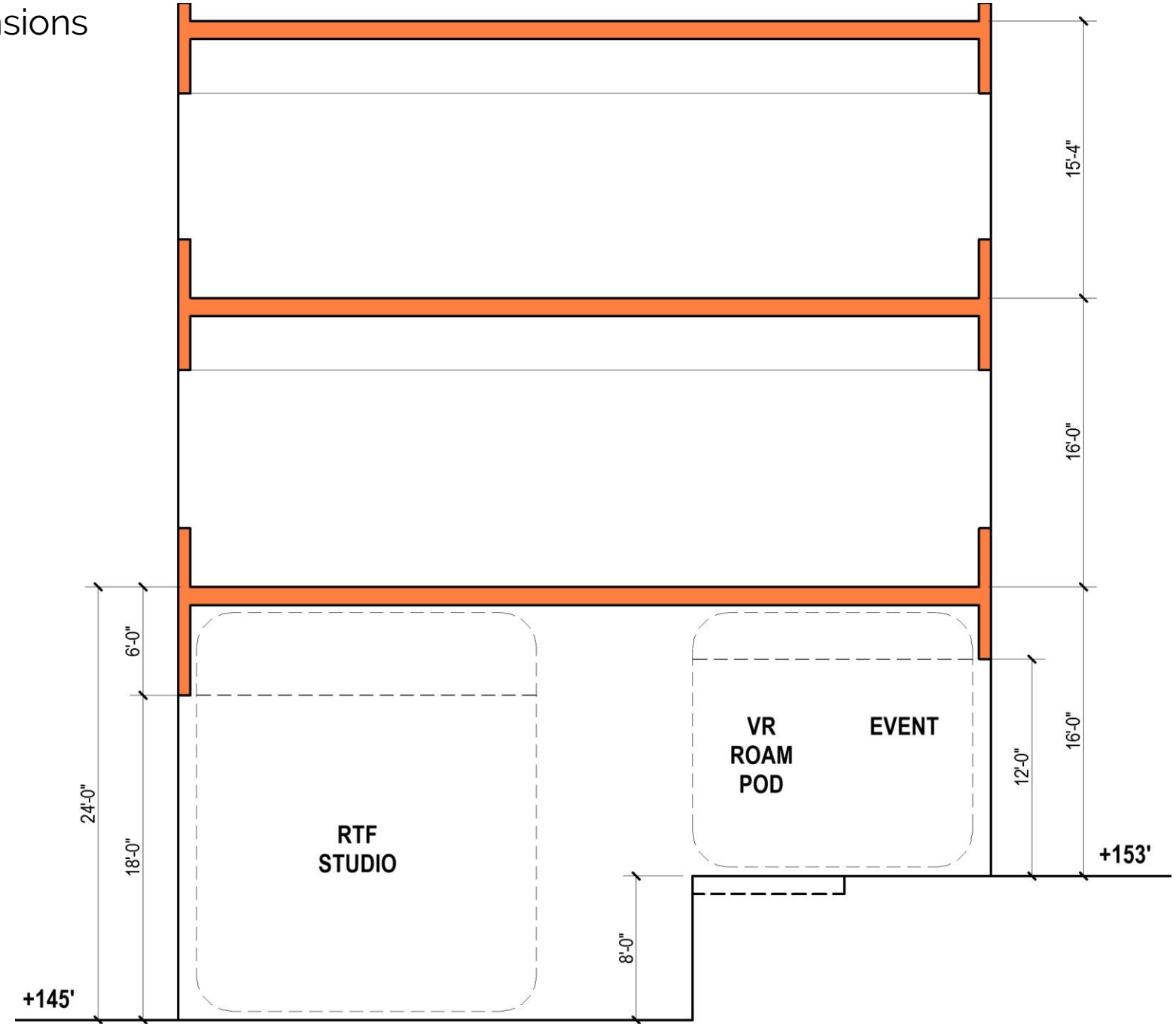


Building Height | Floor-to-Floor Dimensions

Diagrammatic Building Section

Working Assumptions for Floor-to-Floor Heights:

- Ground Level
  - North 24'-0"
  - South 16'-0"
- Second Level 16'-0"
- Third Level 15'-4"

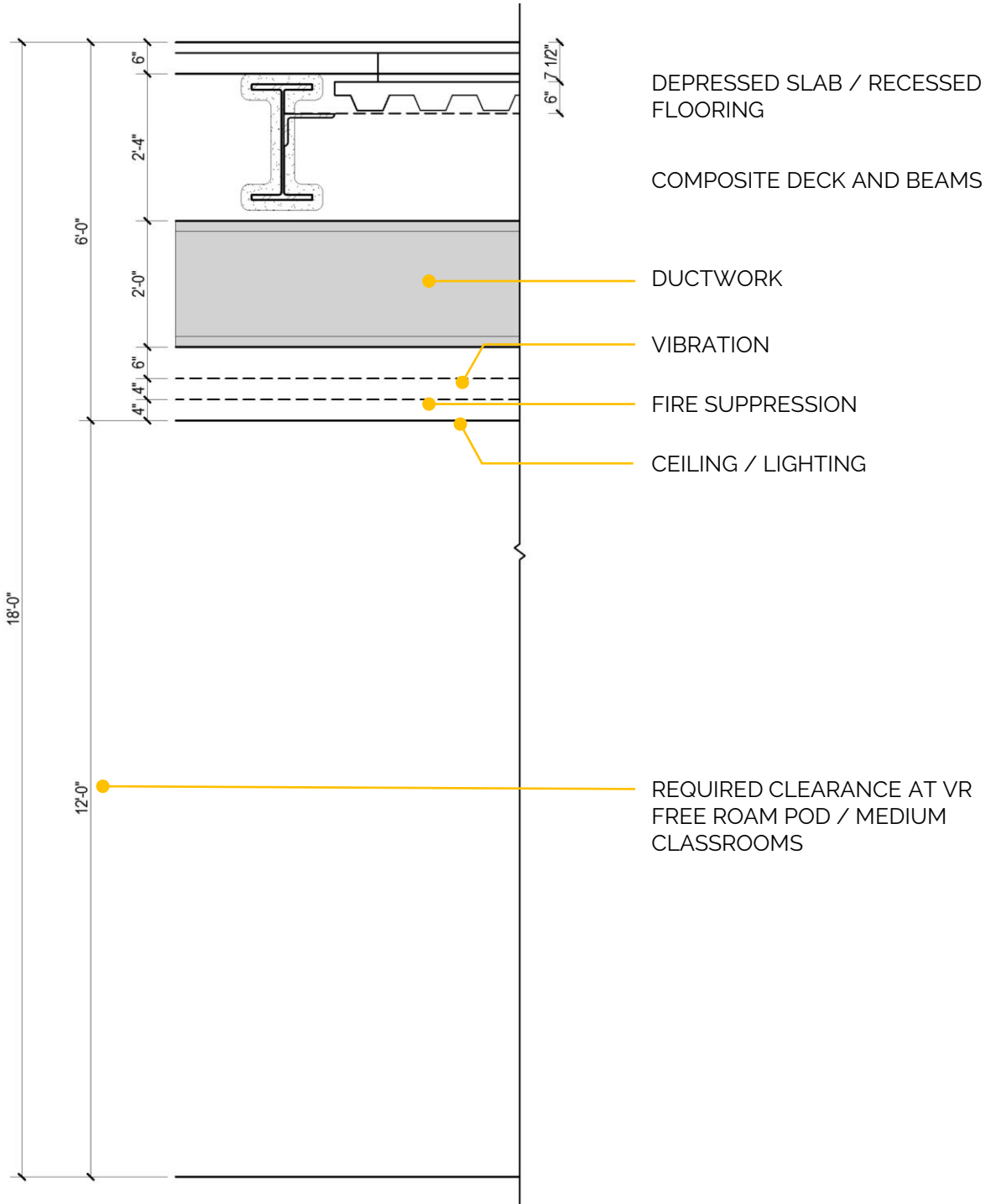


Building Height | Floor-to-Floor Dimensions

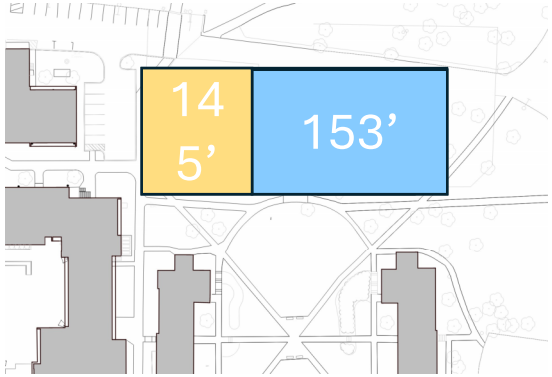
WORKING ASSUMPTIONS

Constraints:

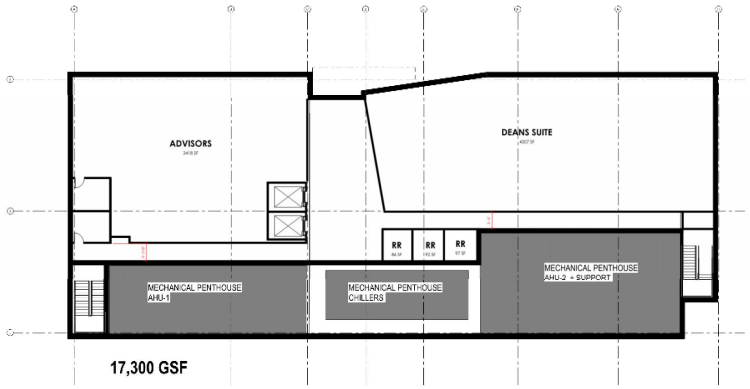
- VR Free Roam Pods require a 12’-0” clear height



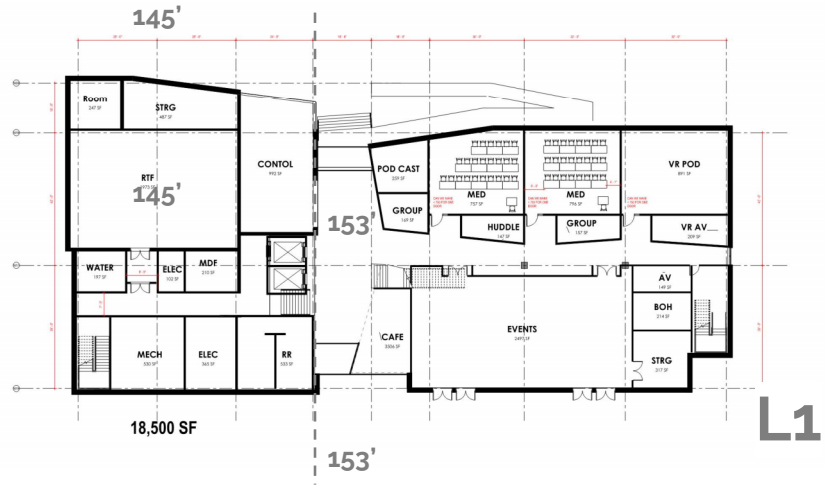
Scheme C.1 | East / West Split



L2

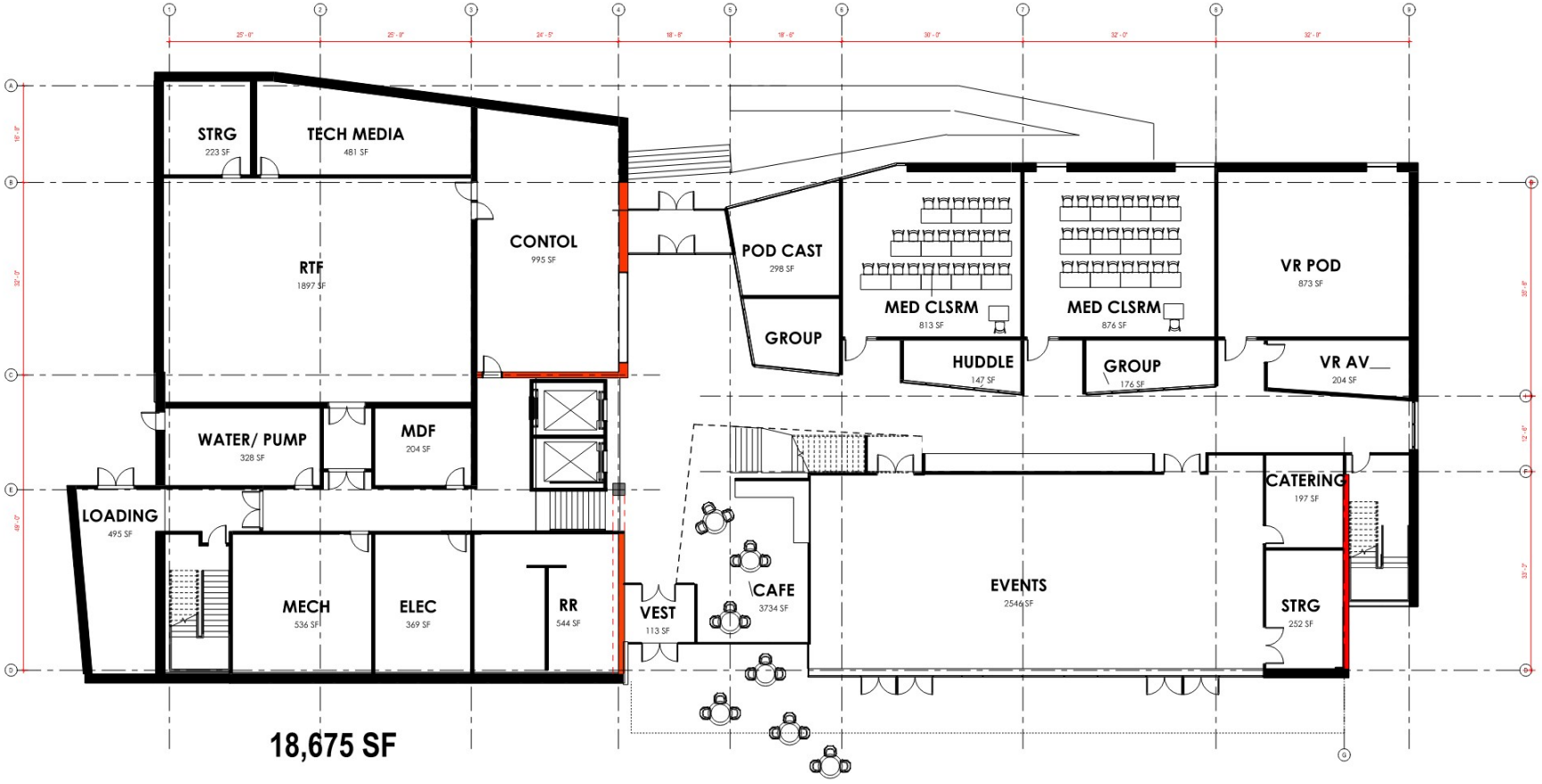


L3

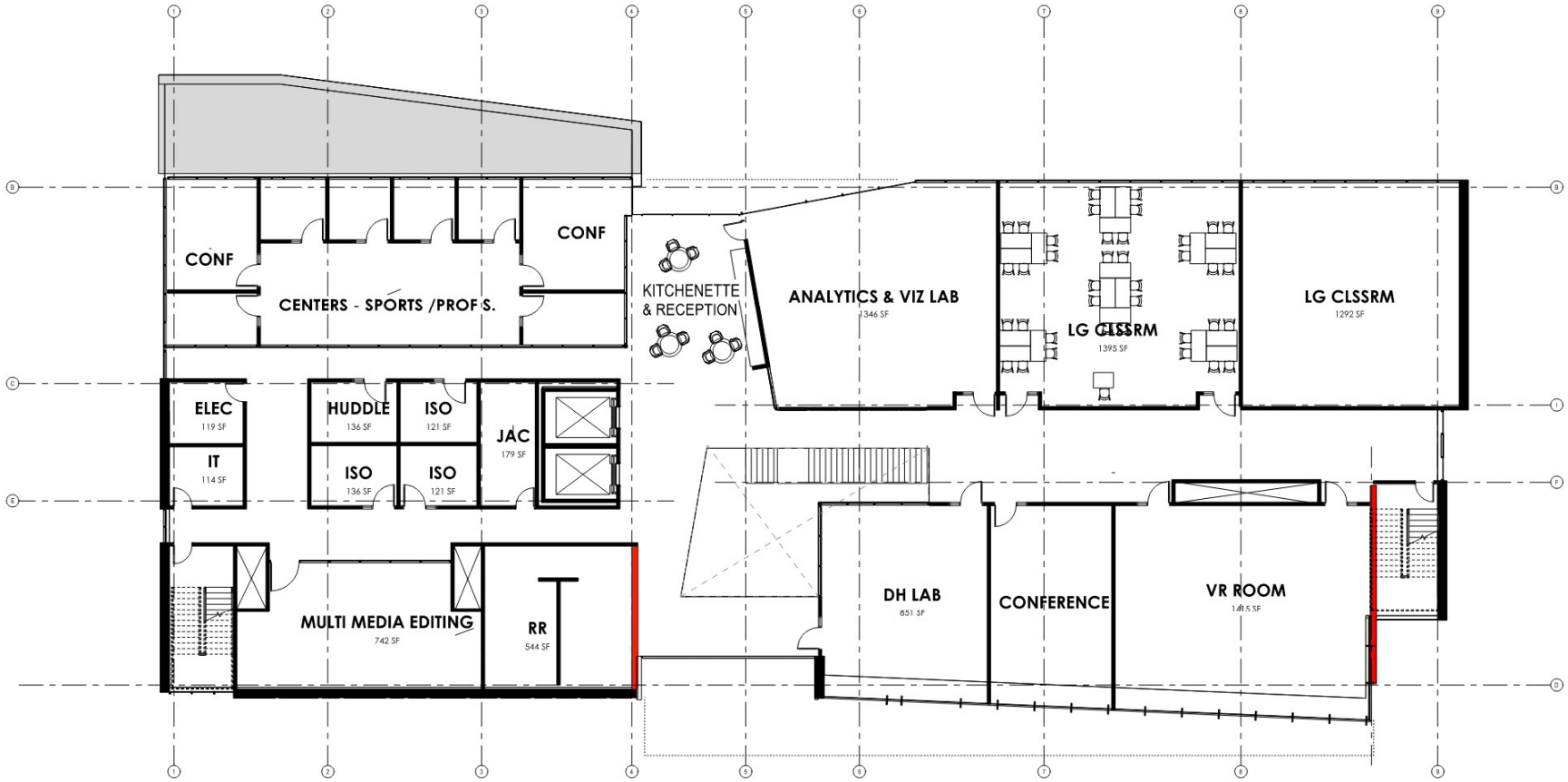


L1

Early concept design - not to be used for square footage



Early concept design - not to be used for square footage



17,300 SF

Early concept design - not to be used for square footage

17,700 SF

SLAM

Scope & System Summaries | DRAFT 11.18.25

Purpose:

The enclosed present a progress summary of the Design Team's ongoing Schematic Design Phase efforts to define scope & direction.

Contents:

- Site Infrastructure
- Foundations | Site Improvement
- Structural System
- HVAC Systems Options
- Fire Pump Options
- Generator Options
- Oak & Laurel De-Coupling Options

Rowan University: New Building for the Ric Edelman College of Communication, Humanities, and Social Sciences

Rowan RFP 26-01 | SLAM Project No. 25199.00

Site Infrastructure

Status Summary

✓ Routing pathways discussed during 10.30.2025 meeting with Rowan University.
✓ Potential existing pathways reviewed as an overlay on the Rowan provided site plan "Rowan Campus Underground Print ADDED_MS" dated 13 October 2025

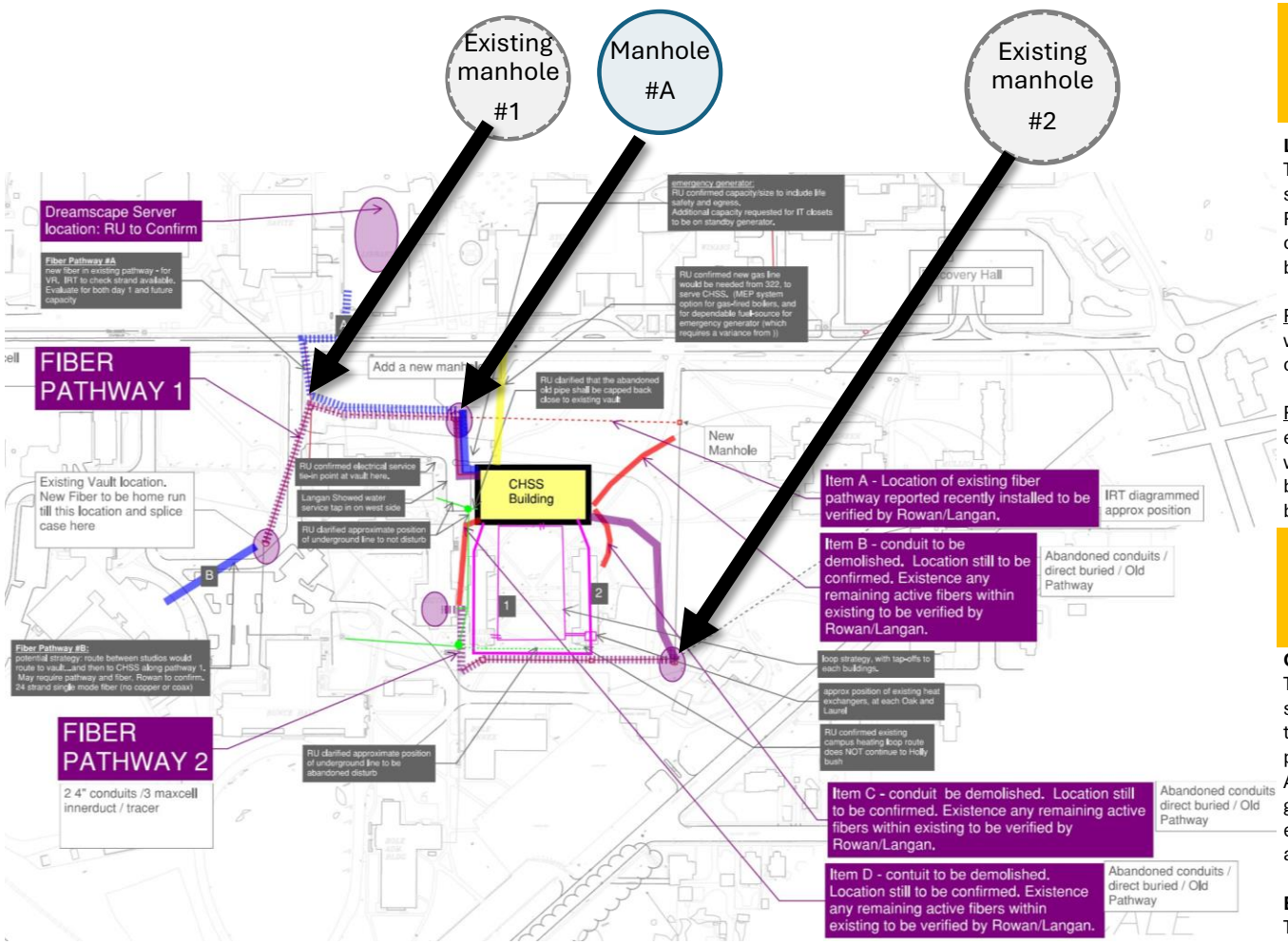
- ❑ RU IRT to provide photos and layouts of existing manholes, vaults, and Memorial Hall MDF room.
- ❑ PURE PM / Langan to provide GPR or other site-verified locations of existing utilities
- ❑ Rowan to confirm de-coupling route strategy
- ❑ Rowan to clarify how scope of Fiber Dreamscape Service connection at Library is tracked
- ❑ Rowan to confirm how scope of Fiber connecting studios at Bozarth Hall is tracked
- ❑ Rowan to confirm electrical service available at vault tie-in point.
- ❑ Langan to define storm/sanitary routing

Fiber Infrastructure

Fiber:
RU IRT requires two (2) pathways for fiber to serve the project. Each are composed of two(2) 4" conduits /3 maxcell innerduct / tracer. Each route shall be 24 Strands Single mode fiber. At this stage of design, new pathways are direct buiried conduit with a detection top layer of flowable concerete fill.

Pathway #1 has an origin within an existing vault north of Bunce Hall. The new fiber shall home-run to this location from the CHSS project. New fiber shall run within existing pathway up to the point of the new/proposed manhole on the CHSS project site. From this position, the pathway to the CHSS includes new conduit and fiber into the CHSS MDF room.

Pathway #2 has an origin within the existing data center within Memorial Hall (at its southern-most portion of th building). The new fiber shall home-run to this location from the CHSS project. New fiber shall run within existing pathway up to the point of an existing manhole between Hollybush and Oak Halls. From this position, the pathway to the CHHS inlcudes new conduit and fiber into the CHSS MDF room.



GRAPHIC LEGEND

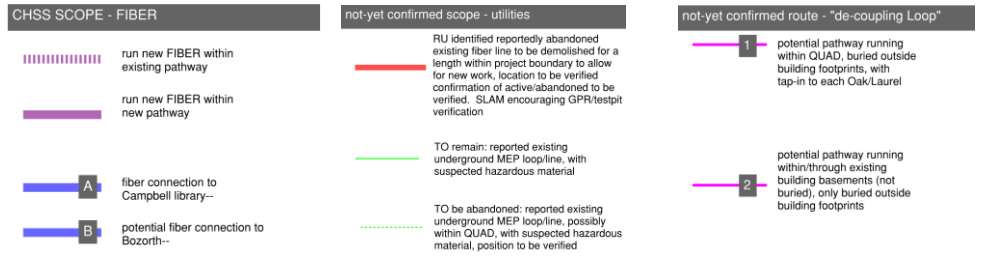


DIAGRAM: "IN-PROGRESS DRAFT" based upon Rowan Meeting Oct. 30,2025 and excerpted from follow-up design team working session.

De-Coupling Loop Infrastructure

Loop Infrastructure:
The CHSS project will include new systems which will support the existing nearby buildings of Oak and Laurel. Routing options of the new "decoupling" loop is under consideration. Options under consideration include, but are not limited to:

Route #1: Create a new loop within the existing quad, with tap-offs into each building. The loop could bypass one or both buildings for maintenance.

Route #2: Create a new loop which feeds into the existing basement space of Oak Hall and Laurel Hall, with tap-offs into each building. Routing through the buildings shall maintain the capability to bypass one or both buildings for maintenance.

Gas, Electric, Water Service Entry

Gas:
The CHSS project will include a new natural gas service line. Service connection shall be made at the Mullica Hill road / 322, and proceed along a pathway which minimized impact to existing Arboretum trees. At this stage of the design, natural gas is the preferred alternative fuel source for an emergency generator—and may also be required for a building MEP system component.

Electric:
The CHSS electrical service tie-in-point is based on a vault located between Memorial Hall and the western side of the CHSS project site. Generator may be evaluated to include more capacity than safety/egress.

Water/Fire:
The CHSS tie-in point for domestic water and fire will be from the western side of the CHSS project site, where an existing water line runs

Storm / Sanitary

Routing not yet discussed – PENDING.

Site Infrastructure | Fiber Pathways

Status Summary

✓ Routing pathways discussed during 10.30.2025 meeting with Rowan University. Underground Print ADDED_MS" dated 13 October 2025

✓ Reviewed during 11.13.2025 Meeting with Rowan University

❑ Highlighted Items represent ongoing efforts to confirm capacity / scope.

Fiber Infrastructure

DIAGRAM: "IN-PROGRESS DRAFT" based upon Rowan Meeting Oct. 30,2025 and excerpted from follow-up design team working session.

Fiber Route #1a

❑ Rowan to clarify how scope of Fiber Dreamscape Service connection at Library is tracked

Fiber Route #1

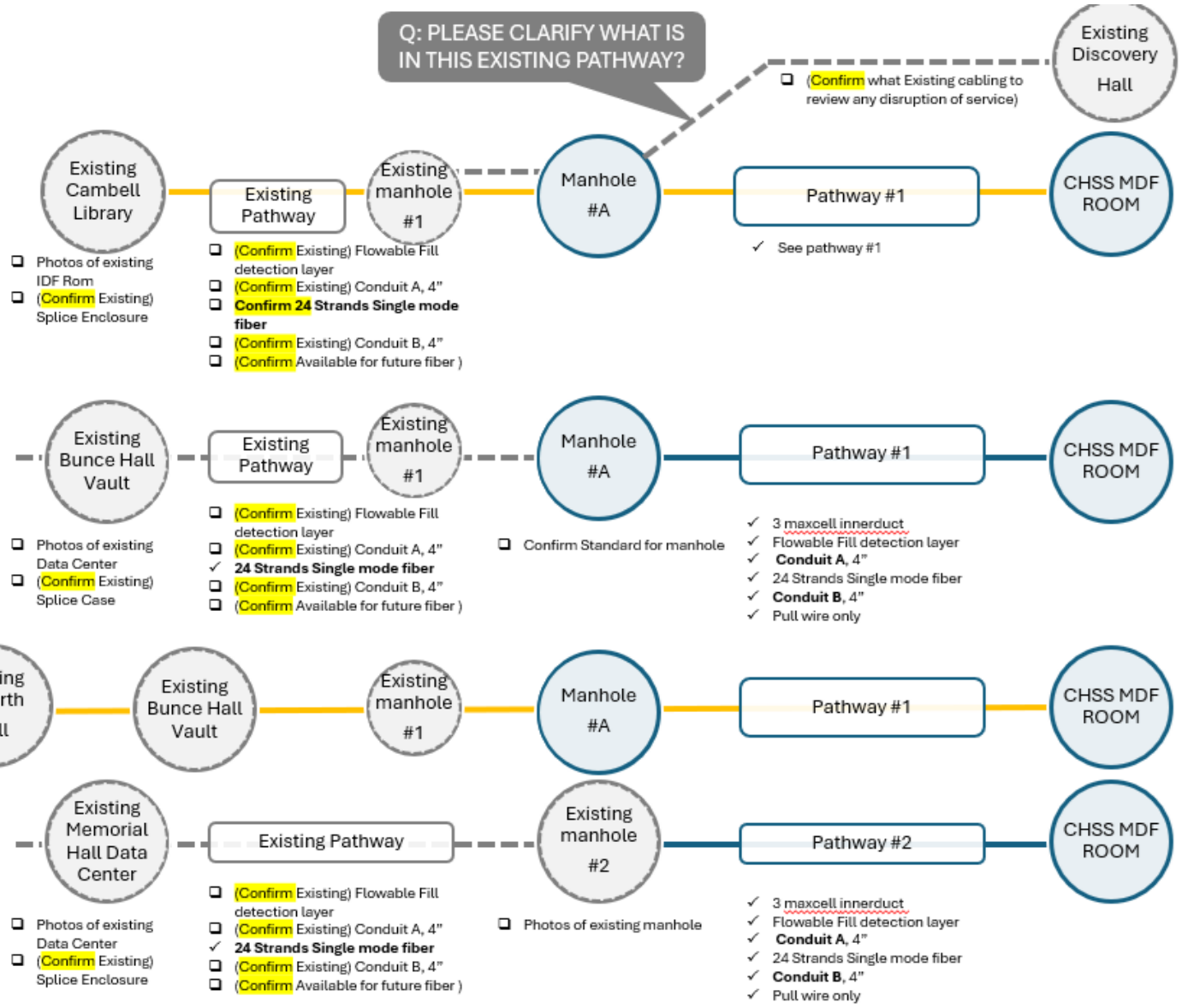
Pathway #1 has an origin within an existing vault north of Bunce Hall. The new fiber shall home-run to this location from the CHSS project. New fiber shall run within existing pathway up to the point of the new/proposed manhole on the CHSS project site. From this position, the pathway to the CHSS includes new conduit and fiber into the CHSS MDF room.

Fiber Route #1b

❑ Rowan to confirm how scope of Fiber connecting studios at Bozarth Hall is tracked

Fiber Route #2

Pathway #2 has an origin within the existing data center within Memorial Hall (at its southern-most portion of th building). The new fiber shall home-run to this location from the CHSS project. New fiber shall run within existing pathway up to the point of an existing manhole between Hollybush and Oak Halls. From this position, the pathway to the CHHS inlcudes new conduit and fiber into the CHSS MDF room.



A3 Narrative - Langan
Ric Edelman College of Communication, Humanities & Social Sciences
Rowan University
130251801

EXISTING SITE DESCRIPTION

The proposed 1-acre± project site is located on the Rowan University Campus in the Borough of Glassboro, Gloucester County, New Jersey. The site is located on an existing parking lot north of Oak Hall and Laurel Hall. The project site was occupied by Linden Hall prior to demolition in 2018.

The site ranges in elevation from approximate el. 150 at the south to approximate el. 144 at the north. The site is generally highest at south adjacent to the "quad" area between Oak Hall and Laurel Hall. Site runoff generally drains to the north and discharges into an existing underground stormwater conveyance system which ultimately conveys flow to the north towards Route 322.

PRELIMINARY UTILITY ASSESSMENT

Our summary bellow is based on the utility mapping received by the University and the Langan survey performed in October 2025.

Sanitary Sewer Service

Based on survey performed by Langan engineering in October 2025, there is an 8" clay sewer line and associated manholes structures to the west of the proposed building. The sanitary is then conveyed to the north.

We anticipate that the proposed building will be able to connect to the existing sanitary sewer system located less than 50' to the west of the project site.

The proposed development will require a Treatment Works Approval (TWA) from the NJDEP as the proposed sanitary flow from the project will likely exceed 8,000 gallons per day (GPD).

Water Service

Based on the base mapping we received from Rowan, there is a 4" water line located to the west of the existing parking lot. There is an 8" water line located north of the site in Route 322. There is also a 4" domestic and 6" fire water lines located south of the Oak Hall and Laurel Hall buildings.

It is our understanding that the previously demolished building was fed from the 4" line for fire and water services. We are currently reviewing with the University to understand if we are able to connect domestic and fire water services for the new building to this existing 4" line. If a

connection to larger infrastructure is required, a connection could be made to the existing mains either north or south of the project site.

The proposed development will likely require a Water Main Extension (WME) from the NJDEP to construct and operate the proposed on-site water main as the proposed water flow will likely exceed 12,000 GPD.

PRELIMINARY DRAINAGE ASSESSMENT

Existing

The site ranges in elevation from approximate el. 150 at the south to approximate el. 144 at the north. The site is generally highest at south adjacent to the "quad" area between Oak Hall and Laurel Hall. Site runoff generally drains to the north and discharges into an existing underground stormwater conveyance system which ultimately conveys flow to the north towards Route 322.

Proposed

As the proposed project will disturb more than one (1) acre of land the project is considered a "major development" and will be subject to the NJDEP stormwater regulations, including water quantity and groundwater recharge. As the project does not currently propose an increase of 0.25 acres or more of regulated motor vehicle surface, we anticipate stormwater runoff quality standards will not apply.

Water Quantity

In accordance with N.J.A.C. 7:8-5.6, stormwater runoff quantity standards are triggered due to a disturbance of more than one (1) acre of land. The NJDEP stormwater regulations require the use of Best Management Practices (BMP) in accordance with the New Jersey BMP Manual to manage stormwater. NJDEP regulations require a major development to meet one of the following three criteria for stormwater runoff quantity:

- Post-construction runoff hydrographs for the 2-, 10- and 100-year storms do not exceed, at any point in time, the pre-construction runoff hydrographs for the same storms.

- Post-construction peak stormwater runoff rates for the 2-, 10- and 100-year storm do not exceed the pre-construction peak stormwater runoff rates. In addition, the increased runoff volume and the change in timing cannot increase flood damage at or downstream of the site. The impact analysis has to account for existing land uses and projected land uses, assuming full development under existing zoning and land-use ordinances.

- Post-construction peak stormwater runoff rates for the 2-, 10- and 100-year storms are 50, 75, and 80%, respectively, of the pre-construction stormwater runoff rates. In this case, the stormwater peak runoff rate reductions apply only to post-construction stormwater runoff generated because of the proposed development.

Because the project will decrease impervious area and generally maintaining drainage patterns, we anticipate meeting the water quantity requirement by demonstrating that post-construction runoff hydrographs for the 2-, 10- and 100-year storms will not exceed, at any point in time, the pre-construction runoff hydrographs for the same storms. This can be done without new stormwater management measures.

We understand that the University has existing flooding issues with runoff flowing from the south toward the project site. A series of swales and below grade conveyance systems will likely be proposed to collect this stormwater runoff and convey it around the proposed building. In addition, the proposed finished floors of the building will be set to provide positive drainage away from the building.

Water Quality

In accordance with N.J.A.C. 7:8-5.5, this project is not anticipated to require water quality treatment as the project currently does not propose an increase in impervious coverage exceeding 0.25 acres.

Groundwater Recharge

In accordance with the N.J.A.C. 7:8-5.4, this project will require groundwater recharge requirements be met due to a disturbance area exceeding one (1) acre. NJDEP regulations require a development to meet one of the following two criteria for groundwater recharge:

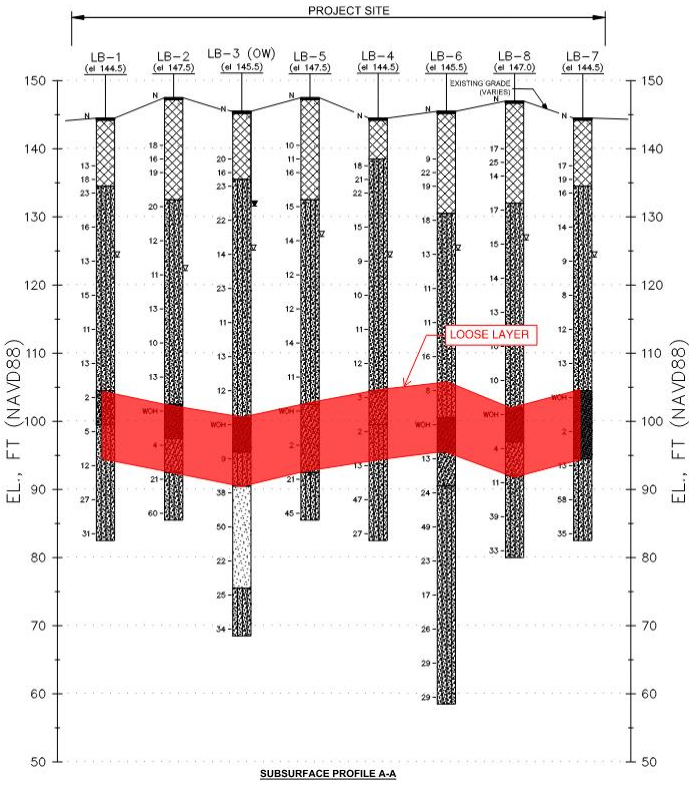
- Demonstrate through hydrologic and hydraulic analysis that the increase of stormwater runoff volume from pre-construction to post-construction for the two-year storm is infiltrated.
  or
- Demonstrate post-construction runoff hydrographs for the 2-, 10- and 100-year storms do not exceed, at any point in time, the pre-construction runoff hydrographs for the same storms.

Based on the hydrologic calculations comparing existing and proposed conditions, we anticipate meeting the groundwater recharge requirement by demonstrating post-construction runoff hydrographs for the 2-, 10- and 100-year storms will not exceed, at any point in time the pre-construction runoff hydrographs for the same storms due to the proposed decrease in overall impervious coverage.

PRELIMINARY GEOTECHNICAL CONSIDERATIONS

Langan has completed a geotechnical investigation on site and has provided a Geotechnical Engineering Report summarizing our recommendations for developing the site. We have included a summary of the existing conditions and recommendations below:

At the project site, the geotechnical test borings identified a layer of loose sand that is up to about 10-feet thick and extends as deep as about 55-feet below existing grades – please see the annotated subsurface profile from the Langan geotechnical report below.



Based on the loose consistency of this material, we anticipate that foundations bearing above this layer would experience considerable settlements. Therefore, we recommend that foundation loads be transferred below the loose stratum using a ground improvement system or a deep foundation system.

- Deep Foundations (Auger Cast Piles) and Structural Floor Slab – This option includes approx. 75-foot-deep auger cast piles and a structural slab supported on piles. This is a conventional deep foundation option. Auger cast piles were selected in lieu of other deep pile types to reduce vibration and noise during installation. The auger cast piles will still produce vibrations and noise, but less so than driven pile options. This option may be slightly more expensive than ground improvement but is likely less subject to pricing shifts based on select subcontractor availability. This option is anticipated to experience less foundation and slab settlement compared to the ground improvement option, therefore the finished product is expected to be slightly better from a total/differential

LANGAN

Rowan's preferred option for CM opinion of cost

settlement perspective. A program of pile load testing will need to be performed to confirm the pile design details. Under slab utilities will need to be hung from the structural slab.

- Shallow Foundations, Slab-on- Grade, and Ground Improvement - This option includes ground improvement (the installation of grouted rigid inclusions and construction of a load transfer platform) and then constructing shallow foundations on the improved ground and constructing the lowest-level slab as a slab on grade on the improved ground. The ground improvement system is typically handled as a delegated design option with a few select contractors. As noted on our call last week, a ground improvement system for a 20,000 sf building footprint will be considered a small job for most rigid inclusion subcontractors. Large swings in mobilization pricing and schedule challenges could arise. A program of rigid inclusion load testing will need to be performed to confirm the rigid inclusion design details.

We understand that the project team would like to explore the use of a timber pile deep foundation system at the site. We anticipate that the use of timber piles would be challenging at the site, and would need to consider the following:

- Pre-drilling: Pre-drilling will likely be needed to allow the timber piles to be installed to below the loose sand layer without fetching up in the medium dense sand that overlies the loose sand. As discussed above, the piles must be extended beyond the loose sand layer to transfer foundation loads below this layer.
- Pile Lengths: The timber piles will need to be installed to about 60 to 70 feet below existing grades. The pile lengths could be partially reduced by installing the piles from a lower elevation (i.e., cutting before driving the piles) however timber piles that are above 50 feet long would still likely be required, and this length of timber pile is typically difficult to procure and transport to the site.
- Pile Capacity: The timber piles will likely be able to achieve allowable compression capacities of about 50 to 60 kips, which is half that of the 12-inch-dia. drilled-in auger cast-in-place option. This would mean that a larger number of piles would be required. This drawback may potentially be offset by the fact that timber piles can be less expensive on a per-pile basis than auger cast-in-place piles.
- Vibrations: Since they are a driven pile system, the installation of timber piles would create vibrations that could disturb/damage the adjacent properties and structures. Vibration control measures and vibration monitoring would likely need to be implemented at the site if driven piles are utilized.

If the team wishes to explore a more feasible driven pile option, we anticipate that closed-ended pipe piles having a diameter of 9.625-inches, a wall thickness of 0.5-inches, and min. 4 ksi concrete fill could be suitable to achieve an allowable compression capacity of 120 kips per pile. The same considerations as described above as pertain to pre-drilling and vibrations would need to be considered for this driven closed-ended pipe pile alternate. Anticipated pipe pile lengths would be about 60 to 75 feet below existing grades. Pipe piles could be spliced as needed to install the pipe piles to the required target depth.

PROJECT REGULATORY APPROVALS AND PERMITTING

Various governmental agency permits and approvals may be required. A preliminary list of approvals and permits that may be required have been listed below (in no particular order):

- Planning Board Submission (Courtesy Review)
- County Planning Board (Letter of no Interest)
- NJDEP TWA
- NJDEP Water Main
- Gloucester Soil Conservation District

Foundations | Soil Improvement

Status Summary

- ✓ Foundation information is based on the geotechnical report prepared by Langan dated 15 August 2025
- ✓ Rowan's initial preference is for Deep Foundations.
- ❑ Pure PM to consult industry sources for ROM costing.

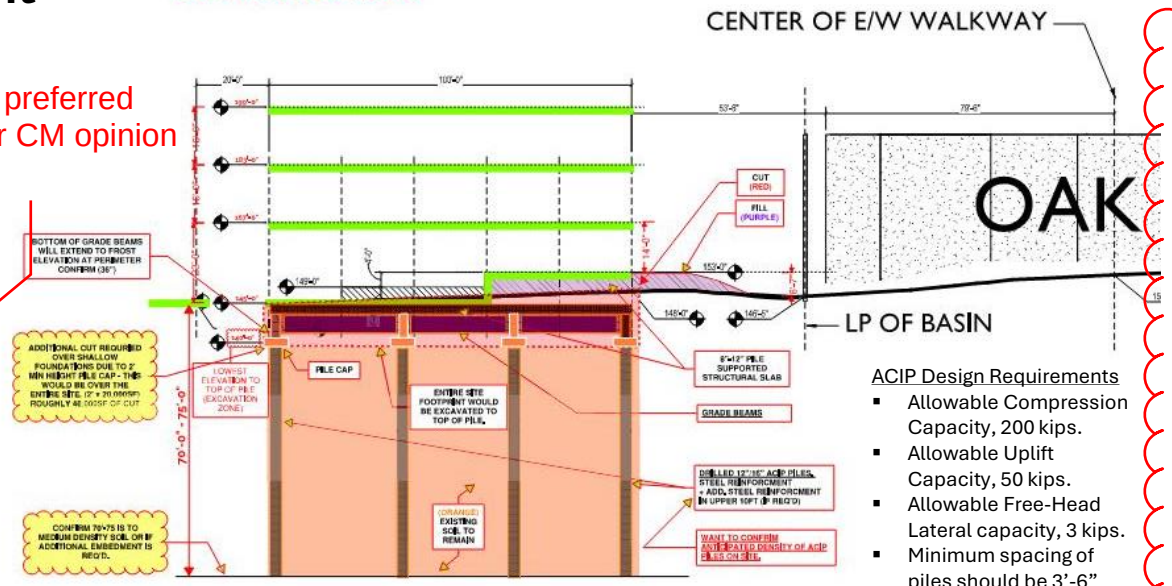
Description: Foundation Options

DEEP FOUNDATIONS: One option is to provide deep foundation using drilled-in Auger Cast-in-Place (ACIP) piles. These will likely be 16" diameter filled with 5000 psi grout and reinforced with full length 1-#18 rebar, grade 60. The pile lengths should extend to at least 75-feet below existing grades and achieve at least a 20-foot-long Type B pressure grouted bond length in the medium dense to dense soils underlying the loose/soft soils.

For piles with uplift and lateral loads, additional rebar in the top 10 feet is required. This will be 4-#10 longitudinal rebar with #4 ties a 12" on center their full length. All rebar shall be Grade 60.

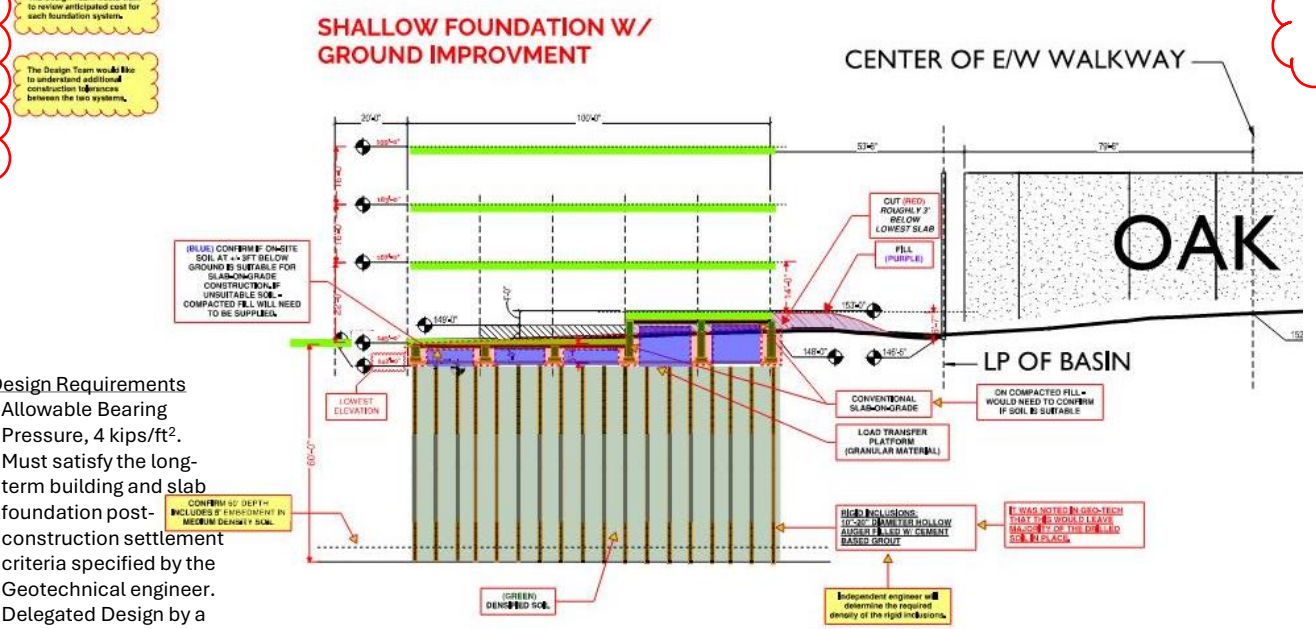
SHALLOW FOUNDATIONS: An alternative option is to provide conventional shallow foundations. This would be accomplished with soil improvement using rigid inclusions (RI) and constructing a load transfer platform (LTP). These will likely be 10" – 20" diameter drilled using a hollow auger then filled with a cement-based grout column using pressure through the hollow auger. The RI do not contain any rebar.
The RI should be installed at least 5 feet into the medium dense to dense soils underlying the loose/soft soils which would yield RI lengths of at least 60 feet below existing grades. They are installed throughout the building footprint on a grid pattern that is spaced depending on the underlying soils, building loads, and settlement criteria. A group of rigid inclusions are also installed at each individual column location to support the column footing. The number of rigid inclusions at each location will be dependent upon the column loading. The spacing of rigid inclusions beneath the perimeter wall typically ranges from 4 to 8 feet.

Rowan's preferred option for CM opinion of cost



ACIP Design Requirements

- Allowable Compression Capacity, 200 kips.
- Allowable Uplift Capacity, 50 kips.
- Allowable Free-Head Lateral capacity, 3 kips.
- Minimum spacing of piles should be 3'-6"



RI Design Requirements

- Allowable Bearing Pressure, 4 kips/ft^2.
- Must satisfy the long-term building and slab foundation post-construction settlement criteria specified by the Geotechnical engineer.
- Delegated Design by a Specialty Contractor Professional Engineer.

DIAGRAM: "IN-PROGRESS DRAFT excerpted from design team working session.

Rowan's preferred option for CM opinion of cost

Civil Engineer's Summary

Deep Foundations (Auger Cast Piles) and Structural Floor Slab – This option includes approx. 75-foot-deep auger cast piles and a structural slab supported on piles. This is a conventional deep foundation option. Auger cast piles were selected in lieu of other deep pile types to reduce vibration and noise during installation. The auger cast piles will still produce vibrations and noise, but less so than driven pile options. This option may be slightly more expensive than ground improvement but is likely less subject to pricing shifts based on select subcontractor availability. This option is anticipated to experience less foundation and slab settlement compared to the ground improvement option, therefore the finished product is expected to be slightly better from a total/differential settlement perspective. A program of pile load testing will need to be performed to confirm the pile design details. Under slab utilities will need to be hung from the structural slab.

Shallow Foundations, Slab-on- Grade, and Ground Improvement - This option includes ground improvement (the installation of grouted rigid inclusions and construction of a load transfer platform) and then constructing shallow foundations on the improved ground and constructing the lowest-level slab as a slab on grade on the improved ground. The ground improvement system is typically handled as a delegated design option with a few select contractors. As noted on our call last week, a ground improvement system for a 20,000 sf building footprint will be considered a small job for most rigid inclusion subcontractors. Large swings in mobilization pricing and schedule challenges could arise. A program of rigid inclusion load testing will need to be performed to confirm the rigid inclusion design details.

William Boska
Senior Project Manager
Langan

Structural System

Rowan's preferred option for CM opinion of cost

Status Summary | Pending

- ❑ Depressed slabs / Raised Floors required for several instructional spaces.
- ❑ Vibration concerns to be considered.
- ❑ Structural Frame to support future installation rooftop PV panels.

Description: Slabs-On-Ground

DEEP FOUNDATIONS
:
Typical structural slabs-on-ground will be between 10” and 12” thick cast in place concrete slabs cast on a 15 mil poly vapor barrier which is placed over a minimum of 6” of leveled compacted granular fill or crushed stone. The granular fill or crushed stone will be placed directly over prepared existing suitable soil material. The concrete for all slabs-on-ground shall be normal weight concrete having a 28-day minimum compressive strength of 4,000 psi. The slabs will be reinforced with a double mat of deformed rebar.
Supporting the structural slabs will be grade beams spanning between pile caps or grade beams. These will be in range of 24” -48” deep.

SHALLOW FOUNDATIONS:

Typical slabs-on-ground will be a minimum of 5” thick cast in place concrete slabs cast on a 15 mil poly vapor barrier which is placed over a minimum of 6” of leveled compacted granular fill or crushed stone. The granular fill or crushed stone will be placed directly over prepared existing suitable soil material. Any unsuitable material will need to be removed and disposed of as per the geotechnical report. The concrete for all slabs-on-grade shall be normal weight concrete having a 28-day minimum compressive strength of 4,000 psi. The slabs will be reinforced with 6x6 – W4.0 x W4.0 welded wire reinforcing, or with structural grade polypropylene fibers mixed into the concrete.

RI Design Requirements
- Allowable Bearing Pressure, 4 kips/ft^2.
- Must satisfy the long-term building and slab foundation post-construction settlement criteria specified by the Geotechnical engineer.
- Delegated Design by a Specialty Contractor Professional Engineer.

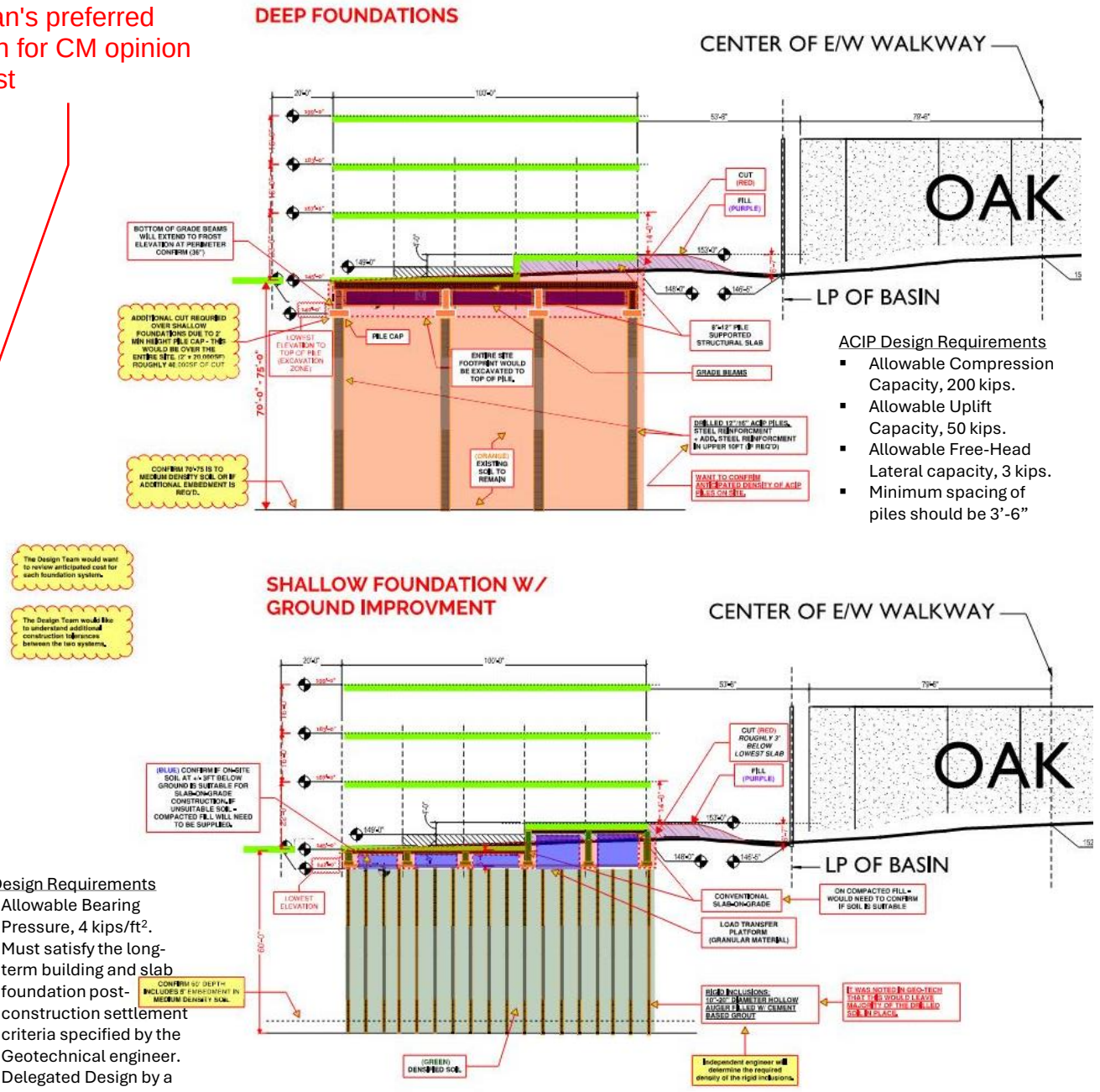


DIAGRAM: “IN-PROGRESS DRAFT excerpted from design team working session.

ACIP Design Requirements
- Allowable Compression Capacity, 200 kips.
- Allowable Uplift Capacity, 50 kips.
- Allowable Free-Head Lateral capacity, 3 kips.
- Minimum spacing of piles should be 3’-6”

Description: Primary Structural System

PRIMARY STRUCTURAL FRAMING SYSTEM

The typical elevated floor construction will be a 6 1/4" thick light-weight concrete slab on 3” composite 20-gage metal deck supported by composite and non-composite steel beams and steel girders.

The column grid will be in the range of 30’ to 40’ on center. Steel reinforcing will be provided at the perimeter of the slab as well as 36” long “candy cane” bars at 12” on center. 6’-0” long bars at 12” on center will be placed over each girder. The slab area will be reinforced with 6x6 – W2.9 x W2.9 welded wire reinforcement.

The roof framing construction will be 3” 20-gage Type N steel roof deck supported by steel beams and steel girders.

The main columns will be wide flange shapes about 12” deep. To aid in efficiency with the moment frames, 21” to 24” deep sections can be used.

Description: Lateral Force Resisting System

LATERAL FORCE RESISTING SYSTEM

The lateral loads, both seismic and wind, will most likely be resisted by ordinary steel concentrically braced frames in the short direction, north-south and by ordinary steel moment frames in the long direction, east-west. As mentioned above, the use of deeper column wide flange sections is more efficient. This will result in a stiffer building with fewer moment frames.

HVAC System Options

Rowan to issue an addendum for CM opinion of cost including the preferred option

Status Summary | 2 HVAC Options

- ❑ Review, discussion and System Selection are PENDING.

* Diagrams and information prepared by Syska & Hennessy.

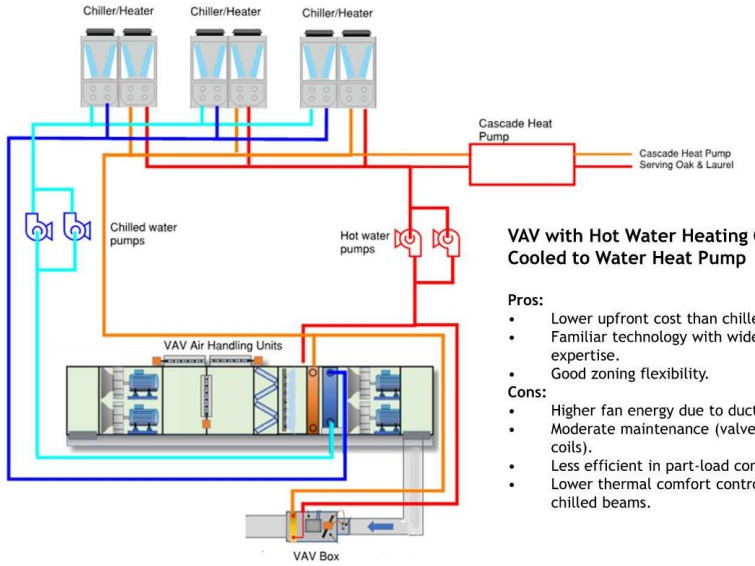
Notes:

LEED Mapping;

- CERTIFIED = 40-49 PTS;
- SILVER = 50-59 PTS;
- GOLD = 60-79 PTS;
- PLATINUM = 80+ PTS

Possible LEED Points by Category ar

LEED Category	Max Points	System 1: VAV + Heat Pumps	System 2: DOAS + Fan Coil Units
Energy & Atmosphere (EA)			
- Minimum Energy Performance (Req.)	Prerequisite	✓	✓
- Optimize Energy Performance	18	8–12	12–16
- Enhanced Commissioning	6	3–4	4–6
Indoor Environmental Quality (IEQ)			
- Enhanced IAQ Strategies	2	1	2
- Thermal Comfort	1	1	1
Innovation (IN)	6	0–1	1–2



VAV with Hot Water Heating Coils + Air-Cooled to Water Heat Pump

Pros:
- Lower upfront cost than chilled beam systems.
- Familiar technology with widespread contractor expertise.
- Good zoning flexibility.

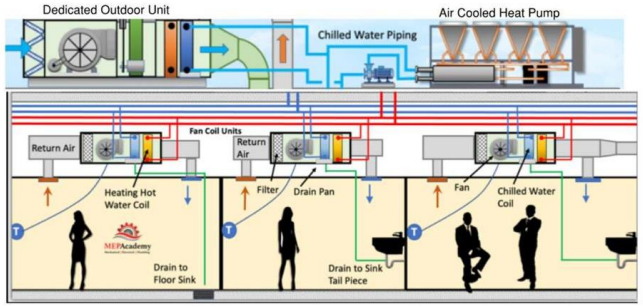
Cons:
- Higher fan energy due to ducted air distribution.
- Moderate maintenance (valves, actuators, reheat coils).
- Less efficient in part-load conditions.
- Lower thermal comfort control compared to chilled beams.

VAV with Air Cooled Heat Pump Diagram

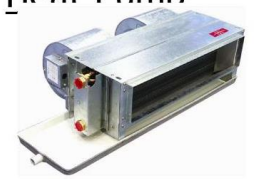
HVAC System Option 1

System Comparison Overview

System Type	Description	First Cost	Energy Efficiency	Estimated ROI Period
System 1	VAV with air-to-water heat pumps	Lower initial cost	Moderate efficiency	7–10 years
System 2	DOAS + fan coil units + air-to-water heat pumps	Moderate cost	High efficiency	8–12 years



Four Pipe Fan Coil with DOAS and Heat Pump



Fan Coil Unit

Four Pipe Fan Coil Units + DOAS + Air-Cooled to Water Heat Pump

Pros:
- Moderate initial cost.
- Individual zone control.
- Familiar technology for maintenance teams.

Cons:
- Higher maintenance (filters, fans, condensate pans).
- Fan noise may affect learning environments.
- Less efficient than chilled beams due to fan energy.

HVAC System Option 2

MEP Requirements-Roof: Option 1

Fire Pump Options

Status Summary | 3 Options

- ❑ Review, discussion and System Selection are PENDING.

* Diagrams and information prepared by Syska & Hennessy.

Fire Pump Option 1

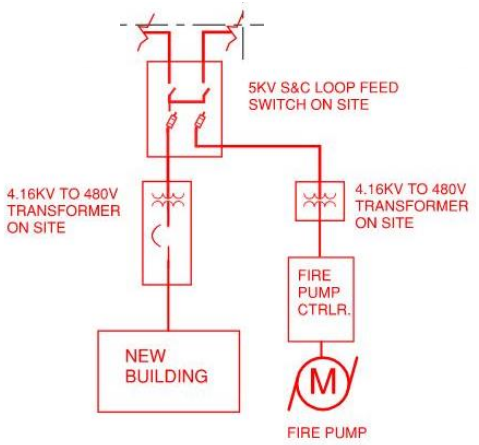
PRO'S

1-No Fuel Oil
2-No Engine Maintenance
3-No Engine exhaust

CON'S

1-Additional Transformer required
2-Additional Feeder to building
3-No means of emergency backup power to the Fire Pump during power outages.

ELECTRIC FIRE PUMP



ELECTRICAL DIAGRAM

Rowan's preferred option for CM opinion of cost

Fire Pump Option 2

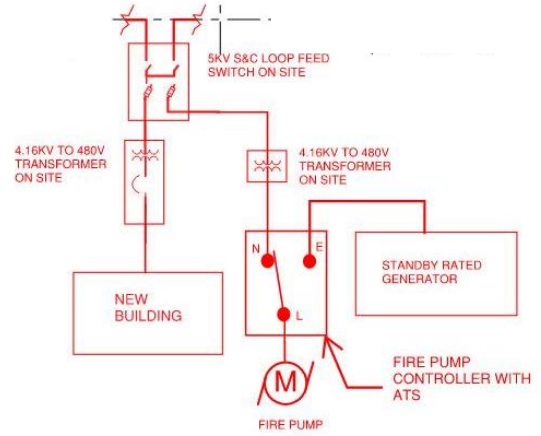
PRO'S

1-No Engine Maintenance
2-No Engine exhaust
3-Emergency Generator assures power to the Fire Pump during power outages.

CON'S

1-Large Generator
2-Diesel Fuel Tank, polishing Delivery

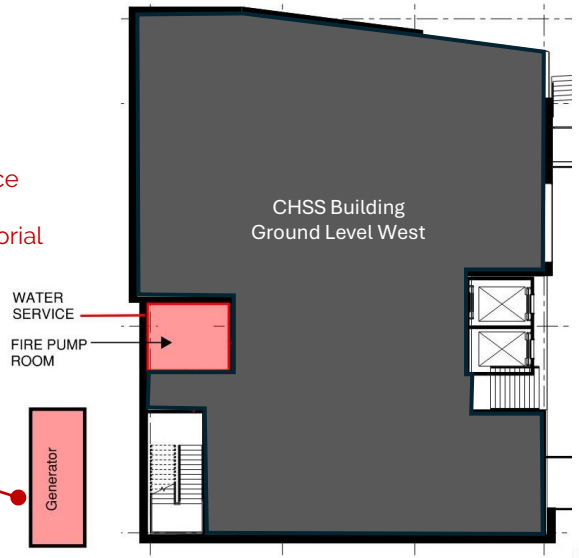
ELECTRIC FIRE PUMP



ELECTRICAL DIAGRAM

Fire Pump Option 3

Option 2:
Generator to be located in Service Court between CHSS and Memorial Hall



PRO'S

1-No secondary Power Source
2-No second transformer
3-No second feeder

CON'S

1-Fuel cleaning
2-Engine Maintenance
3-Room ventilation required
4-Engine exhaust

DIESEL FIRE PUMP

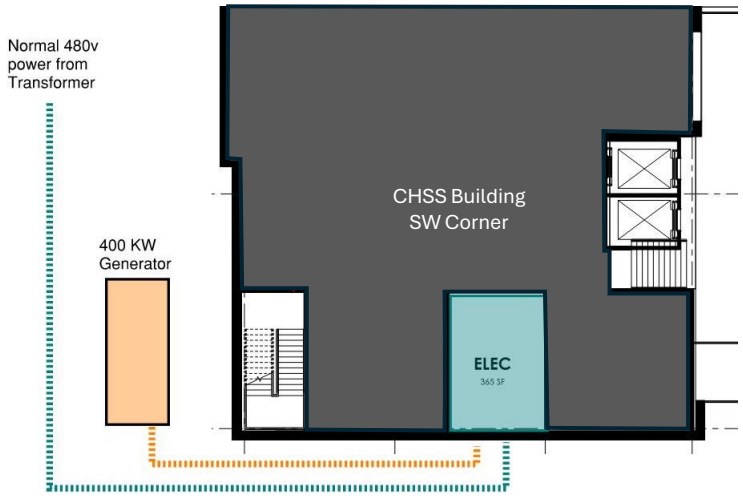
Generator Options

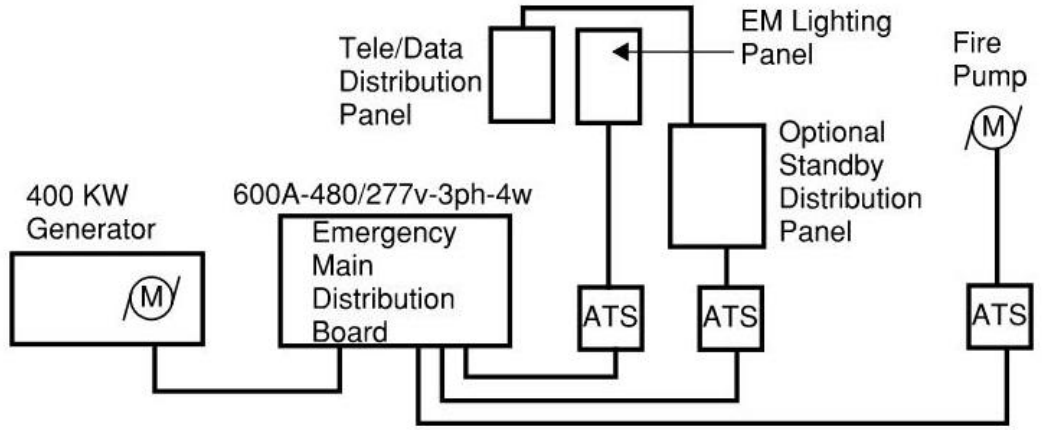
Rowan to issue an addendum for CM opinion of cost including the preferred option

Status Summary | 2 Options

- ❑ Review, discussion and System Selection are PENDING.

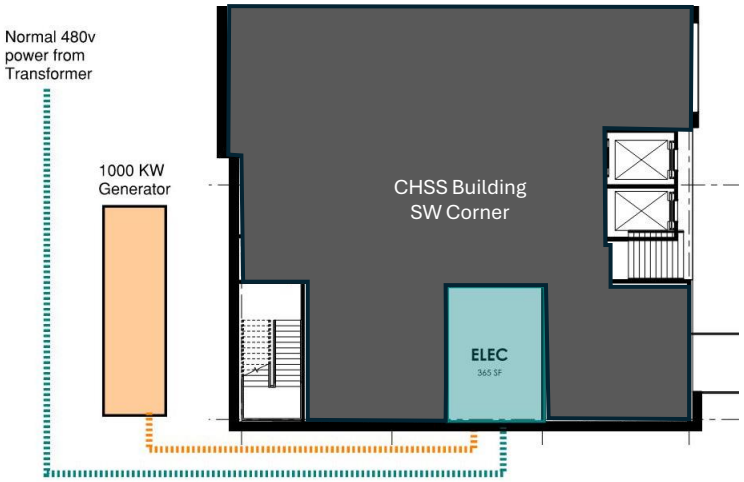
* Diagrams and information prepared by Syska & Hennessy.

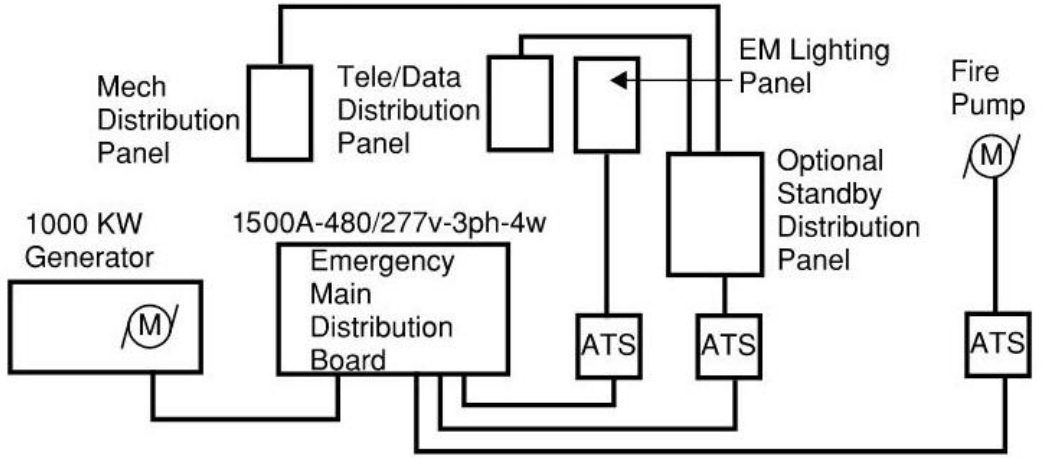




Generator Option 1

PGenerator Load Estimate Tele/Data AV					
Load Description	Amperes @ 480V-3 Phase	Amperes @ 208V-1Phase	Quantity	Total Amperes	Total kVA
DX IT Rm. Cooling		16	4	64	13
HVAC Controls	20		NA	20	17
Telecom Equipment	50		NA	50	42
AV Equipment (Est.)	50		NA	50	42
Lighting (1VA/SF)	18	NA	18	15	15
Fire Pump (125HP)	156		1	156	129
Fire Pump Booster Pump (3HP)	4.8		1	5	4
Fire Alarm	15		1	15	12
				Total:	274
				400 kW Generator Required	





Generator Option 2

Generator Load Estimate Full HVAC				
Load Description	Amperes @ 480V-3 Phase	Quantity	Total Amperes	Total kVA
Air Cooled Heater/Chillers	74	6	444	369
Roof Top AHU	140	2	280	232
Chilled Water Pumps (20HP)	27	1	27	22
HVAC Controls	20	NA	20	17
Hot Water Pumps (15HP)	21	1	21	17
Telecom Equipment	50	NA	50	42
AV Equipment (Est.)	50	NA	50	42
Lighting (1VA/SF)	18	NA	18	15
Fire Pump (125HP)	156	1	156	129
Fire Pump Booster Pump (3HP)	4.8	1	5	4
Fire Alarm	15	1	15	12
	575.8		Total:	901
			1000 kW Generator Required	

Oak and Laurel Hall Decoupling | Option 1

Status Summary | 3 Options

- ❑ Review, discussion and System Selection are PENDING.

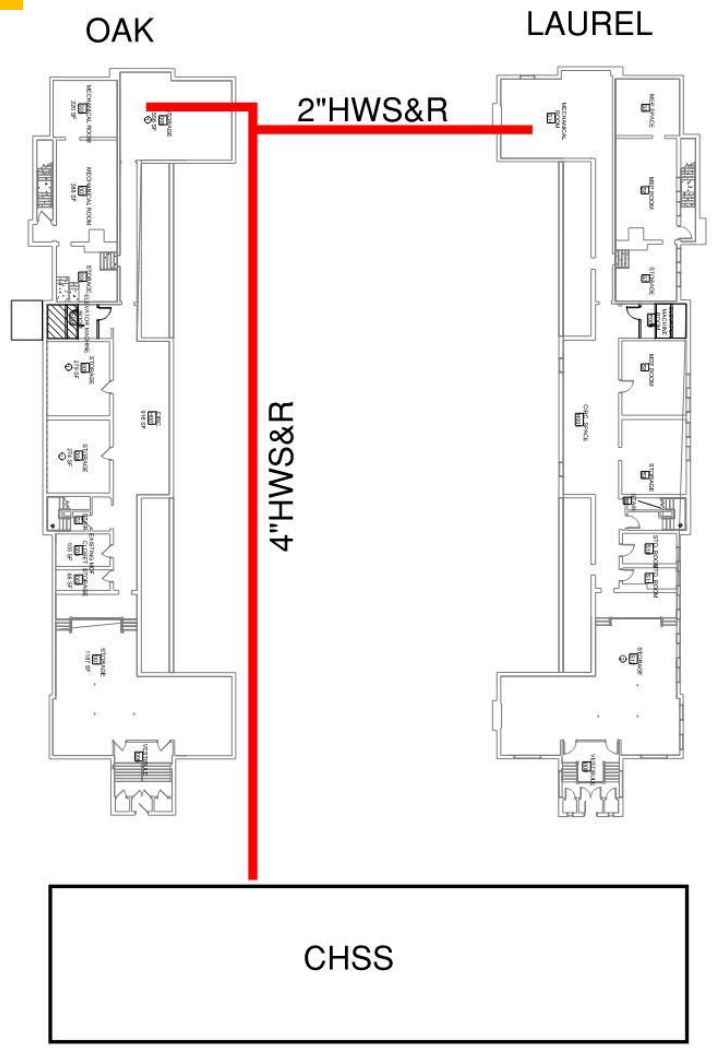
* Diagrams and information prepared by Syska & Hennessy.

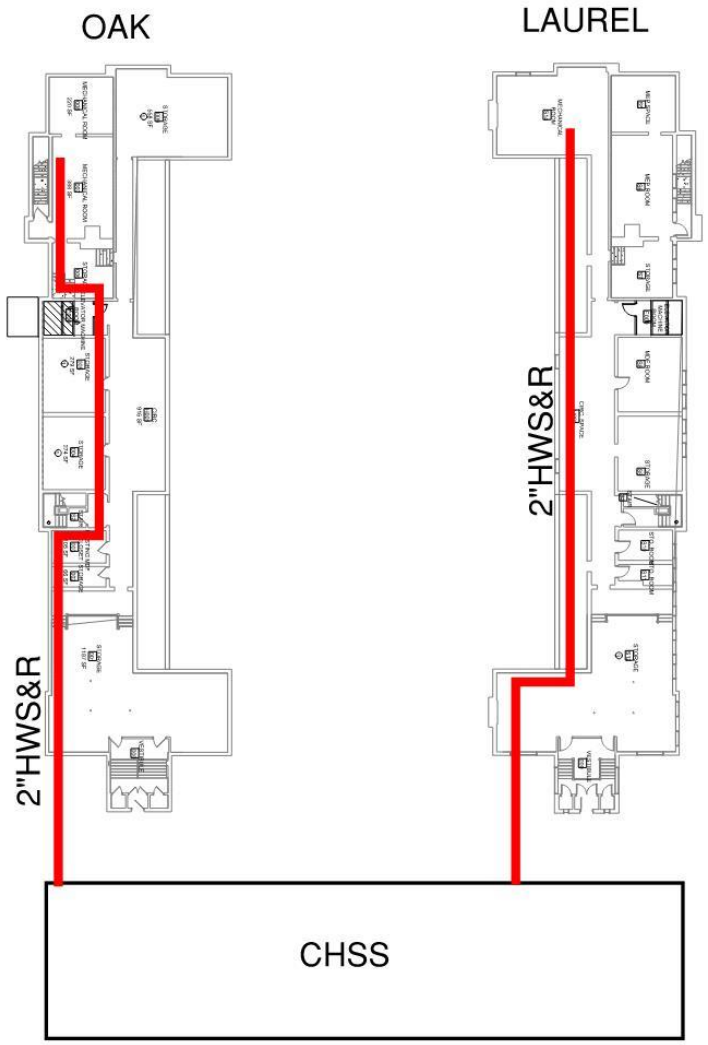
Narrative: Option 1A

1. Generate 180-degree water within the CHSS building with a cascading heat pump, distribute to Oak and Laurel via underground piping.
2. Will need a secondary heat exchanger for domestic water and recirculation pump.
3. Will require demolition of existing steam and condensate piping, PRV stations, heating heat exchanger, domestic water heat exchanger

Narrative: Option 1B

1. Generate 180-degree water within the CHSS building with a cascading heat pump, distribute to Oak and Laurel within basement levels.
2. Will need a secondary heat exchanger for domestic water and recirculation pump.
3. Will require demolition of existing steam and condensate piping, PRV stations, heating heat exchanger, domestic water heat exchanger





Oak and Laurel Hall Decoupling | Option 2

Rowan's preferred option for CM opinion of cost

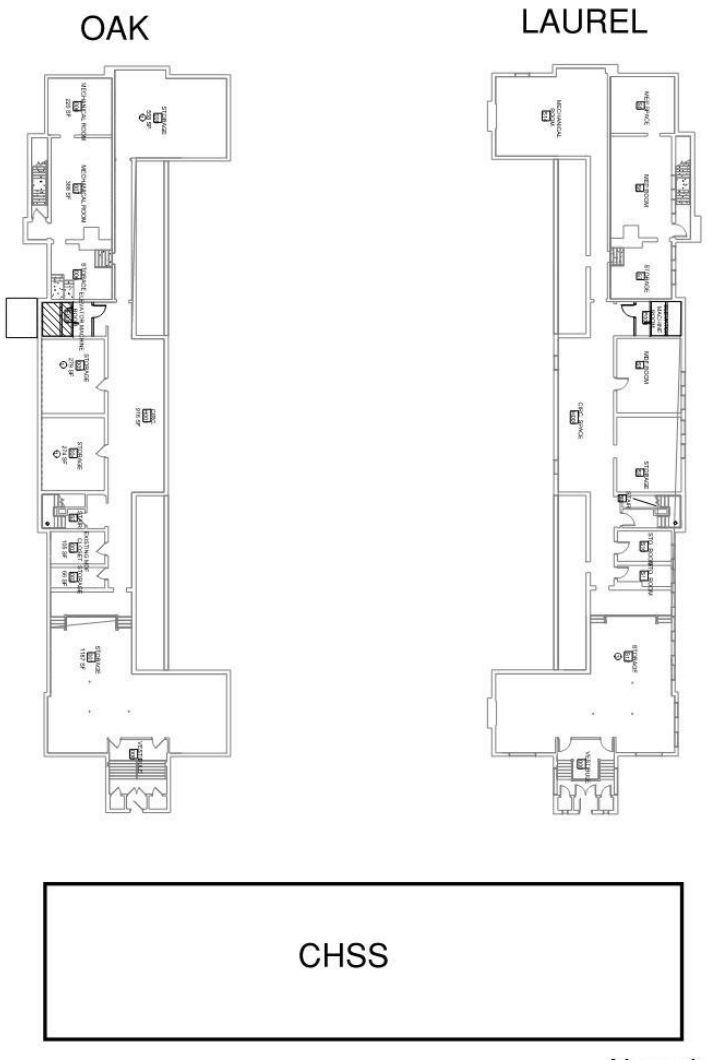
Status Summary | 3 Options

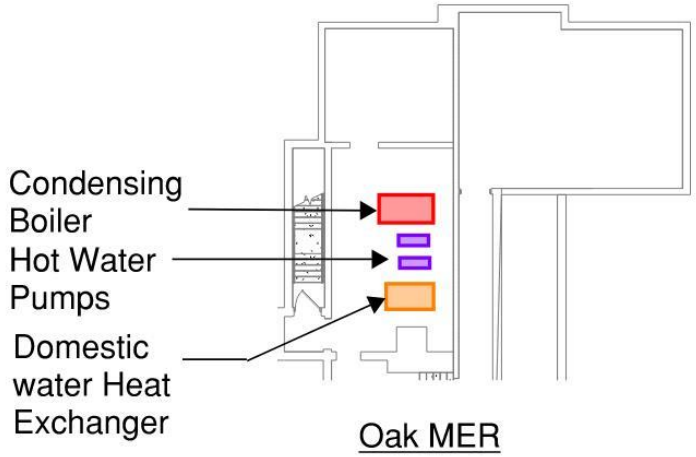
- ❑ Review, discussion and System Selection are PENDING.

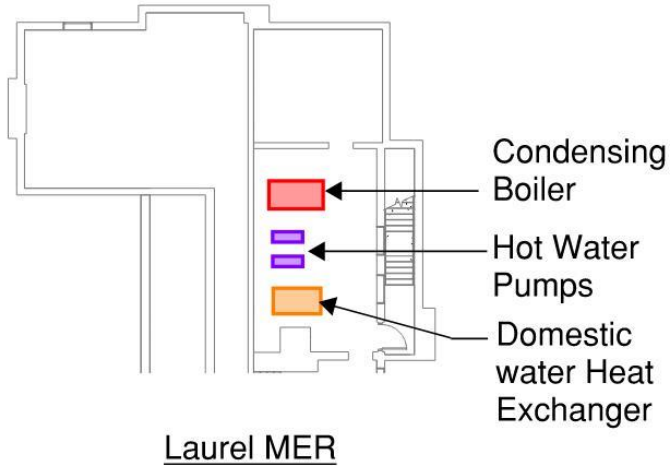
* Diagrams and information prepared by Syska & Hennessy.

Narrative:

1. Install gas-fired condensing boilers within Oak and Laurel to generate 180-degree water.
2. Will need a secondary heat exchanger for domestic water and recirculation pump.
3. Will require demolition of existing incoming steam and condensate piping, PRV stations, heating heat exchanger, domestic water heat exchanger.







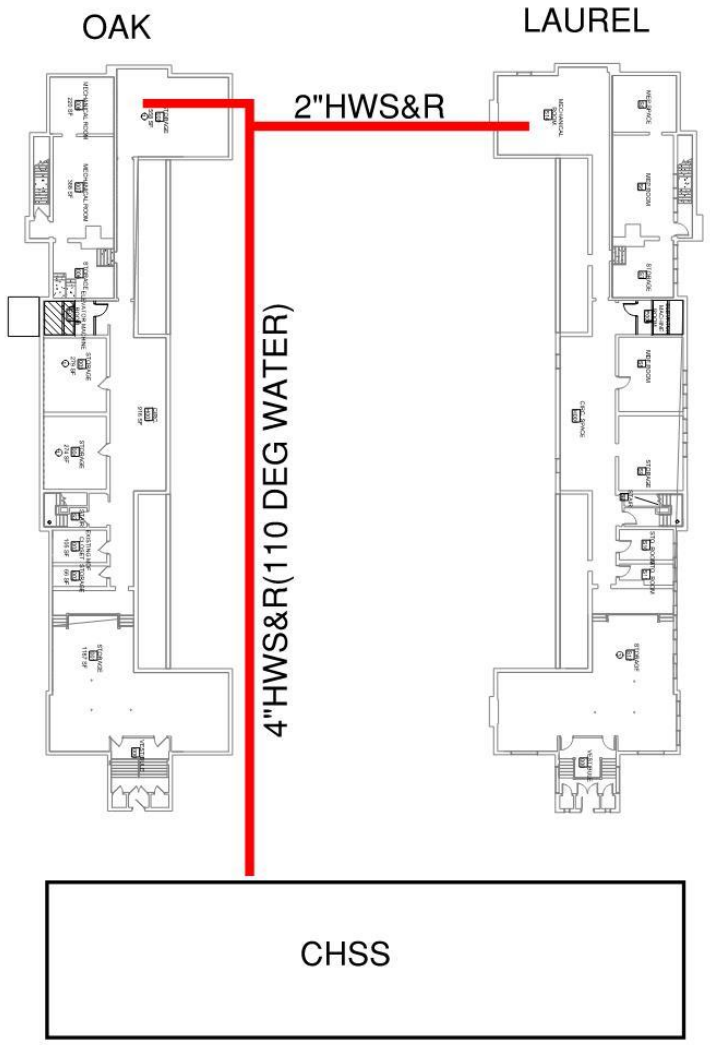
Oak and Laurel Hall Decoupling | Option 3

Status Summary | 3 Options

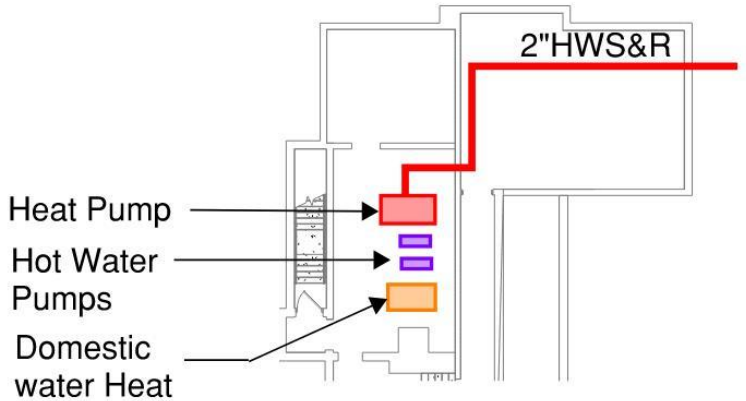
❑ Review, discussion and System Selection are PENDING.
* Diagrams and information prepared by Syska Hennessy.

Narrative:

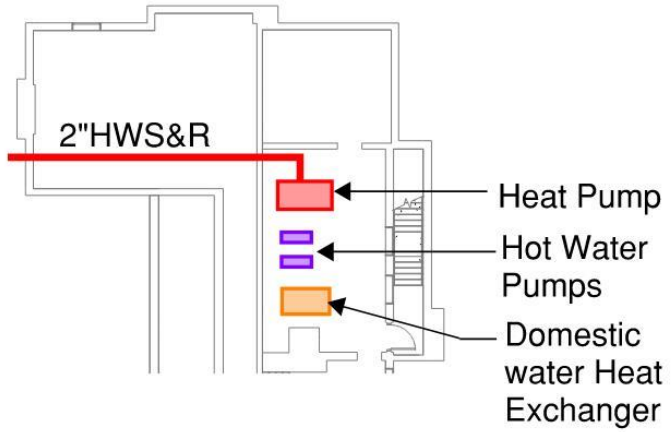
1. Install heat pump for heating within Oak and Laurel
2. Will need a secondary heat exchanger for domestic water and recirculation pump.
3. 480V power will be required from another source to each building to feed heat pumps.
4. Will require demolition of existing incoming steam and condensate piping, PRV stations, heating heat exchanger, domestic water heat exchanger.



Narrative



Oak MER



Laurel MER

Rowan's preferred option for CM opinion of cost in technology-enhanced spaces only;

Assumed technology-enhanced spaces are highlighted in yellow within Appendix A which contains the approved program and associated net square footages. In addition to these areas, Rowan's preferred preaction sprinkler system should be assumed in the following spaces which are accounted for separately in the gross square footage of the building:
- MDF closet: (1) on Level 1
- IDF closet: (1) on Level 2 and (1) on Level 3

Single Interlock Preaction System

PRO's

- Releases water into the sprinkler system if **one of** the following events occur
  - A sprinkler element is broken
  - Detection system is activated

CON's

- Water can possibly fill up the sprinkler piping during a false alarm from the detection system
- Additional maintenance for the preaction cabinet.
- Additional cost for the preaction cabinet and detection system.

Double Interlock Preaction System

PRO's

- Releases water into the sprinkler system when **both** events occur
  - A sprinkler element is broken
  - Detection system is activated
- Prevents the system from accidently filling up with water from either
  - A sprinkler or piping is broken
  - False activation of detection system

CON's

- Additional maintenance for the preaction cabinet. (Same maintenance as Single Interlock)
- More expensive than Single Interlock Preaction System (approximately 15%)

Appendix A - Rowan Approved Program

*To be utilized as basis for square footages in CM Opinion of Cost

Rowan University **NEW BUILDING FOR THE RIC EDELMAN COLLEGE PROGRAM**

25199.00 10/16/2025

Proposed Program

Program		*per room* OCCUPANCY		AREA @	PROGRAM	*total* # of	**TOTAL**	
ID	**TITLE**	sta	*seats*	NSF/sta	NSF	Rooms	**Area (NSF)**	
	ECCHSS							
	Dean's Suite Offices & Support							
	PRIVATE OFFICES							
	DEAN'S OFFICE	1	4	220.00	220	1	**220**	
	SR ASSOC DEAN OFFICE	1	4	175.00	175	1	**175**	
	ASSOC DEAN OFFICE	1	4	175.00	175	4	**700**	
	BUDGET & FINANCE COORDINATOR OFFICE	1	2	120.00	120	1	**120**	
	ROWAN GLOBAL LIASON	2		60.00	120	1	**120**	
	MEDIA SPECIALIST OFFICE	1	2	120.00	120	1	**120**	
	DIRECTOR OF RESEARCH FUNDING OFFICE	1	2	120.00	120	1	**120**	
	OPEN WORKSTATIONS							
	ADMIN ASST WORKSTATION	1		70.00	70	3	**210**	
	EVENT COORDINATOR WORKSTATION	1		70.00	70	1	**70**	
	GRANTS ADMINISTRATOR WORKSTATION	1		70.00	70	1	**70**	
	PUBLIC RELATIONS COORDINATOR WORKSTATION	1		70.00	70	1	**70**	
	SUPPORT SPACES							
	LG CONFERENCE ROOM (SHARED)		25	25.00	625	1	**625**	*sized for entire departments;*
	KITCHENETTE				100	1	**100**	
	COPY/ PRINTER/ MAIL				50	1	**50**	
	RECEPTION / LOUNGE		3		200	1	**200**	*(3) waiting seats;*
	DEAN'S STORAGE				75	1	**75**	
	Subtotal						3,045	
					Multiplier:	1.45	4,415	DGSF

Appendix A - Rowan Approved Program

*To be utilized as basis for square footages in CM Opinion of Cost

Rowan University	**NEW BUILDING FOR THE RIC EDELMAN COLLEGE PROGRAM**							
					25199.00		10/16/2025	
		Proposed Program						
		per room				*total*		
Program		OCCUPANCY		AREA @	PROGRAM	# of	**TOTAL**	
ID	**TITLE**	sta	*seats*	NSF/sta	NSF	Rooms	**Area (NSF)**	
Collaboration Space								
	OPEN WORKSTATIONS							
	FACULTY ACTIVITY-BASED WORKSPACE							
	- HUDDLE ROOM		3	26.67	80	2	**160**	
	- OPEN TOUCHDOWN WORKSTATIONS	1		45.00	45	4	**180**	*can be used by Adjuncts;*
	MEDIUM GROUP ROOM		8	26.25	210	2	**420**	
	GROUP ROOM		6	25.00	150	6	**900**	*make expandable into (3) 12 seat rooms;*
	BREAK-OUT SEATS		1	35.00	35	16	**560**	*distributed throughout building;*
	SM CONFERENCE ROOM (SHARED)		10	25.00	250	2	**500**	*adjoining rooms;*
	Advising Suite							
	PRIVATE OFFICES							
	ASSOC DIRECTOR'S OFFICE	1		120.00	120	1	**120**	
	ADVISOR OFFICE	1		120.00	120	11	**1,320**	
	FUTURE ADVISOR OFFICE	1		120.00	120	2	**240**	
	OPEN WORKSTATIONS							
	ADMIN ASST WORKSTATION	1		70.00	70	1	**70**	
	SUPPORT SPACES							
	WAITING CHAIRS		6	25.00	150	1	**150**	
	SECURE STORAGE				100	1	**100**	
	COPY/ PRINTER/ MAIL				50	1	**50**	
	KITCHENETTE				100	1	**100**	
	CONFERENCE ROOM				**see ECCHSS Shared Space**			
	Subtotal						4,870	
					Multiplier:	1.45	0	DGSF

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					25199.00		10/16/2025	
		Proposed Program						
		per room				total		
Program		OCCUPANCY		AREA @	PROGRAM	# of	TOTAL	
ID	TITLE	sta	seats	NSF/sta	NSF	Rooms	Area (NSF)	
Department of Radio, Television, Film (RTF)								
	TV Studios							
	STUDIO				2,000	1	**2,000**	
	- LIGHT LOCK VESTIBULE				50	2	**100**	
	- CONTROL ROOM				1,000	1	**1,000**	
	MULTI-MEDIA EDITING & E-SPORTS ROOM				640	1	**640**	
	TECHNOLOGY/ MEDIA STORAGE				500	1	**500**	
	ISOLATION ROOM				120	3	**360**	*access to these rms from the Editing/E-Sports Rm;*
	STORAGE/ MAINTENANCE RM				200	1	**200**	
	Subtotal						4,800	
Centers & Institutes								
	Center for Digital Humanities Research							
	PRIVATE OFFICES							
	OPEN WORKSTATIONS							
	DIRECTOR WORKSTATION	1		70.00	70	0	**0**	*worksta in Lab;*
	GRAD STUDENT WORKSTATION	1		70.00	70	0	**0**	*worksta in Lab;*
	SUPPORT SPACES							
	DIGITAL HUMANITIES LAB		22	35.00	770	1	**770**	*flexible furniture; various types of furn; (2) workstas;*

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		Proposed Program						
		per room				*total*		
Program		OCCUPANCY		AREA @	PROGRAM	# of	**TOTAL**	
ID	**TITLE**	sta	*seats*	NSF/sta	NSF	Rooms	**Area (NSF)**	
	Center for Sports Communication & Social Impact							
	PRIVATE OFFICES							
	PROGRAM DIRECTOR OFFICE	1	2	120.00	120	1	**120**	
	DIRECTOR OFFICE	1	2	120.00	120	1	**120**	*N. Hartman*
	PROGRAM ASST OFFICE	1	2	120.00	120	1	**120**	
	Center for Professional Success							
	PRIVATE OFFICES							
	ASST DIRECTOR FOR CAREER DEVELOPMENT	1	2	120.00	120	1	**120**	*P. Massaro*
	ASST DIRECTOR OFFICE (FUTURE)	1	2	120.00	120	1	**120**	*future*
	Shared Centers & Institutes Spaces							
	SUPPORT SPACES							
	CONFERENCE ROOM		6	25.00	150	2	**300**	*student workers will work here;*
	RECEPTION		8	25.00	200	1	**200**	
	STORAGE				150	1	**150**	
	KITCHENETTE				100	1	**100**	
	Subtotal						2,120	
					Multiplier:	1.45	3,074	DGSF
ECCHSS Subtotal							**14,835**	***NSF***

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		Proposed Program						
		per room				*total*		
Program		OCCUPANCY		AREA @	PROGRAM	# of	**TOTAL**	
ID	**TITLE**	sta	*seats*	NSF/sta	NSF	Rooms	**Area (NSF)**	
	University Space							
Instructional								
	TECHNOLOGY-ENHANCED INSTRUCTIONAL SPACE							
	MEDIUM CLASSROOMS		25	32.00	800	2	**1,600**	*adjoining rms w/ movable partn to open to a larger rm; raised flr;*
	LARGE CLASSROOMS		42	32.00	1,350	2	**2,700**	*raised flr;*
	ANALYTICS VISUALIZATION INSTRUCTION LAB		30	45.00	1,350	1	**1,350**	*raised flr;*
	IMMERSIVE LEARNING							
	VR CLASSROOMS		32	42.19	1,350	1	**1,350**	*raised flr;*
	VR ROAM POD		6	133.33	800	1	**800**	*raised flr; fully immersive;*
	STORAGE				100	1	**100**	
	Subtotal						7,900	
Gathering Space								
	Snack Bar							
	- BACK OF HOUSE				600	1	**600**	
	DINING SEATING		30	25.00	750	1	**750**	
	Flex Event Center							
	FLEX EVENT SPACE		177	14.50	2,565	1	**2,565**	
	FURNITURE STORAGE				300	1	**300**	
	CATERING SUPPORT SPACE				200	1	**200**	
	Subtotal						4,415	
University Space Subtotal							**12,315**	***NSF***

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		Proposed Program						
		per room				*total*		
Program		OCCUPANCY		AREA @	PROGRAM	# of	**TOTAL**	
ID	**TITLE**	sta	*seats*	NSF/sta	NSF	Rooms	**Area (NSF)**	
	Building Support							
	LOBBY		22	45.00	1,000	1	**1,000**	
	CUSTODIAL SUPPLIES STORAGE				85	3	**255**	*one per floor*
	BUILDING STORAGE				500	1	**500**	*equipment, custodial storage*
	WELLNESS ROOM				100	1	**100**	
	DISPLAY				150	1	**150**	*distributed allocation; digital display of student work;*
	VENDING				50	1	**50**	*(2) machines;*
	LOADING / HOLDING/ RECEIVING				500	1	**500**	*incl. trash & recycling;*
	Subtotal						2,555	
BUILDING SUPPORT Subtotal							**2,555**	***NSF***
	TOTAL NSF						**29,705**	
	Building Infrastructure						24,304	
	TOTAL GSF					55.0%	**54,009**	

By signing this document, I indicate my agreement with and endorsement of the program described in this document for The Ric Edelman College of Communications, Humanities, and Social Sciences:

DocuSigned by:
Nawal Ammar 10/21/2025
C03254A1177D4DF...

Nawal Ammar, Dean of the
Ric Edelman College

DocuSigned by:
Vojislava Popluristic 10/21/2025
D5ADCCEE1480438...

Vojislava “Voki” Pophristic,
Provost & Executive Vice
Chancellor for Academic Affairs