

R.W. Kern Center

Hampshire College
893 West Street
Amherst, Massachusetts 01002

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TECHNICAL REPORT I

Part I Complete | Oct. 25, 2015

Exectutive Summary

The focus and purpose of the R.W. Kern Center design is that it is to in addition to achieving a Living Building Status - net-zero energy, waste, and water - it is to act as multifunctional learning, teaching, and exhibition space as it will be the home of admissions, and serve as Hampshire College's informational hub.

The R.W. Kern Center acts as a hub for prospective students by providing an integrated bookstore and library, an instructional assembly space, a student learning commons, and possibly more importantly, the R.W. Kern Center acts as a window into Hampshire college's deep rootedness into its surrounding sustainable natural environment.

PROPOSED AREAS OF STUDY

LARGE WORK SPACE PROPOSAL | FIRST AND SECOND FLOOR ADMISSIONS OFFICE SPACE

EXISTING CONDITIONS

SUMMARY

The R.W. Kern Center Admissions offices are located on the ground and second floors in the east wing, and are connected centrally by a single linear staircase. Along the south side of the “admissions” wing is an open lobby space that has a southern façade lined with five floor to ceiling (12’) GL-1 glazed windows (4’-4” x 12’-0”). Along the north façade of the building are individual offices with south facing glass walls and north facing operable windows.

Within this space, students and prospective students are offered work stations where they can collaborate. issues regarding college registration and attendance. This space is important as it is one of the first defining connections that students have to their campus. As students wait to be seen in the lobby space or are engaged in meetings with faculty they should feel a connection to the space | building | campus.

Dimensions

First Floor | 2124 SF

Height | 14 FT

Second Floor | 2357 SF

Height | 14 FT

Typical Office | 8 FT x 10 FT

Tasks and Activities

Faculty Offices

Student work stations

Presentations

Wall mounted literature

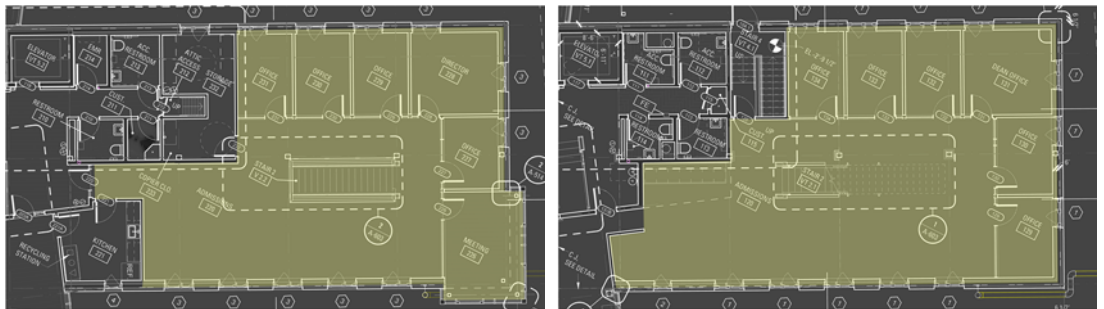


Figure | 1 - Ground Floor (Left) + Second Floor (Right) Admissions Floor Plan



Figure | 2 - Ground Floor Rendering of Student Workstations and Faculty Offices

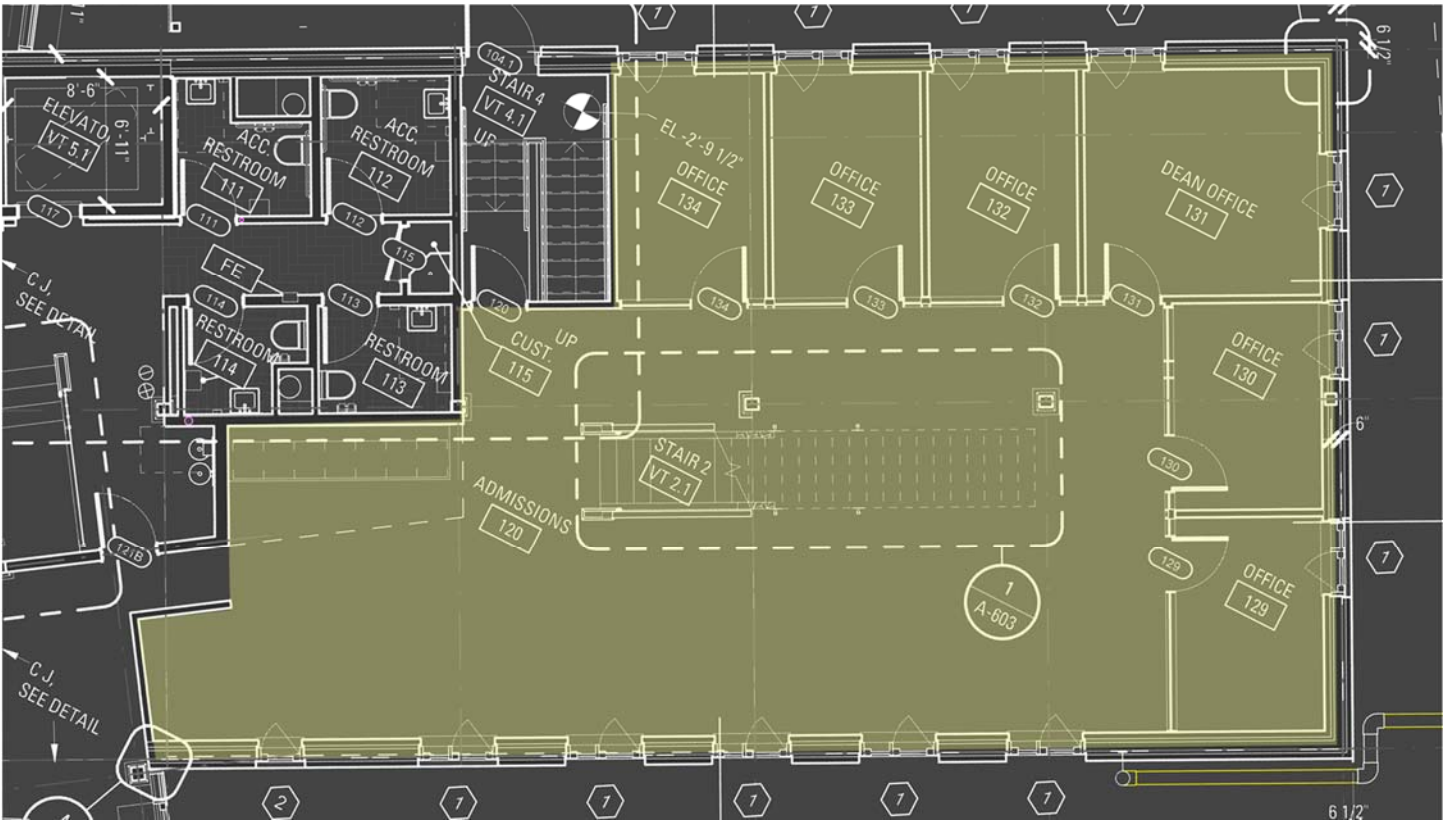


Figure | 3 - Admissions Offices on Ground Floor

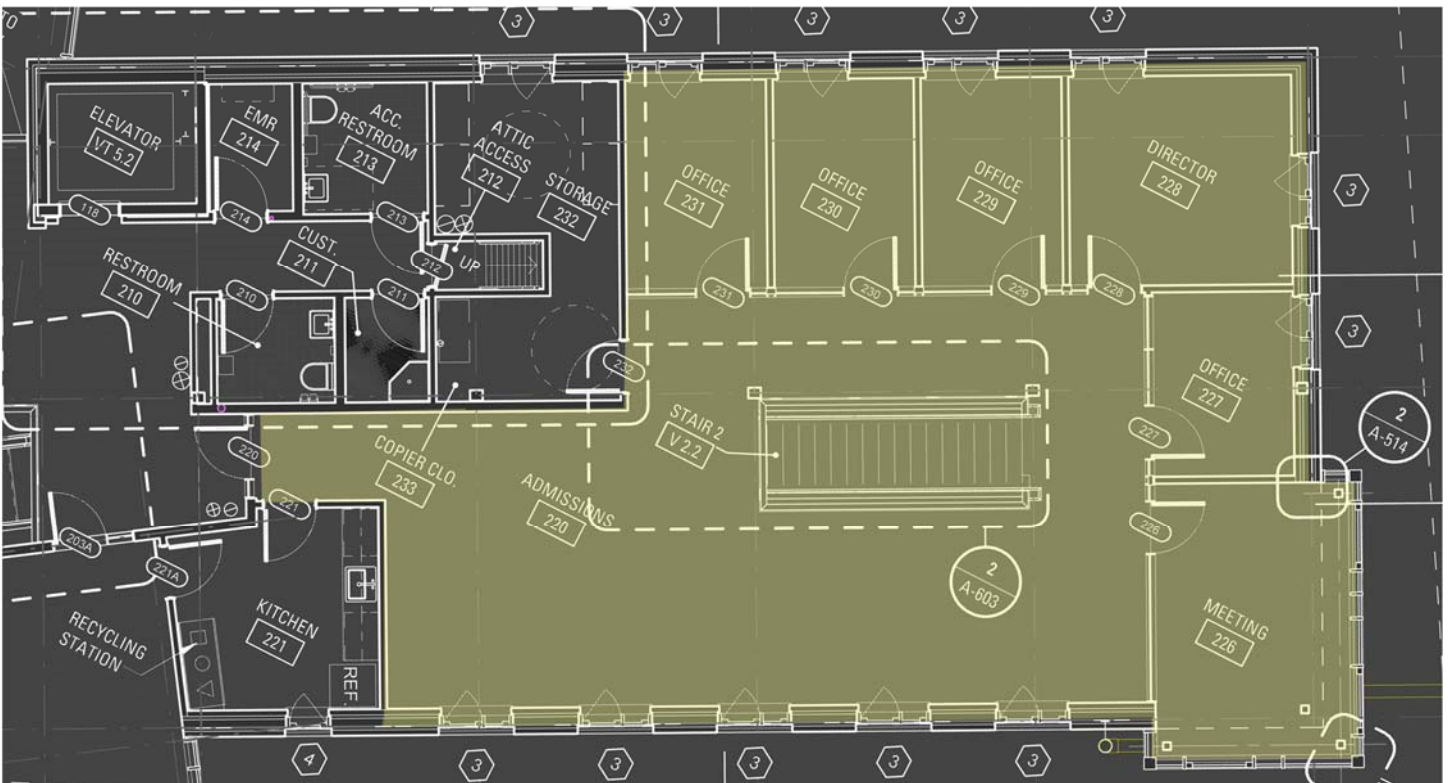


Figure | 4 - Admissions Offices on Second Floor

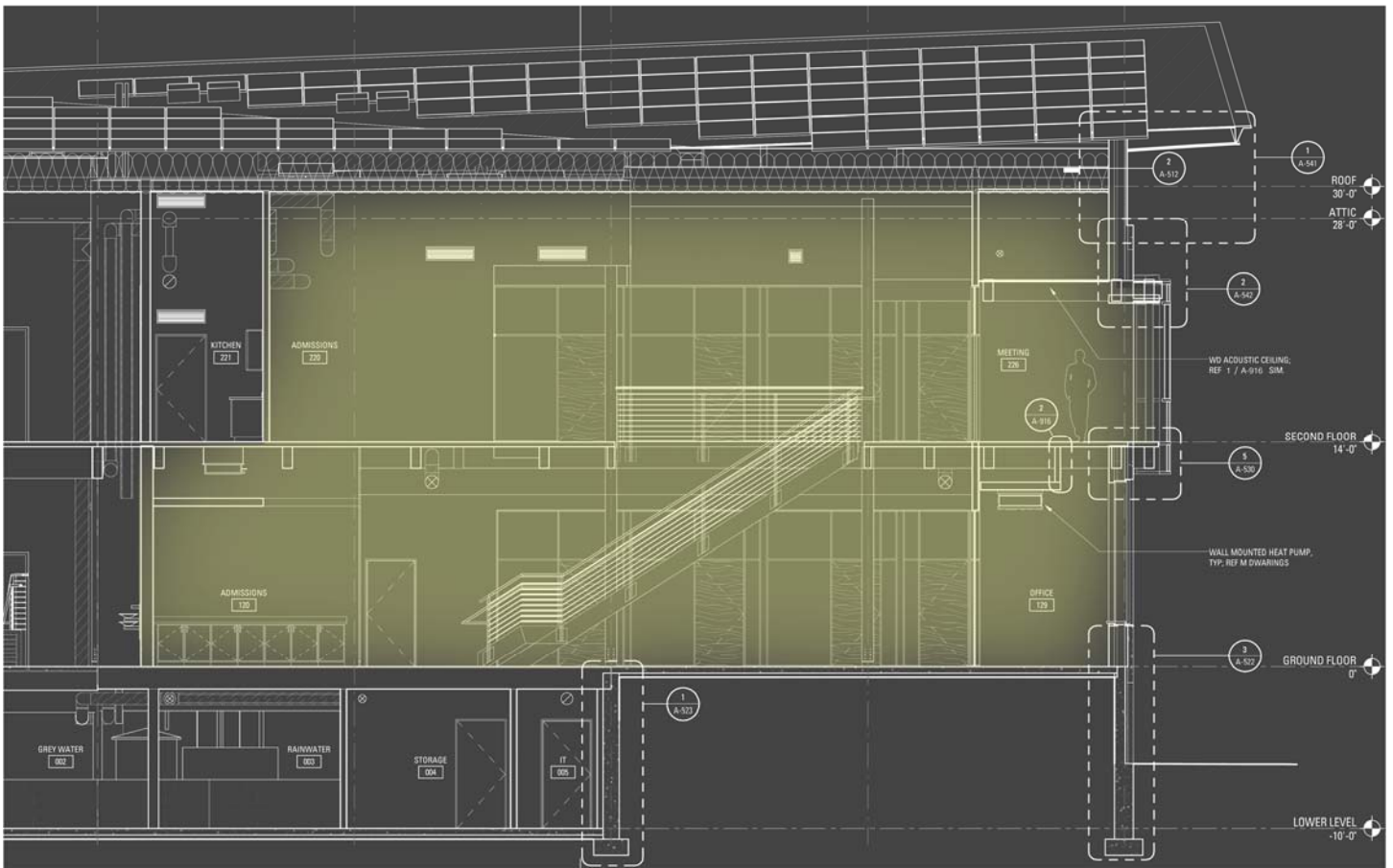


Figure | 4 - Section of Admissions Offices Ground and Second Floor

Finish Materials

The material finishes in the admissions offices - Ground and Second Floor - are chosen in accordance with the building design philosophy - sustainability. The large amount of natural and warm colored - exposed reclaimed wood at the ceiling level, further accentuated by the ashen/sandy/gray color of the oxidized herringbone patterned carpet tiles combine with the neutral color of the walls to create a neutral atmosphere.

Surface	Finishes Description	Material	Color	Reflectance	Manufacturer
Floor	Carpet	Carpet Tile	Oxidize - 48531	0.335	Shaw
Wall	Window	Glazing	-	*0.57	Yaro Windows + Doors
	GWB	Paint	-	**0.63	
Ceiling	Wood Acoustic Ceiling Assembly	Exposed Reclaimed Wood	Sandal Wood	0.476	Bensonwood

Notes: *Daylight Transmission
 **Visible Light Transmission

Table | 1 - Section of Admissions Offices Ground and Second Floor

Existing Lighting Conditions

Existing Controls

Lighting Power Density

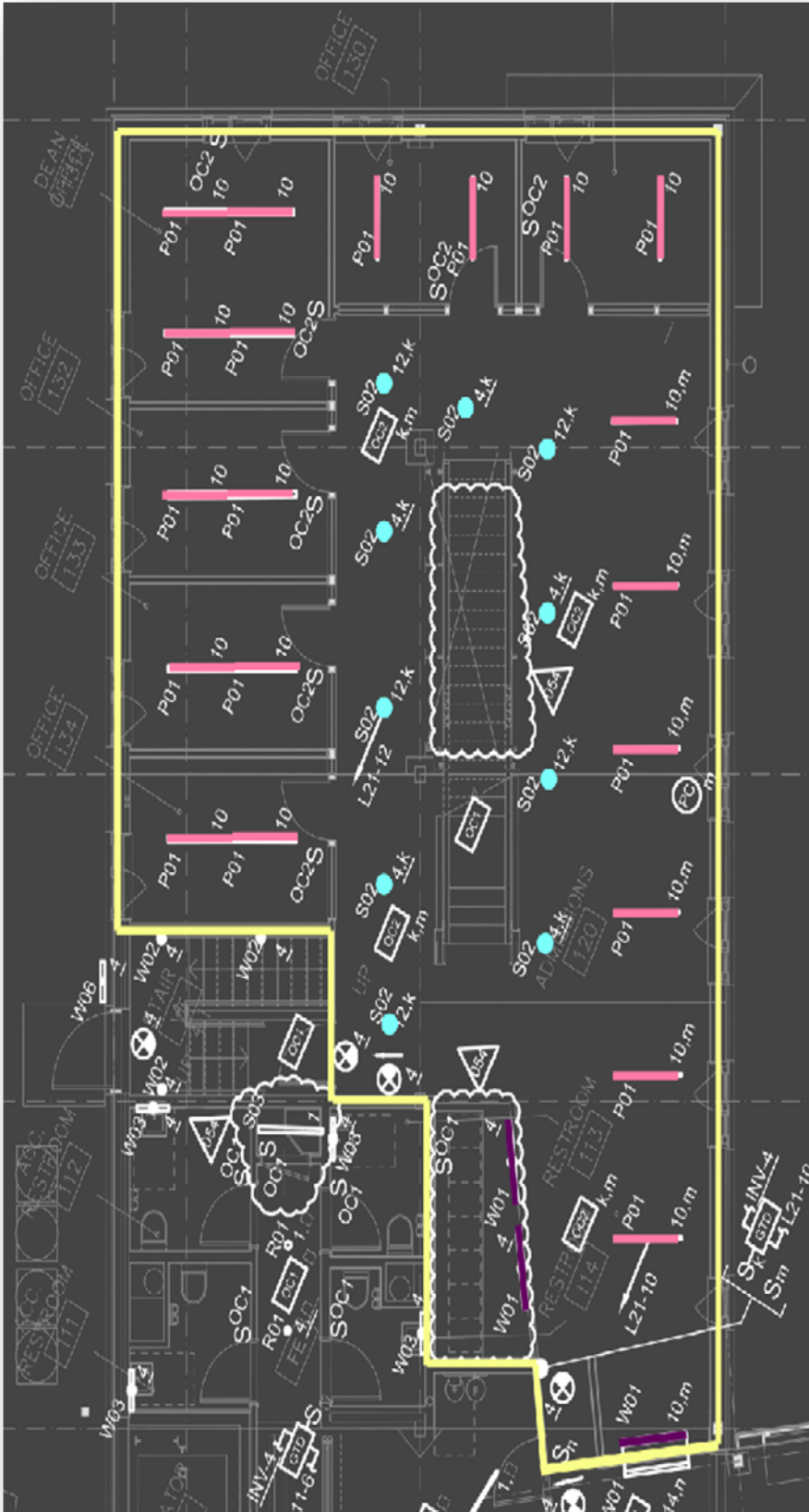
Illuminance Requirements

Sustainability

Uniformity

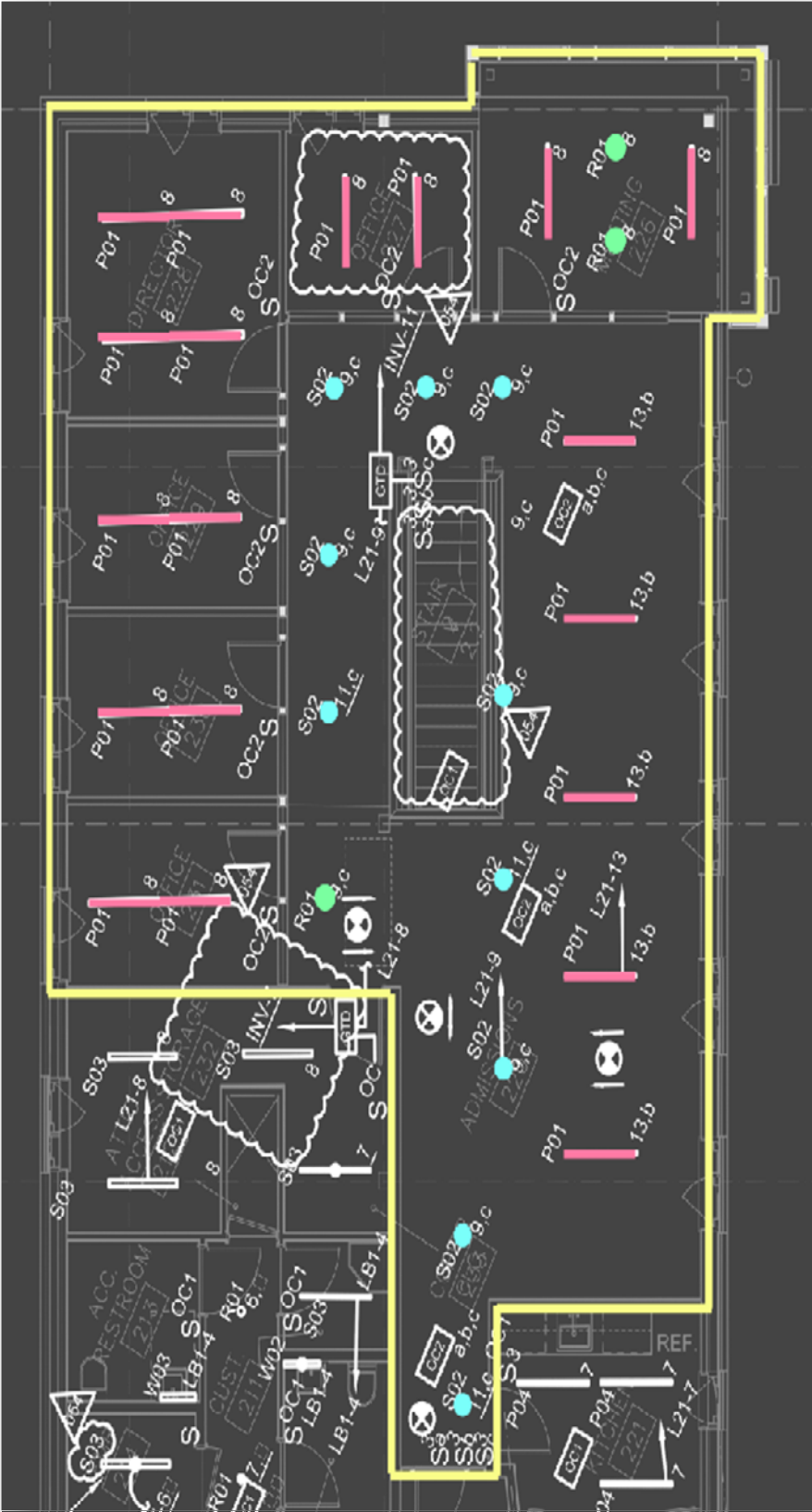
Furnishings

Evaluation



Fixture Type	Description	Fixture	Lamp/Source
W01	Surface wall mounted decorative linear fluorescent wallwasher with machined aluminum housing, 6" cantilever arms, surface mounted ballast enclosure, and integral electronic dimming ballast.	Vode: 107-WG-01-LENGTH- A-WA-6-IP-AE-VOLTAGEX-B-SO-35-19-0-AL-0	Philips: F28T5/835/ALTO
P01	Cable suspended linear LED pendant with nominal 1.5" x 4.5" cross section, extruded aluminum housing, clear acrylic optical lenses, 10% up/90% down light distribution, decorative endcaps, and 0-10V dimming driver.	Fluxwerk: VU1-R-B-D-35-A-LENGTH- D-D-M-03-	INTEGRAL LED, 12.5W/lf
P04	Cable suspended decorative linear fluorescent with machined aluminum housing, frosted acrylic diffuser, surface mounted ballast enclosure, and integral electronic ballast.	Vode: 105-BF-01-LENGTH- A-CC-60-IB-A-VOLTAGE- XHE-AL-0-0-0	Philips: F28T5/835/ALTO
S02	Surface ceiling mounted adjustable line-voltage spotlight with 4.5" diameter machined aluminum cylinder housing, Soraa PAR LED lamp, folded yoke, tapered snoot, beam softening lens, and surface canopy mount.	Litelab: J02PAR30-3-A-SNOOT-T-P-15-OL-SF-PNT-	Soraa: SP30L-18-36D-830-03

Figure | 5 [Top] + Table | 2 [Bottom] - Existing Ground Floor Admissions Luminaire layout and Fixture Schedule



Fixture Type	Description	Fixture	Lamp/Source
P01	Cable suspended linear LED pendant with nominal 1.5" x 4.5" cross section, extruded aluminum housing, clear acrylic optical lenses, 10% up/90% down light distribution, decorative endcaps, and 0-10V dimming driver.	Fluxwerx: VU1-R-B-D-35-A-LENGTH-D-D-M-03	INTEGRAL LED, 12.5W/lf
S02	Surface ceiling mounted adjustable line-voltage spotlight with 4.5" diameter machined aluminum cylinder housing, Soraal PAR LED lamp, folded yoke, tapered snoot, beam softening lens, and surface canopy mount.	LiteLab: J02PAR30-3-A-SNOOT-T-P-15-OL-SF-PNT-	Soraal: SP30L-18-36D-830-03
R01	Ceiling recessed LED downlight with 4.5" diameter aperture, regressed light source, and integral 0-10V dimming driver.	USAI: 1020-B1-10-LRTD4-9014-M2-35KS-30-NCSMVOLTAGE-DIML2-MOUNTING	INTEGRAL LED, 14W

Figure | 6 [Top] + Table | 3 [Bottom] - Existing Second Floor Admissions Luminaire layout and Fixture Schedule

CIRCULATION SPACE PROPOSAL | FIRST AND SECOND FLOOR LOBBY/CIRCULATION & GALLERY SPACE

Existing Conditions

SUMMARY

The lobby/circulation space is the first space that guests are exposed to. With southern and northern window wall systems and an exposed glulam wood framed ceiling of 14', the lobby is subject to a large amount of natural elements. Daylighting design in this space will need to be considered. The lobby becomes a learning ground as a coffee bar and 'Living Room' on the first floor encourages students to spend time studying or holding group meetings. Whereas as students pass through the space from the south to the north, this space becomes a portal to campus. Based on the multiple functionality of this space it will require a versatile design schema that celebrate allows for student activity while imbibing the buildings 'biophilia' philosophy.

AREAS

FIRST FLOOR | 2327 SF

Second Floor | 1976 SF

FINISH MATERIALS

- FIRST FLOOR | Floor Finish (Conc.): Concrete
- WALL FINISH (P-1) : PAINT [ASSUMED REFLECTANCE: .65]
- CEILING FINISH (EXP) : EXPOSED WOOD STRUCTURE
- SECOND FLOOR | Floor Finish (WD-1) : RECLAIMED WOOD FLOORING
- BASE FINISH (B-1) : Wood Base [PAINT-GRADE 1X4
BASE, 1/4" RABBET AT BASE]
- WALL FINISH (P-1): PAINT [ASSUMED REFLECTANCE: .65]



Figure | 4 Lobby | Circulation—First Floor Plan



Figure | 5 Gallery | Circulation—Second Floor Plan



Figure | 6 Lobby | Circulation —First Floor Interior Rendering

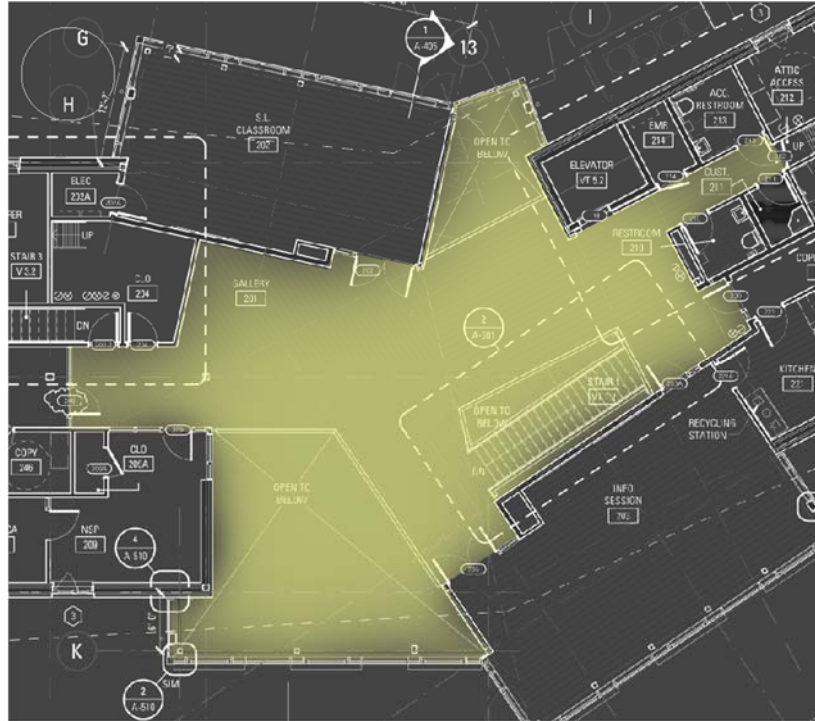


Figure | 3 - Admissions Offices on Ground Floor

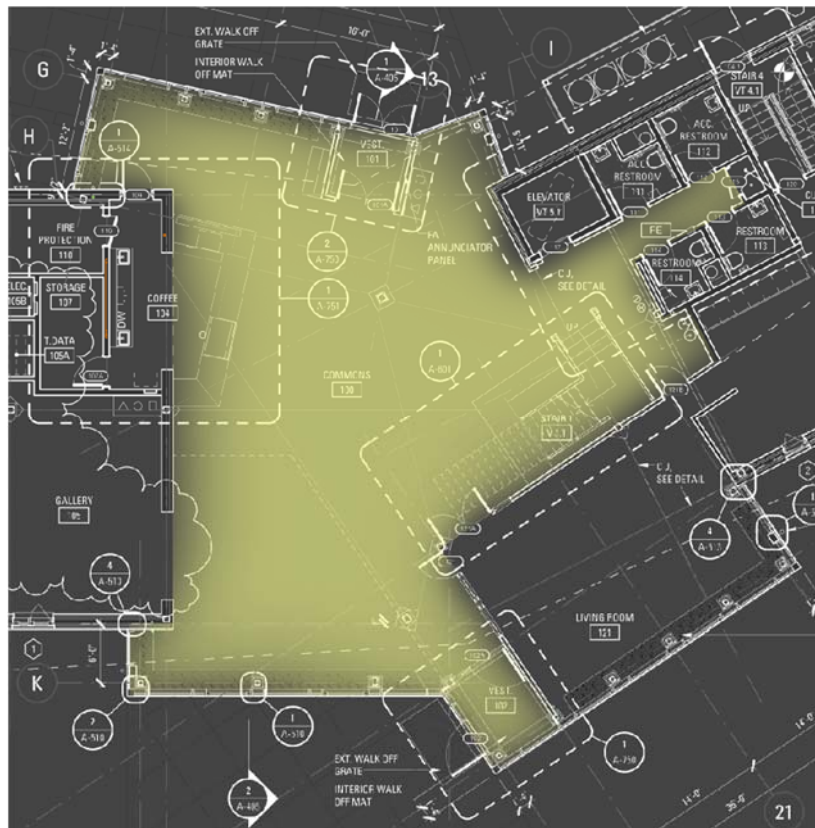


Figure | 4 - Admissions Offices on Second Floor

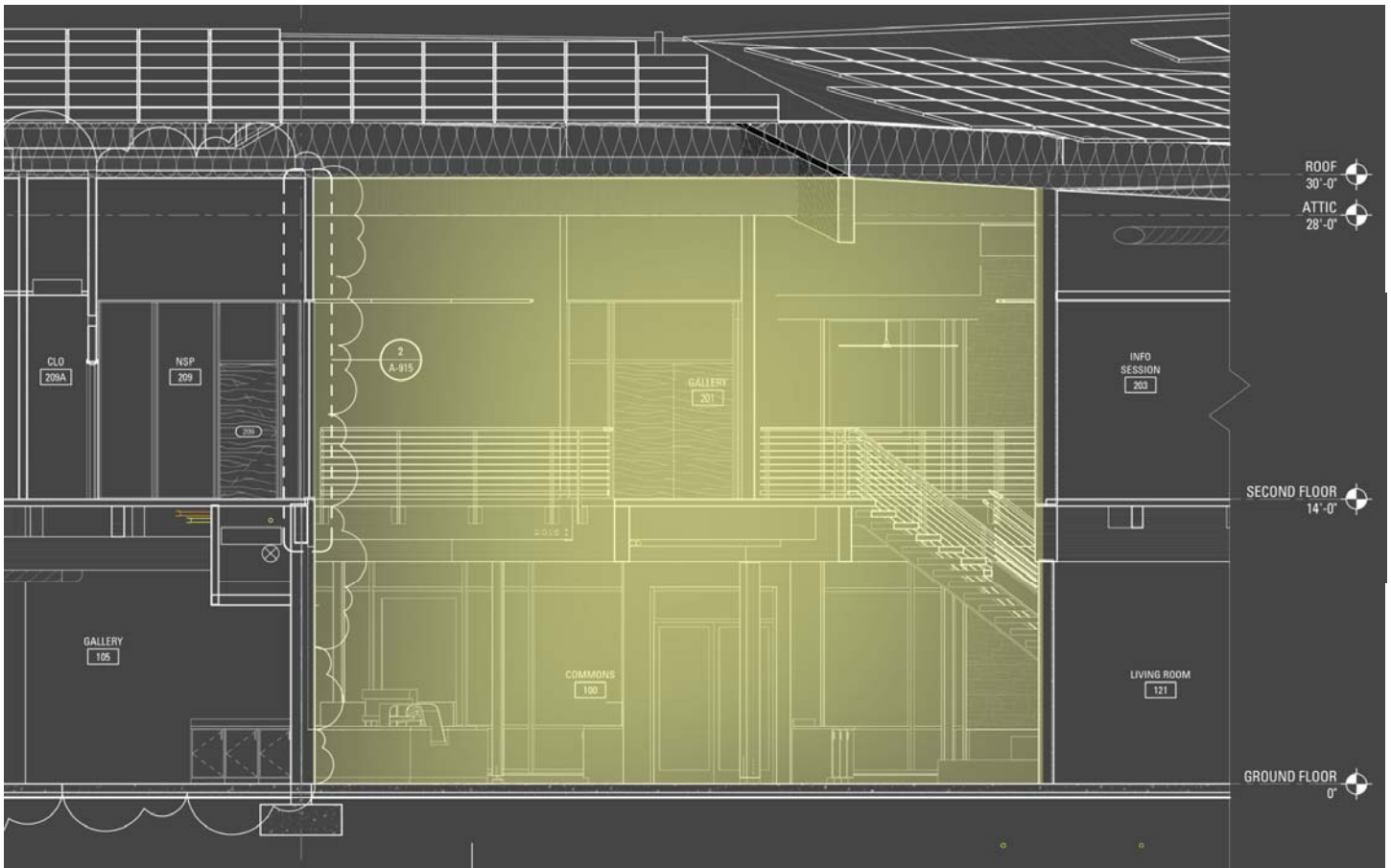


Figure | 4 - Section of Circulation/Commons Offices Ground and Second Floor

Finish Materials

The material finishes in the admissions offices - Ground and Second Floor - are chosen in accordance with the building design philosophy - sustainability. The large amount of natural and warm colored - exposed reclaimed wood at the ceiling level, further accentuated by the ashen/sandy/gray color of the oxidized herringbone patterned carpet tiles combine with the neutral color of the walls to create a neutral atmosphere.

Surface	Finishes Description	Material	Color	Reflectance	Manufacturer
Floor	Carpet	Carpet Tile	Oxidize - 48531	0.335	Shaw
Wall	Window	Glazing	-	*0.57	Yaro Windows + Doors
	GWB	Paint	-	**0.63	
Ceiling	Wood Acoustic Ceiling Assembly	Exposed Reclaimed Wood	Sandal Wood	0.476	Bensonwood

Notes: *Daylight Transmission
 **Visible Light Transmission

Table | 1 - Section of Admissions Offices Ground and Second Floor

Existing Lighting Conditions

Existing Controls

Lighting Power Density

Illuminance Requirements

Sustainability

Uniformity

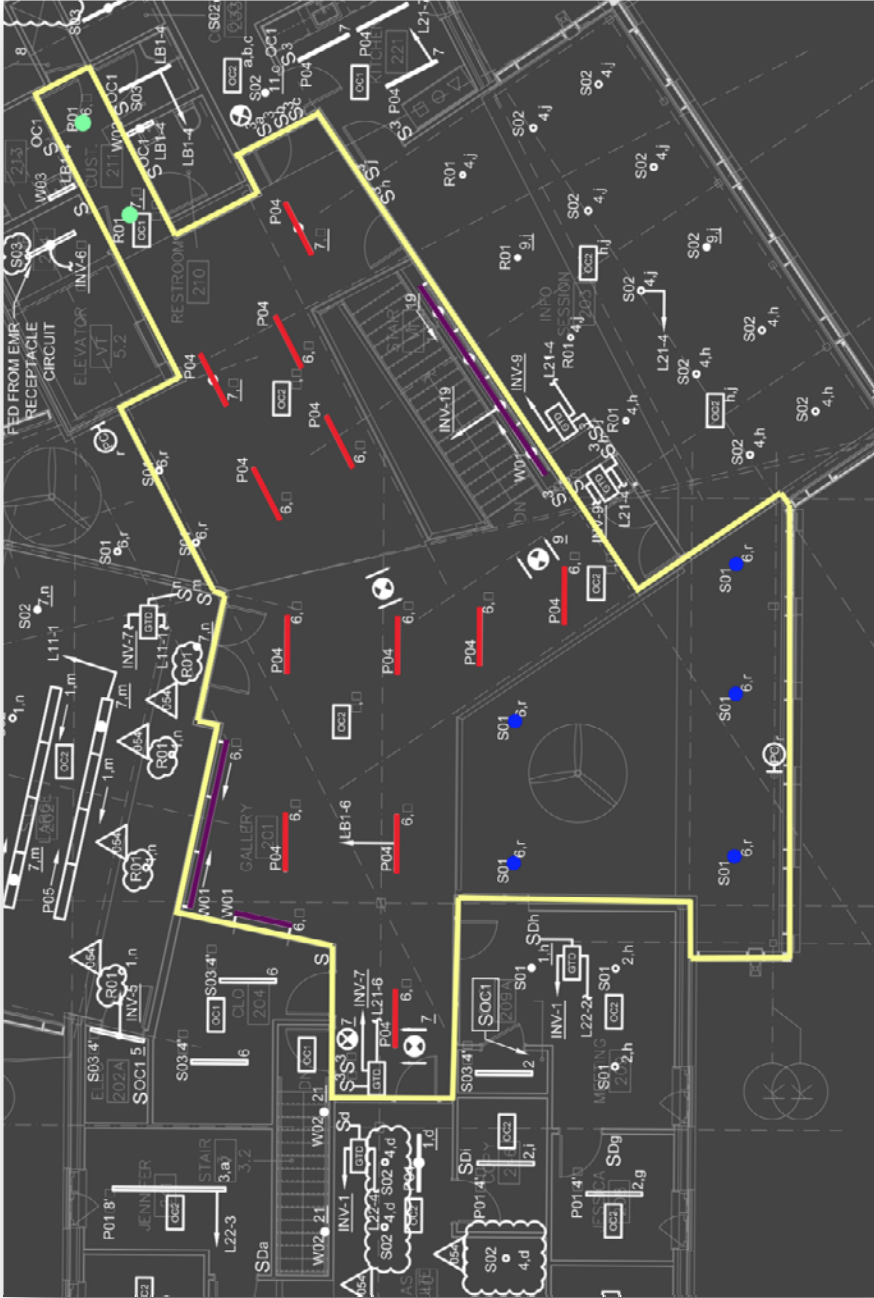
Furnishings

Evaluation



Fixture Type	Description	Fixture	Lamp/Source
P01	Cable suspended linear LED pendant with nominal 1.5" x 4.5" cross section, extruded aluminum housing, clear acrylic optical lenses, 10% up/90% down light distribution, decorative endcaps, and 0-10V dimming driver.	Fluxwerx: VU1-R-B-D-35-A-LENGTH-D-M-03-	INTEGRAL LED, 12.5W/lf
S02	Surface ceiling mounted adjustable line-voltage spotlight with 4.5" diameter machined aluminum cylinder housing, Soraa PAR LED lamp, folded yoke, tapered snoot, beam softening lens, and surface canopy mount.	LiteLab: J02PAR30-3-A-SNOOT-T-P-15-OL-SF-PNT-	Soraa: SP30L-18-36D-830-03
R01	Ceiling recessed LED downlight with 4.5" diameter aperture, regressed light source, and integral 0-10V dimming driver.	USA: 1020-B1-10-LRTD4-9014-M2-35KS-30-NCSMVOLTAGE-DIML2-MOUNTING	INTEGRAL LED, 14W

Figure | 6 [Top] + Table | 3 [Bottom] - Existing Ground Floor Commons Luminaire layout and Fixture Schedule



Fixture Type	Description	Fixture	Lamp/Source
W01	Surface wall mounted decorative linear fluorescent wallwasher with machined aluminum housing, 6" cantilever arms, surface mounted ballast enclosure, and integral electronic dimming ballast.	Code: 107-WG-01-LENGTH- A-WA-6-IP-AE-VOLTAGEX-B-SO-35-19-0-AL-0	Philips: F28T5/835/ALTO
P01	Cable suspended linear LED pendant with nominal 1.5" x 4.5" cross section, extruded aluminum housing, clear acrylic optical lenses, 10% up/90% down light distribution, decorative endcaps, and 0-10V dimming driver.	Fluxwerx: VU1-R-B-D-35-A-LENGTH- D-INTTEGRAL LED, -D-M-03-	INTEGRAL LED, 12.5W/lf
P04	Cable suspended decorative linear fluorescent with machined aluminum housing, frosted acrylic diffuser, surface mounted ballast enclosure, and integral electronic ballast.	Code: 105-BF-01-LENGTH- A-CC-60-IB-A-VOLTAGE- XHE-AL-0-0-0	Philips: F28T5/835/ALTO
S02	Surface ceiling mounted adjustable line-voltage spotlight with 4.5" diameter machined aluminum cylinder housing, Soraa PAR LED lamp, folded yoke, tapered snoot, beam softening lens, and surface canopy mount.	Litelab: J02PAR30-3-A-SNOOT-T-P-15-OL-SF-PNT-	Soraa: SP30L-18-36D-830-03

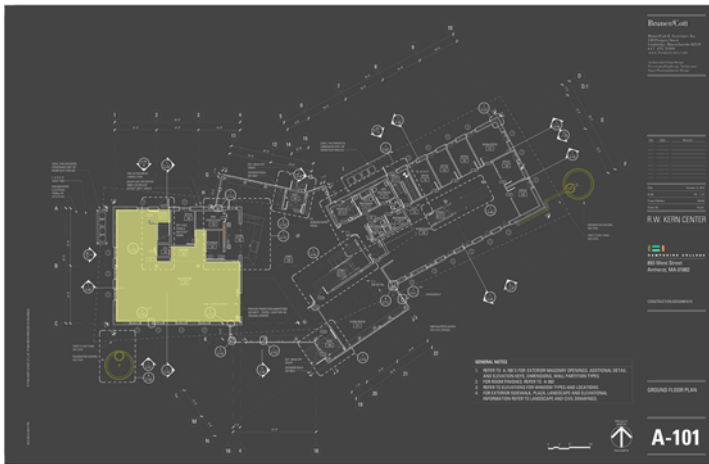
Figure | 5 [Top] + Table | 2 [Bottom] - Existing Second Floor Commons and Gallery Luminaire layout and Fixture Schedule

SPECIAL PURPOSE SPACE PROPOSAL | FIRST FLOOR MERCANTILE SPACE [THREE SCHEMATIC DESIGNS]

Existing Conditions

Summary

The Mercantile space on the ground floor acts as a bookstore, library, and a college merchandise distributor. The lighting of both vertical and horizontal surfaces must be considered for this space in order to be most effective in the displaying of merchandise and literature. However, the open floor plan of this space proposes the possibility of being a multiuse space, and will be approached as such.



AREAS

FIRST FLOOR | 1944 SF

FINISH MATERIALS

FIRST FLOOR | Floor Finish (Conc.): Concrete

WALL FINISH (P-1) : PAINT [ASSUMED REFLECTANCE: .65]

CEILING FINISH (EXP) : EXPOSED WOOD STRUCTURE

SECOND FLOOR | Floor Finish (WD-1) : RECLAIMED WOOD FLOORING

BASE FINISH (B-1) : Wood Base [PAINT-GRADE 1X4 BASE, 1/4" RABBET AT BASE]

WALL FINISH (P-1): PAINT [ASSUMED REFLECTANCE: .65]

Figure | 7 Special Purpose | Mercantile—First Floor



Figure | 8 Mercantile Space—Interior Rendering

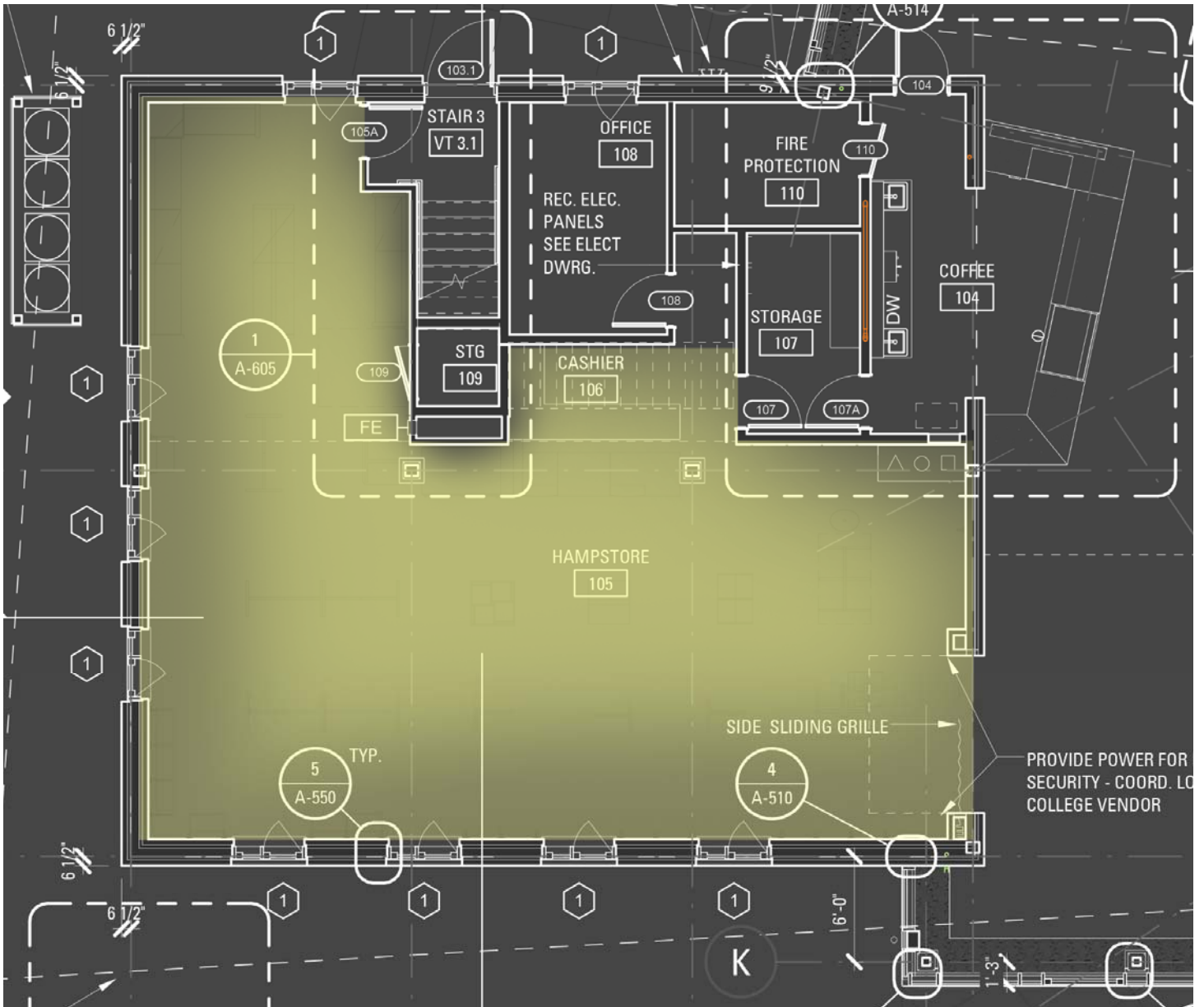


Figure | 3 - Admissions Offices on Ground Floor

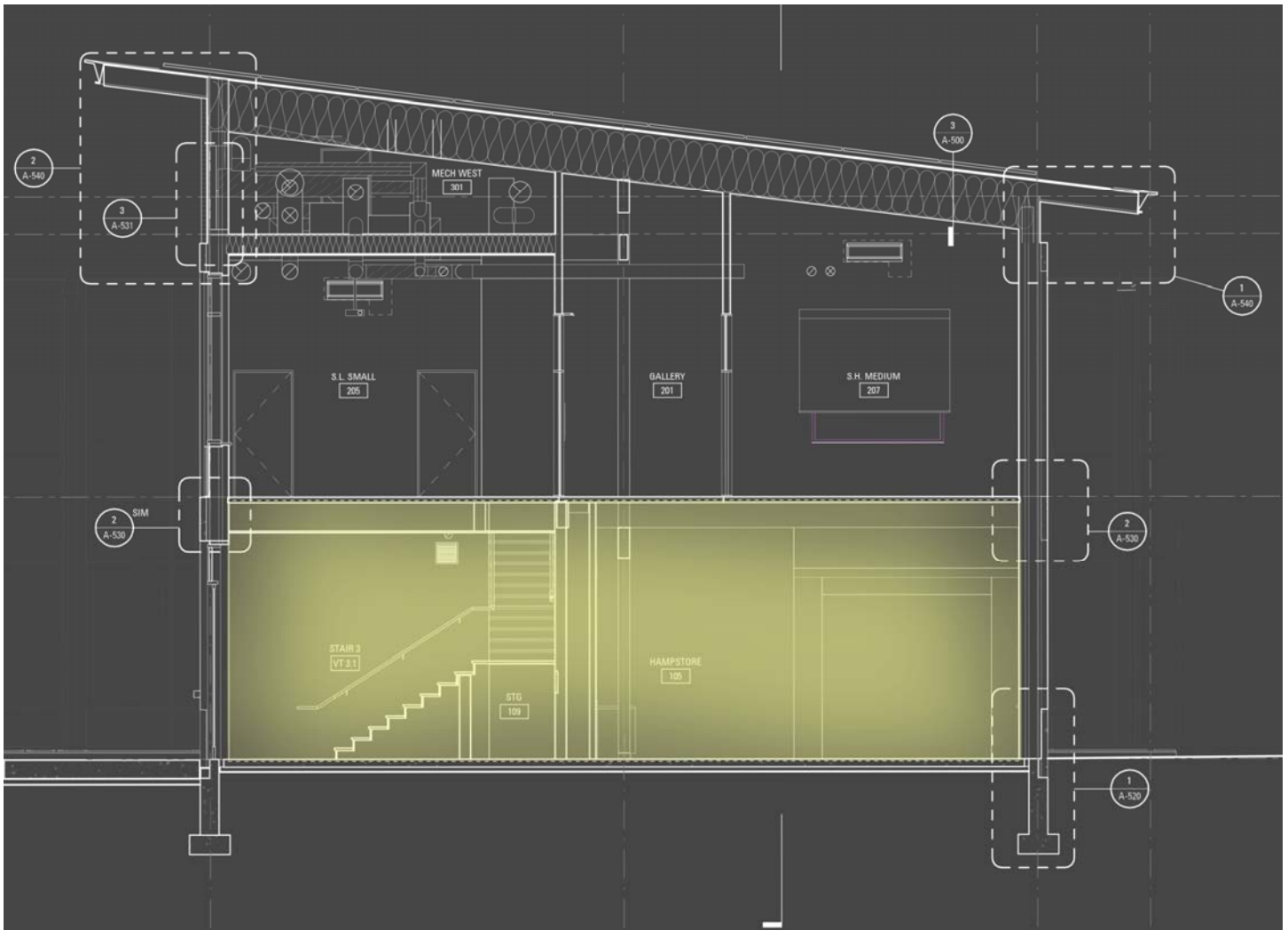


Figure | 1 - Section of Hampstore

Finish Materials

The material finishes in the admissions offices - Ground and Second Floor - are chosen in accordance with the building design philosophy - sustainability. The large amount of natural and warm colored exposed reclaimed wood at the ceiling level, further accentuated by the ashen/sandy/gray color of the oxidized herringbone patterned carpet tiles combine with the neutral color of the walls to create a neutral atmosphere.

Surface	Finishes Description	Material	Color	Reflectance	Manufacturer
Floor	Carpet	Carpet Tile	Oxidize - 48531	0.335	Shaw
Wall	Window	Glazing	-	*0.57	Yaro Windows + Doors
	GWB	Paint	-	**0.63	
Ceiling	Wood Acoustic Ceiling Assembly	Exposed Reclaimed Wood	Sandal Wood	0.476	Bensonwood

Notes: *Daylight Transmission
 **Visible Light Transmission

Table | 1 - Section of Admissions Offices Ground and Second Floor

Existing Lighting Conditions

Existing Controls

Lighting Power Density

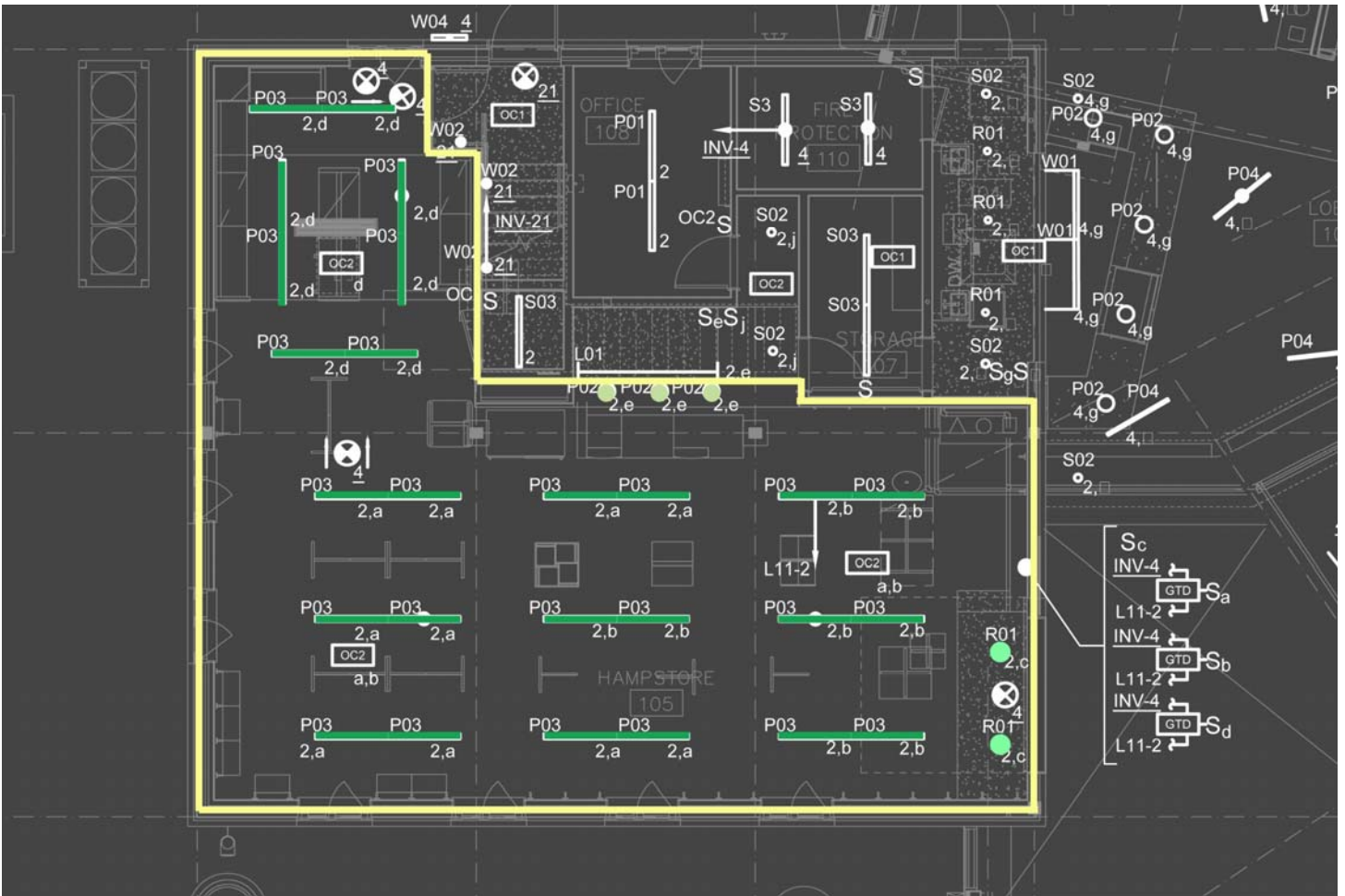
Illuminance Requirements

Sustainability

Uniformity

Furnishings

Evaluation



Fixture Type	Description	Fixture	Lamp/Source
R01	Ceiling recessed LED downlight with 4.5" diameter aperture, recessed light source, and integral 0-10V dimming driver.	USAI: 1020-B1-10-LRTD4-9014-M2-35KS-30-NCSMVOLTAGE-DIML2-MOUNTING	INTEGRAL LED, 14W
P02	Stem mounted decorative LED pendant with frosted blown glass sphere, field-cuttable rigid stem, swivel canopy, and surface mounted driver enclosure.	Tegan: TG-KAQP-SPG-SMDE-SS-AL-LED-VOLTAGE- DSOKAP-SPK-0-10V-	INTEGRAL LED, 15W
P03	Cable suspended linear LED pendant with nominal 3.5" x 3.1" cross section, extruded aluminum housing, clear acrylic optical lenses, 40% up/60% down light distribution, decorative endcaps, and 0-	Fluxwerx: PR1-B-A-C-35-A-LENGTH- D-D-M-03-	INTEGRAL LED, 10 W/lf

Figure | 5 [Top] + Table | 2 [Bottom] - Existing Ground Floor Admissions Luminaire layout and Fixture Schedule

OUTDOOR SPACE PROPOSAL | HIGH USE LAWN AND SURROUNDING LANDSCAPE FEATURES

[PSYCHOLOGICAL IMPRESSION ANALYSIS]

EXISTING CONDITIONS

SUMMARY

Surrounding the R.W. Kern Center are multiple areas of encouraged student immersion into the landscape. The ‘High Use Outdoor Lawn’ area presents an outdoor sitting area where students can picnic, study, or simply enjoy. Adhering to the R.W. Kern Center sustainable goals, it is important that sufficient amounts of artificial light be given to the space to allow for evening walks and outdoor studying without disturbing the natural environment.

The natural environment’s celebration is of the utmost importance to this project. Keeping this idea in mind, it is important to implement a lighting scheme that appeals to guests emotions, and therefore this space will be analyzed for its psychological impact, especially that of intimacy and relaxation.

AREAS

MEADOW PLANTING | 21,488 SF

HIGH OUTDOOR USE LAWN | 26,213 SF

FINISH MATERIALS

- EXTERIOR | Concrete Paving
- Stone Slab
- Crushed Stone
- Grass: Carex Pensylvanica

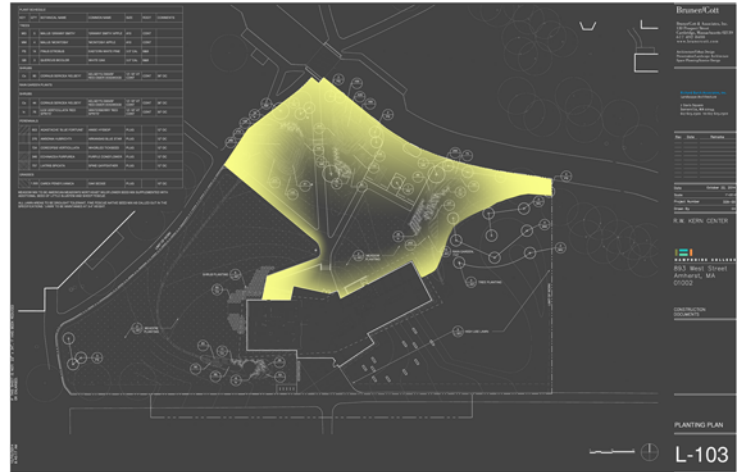


Figure | 9 Meadow Planting | Rain Garden—Site Plan

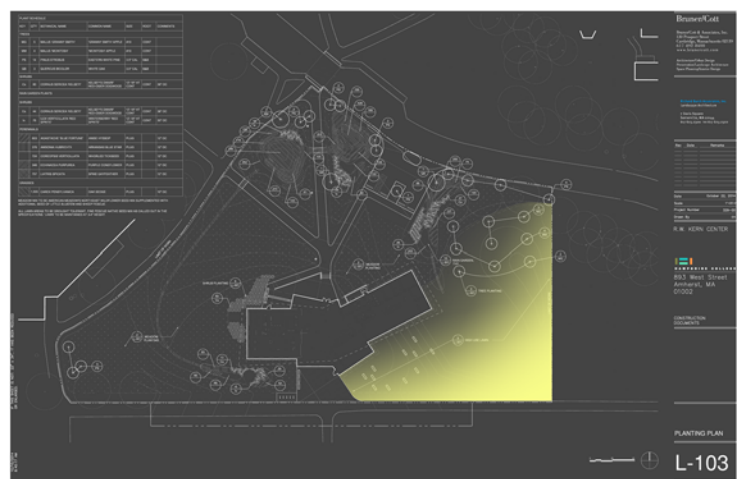


Figure | 10 High Use Outdoor Lawn—Site Plan



Figure | 11 Exterior Rendering—South Entrance

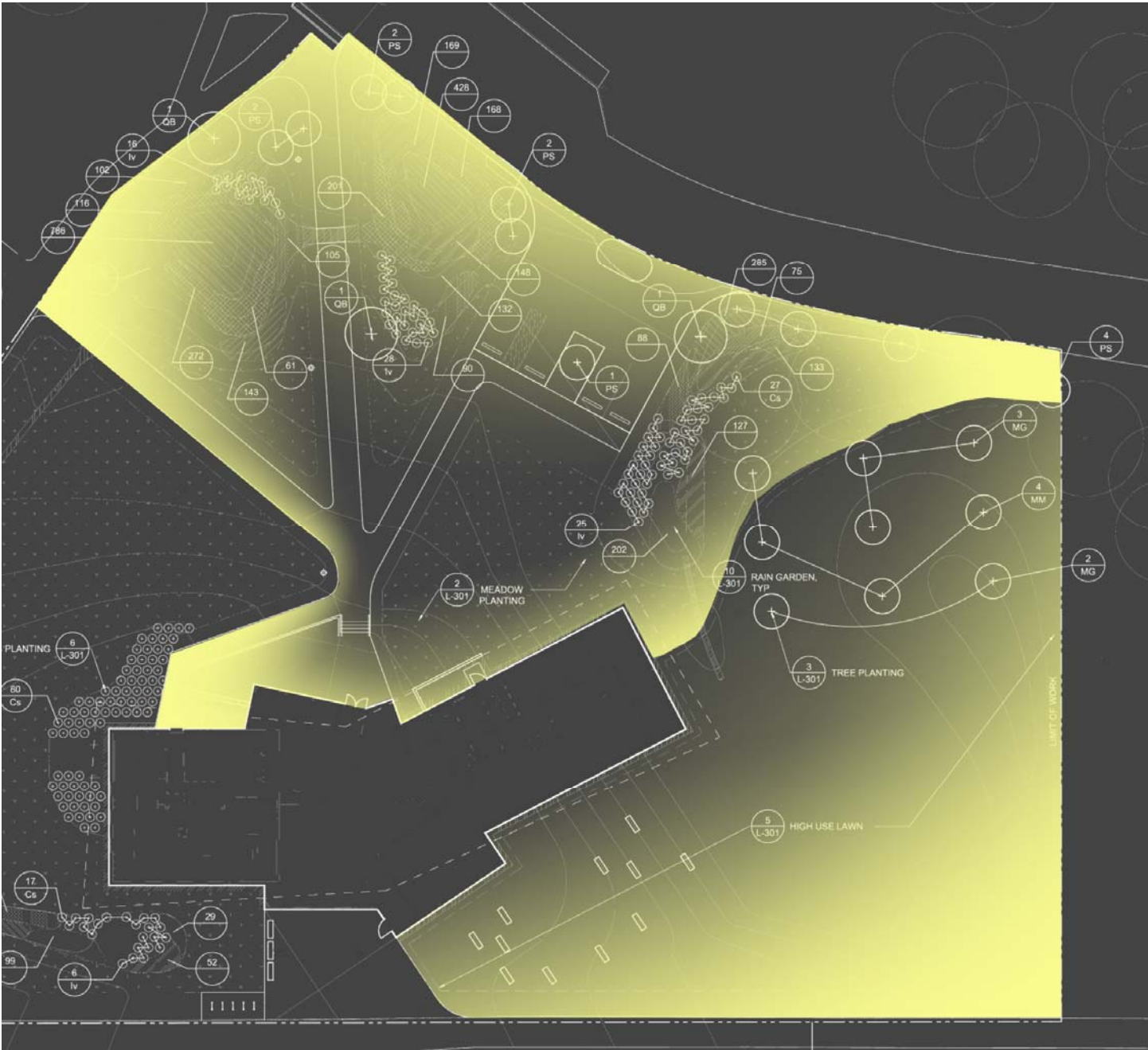


Figure | 3 - Admissions Offices on Ground Floor

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Figure | 4 - Section of Admissions Offices Ground and Second Floor

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	GWB	Paint	-	**0.63	
				0.65	-
Ceiling	Wood Acoustic Ceiling Assembly	Exposed Reclaimed Wood	Sandal Wood	0.476	Bensonwood

Notes: *Daylight Transmission
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Table | 1 - Section of Admissions Offices Ground and Second Floor

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Existing Controls

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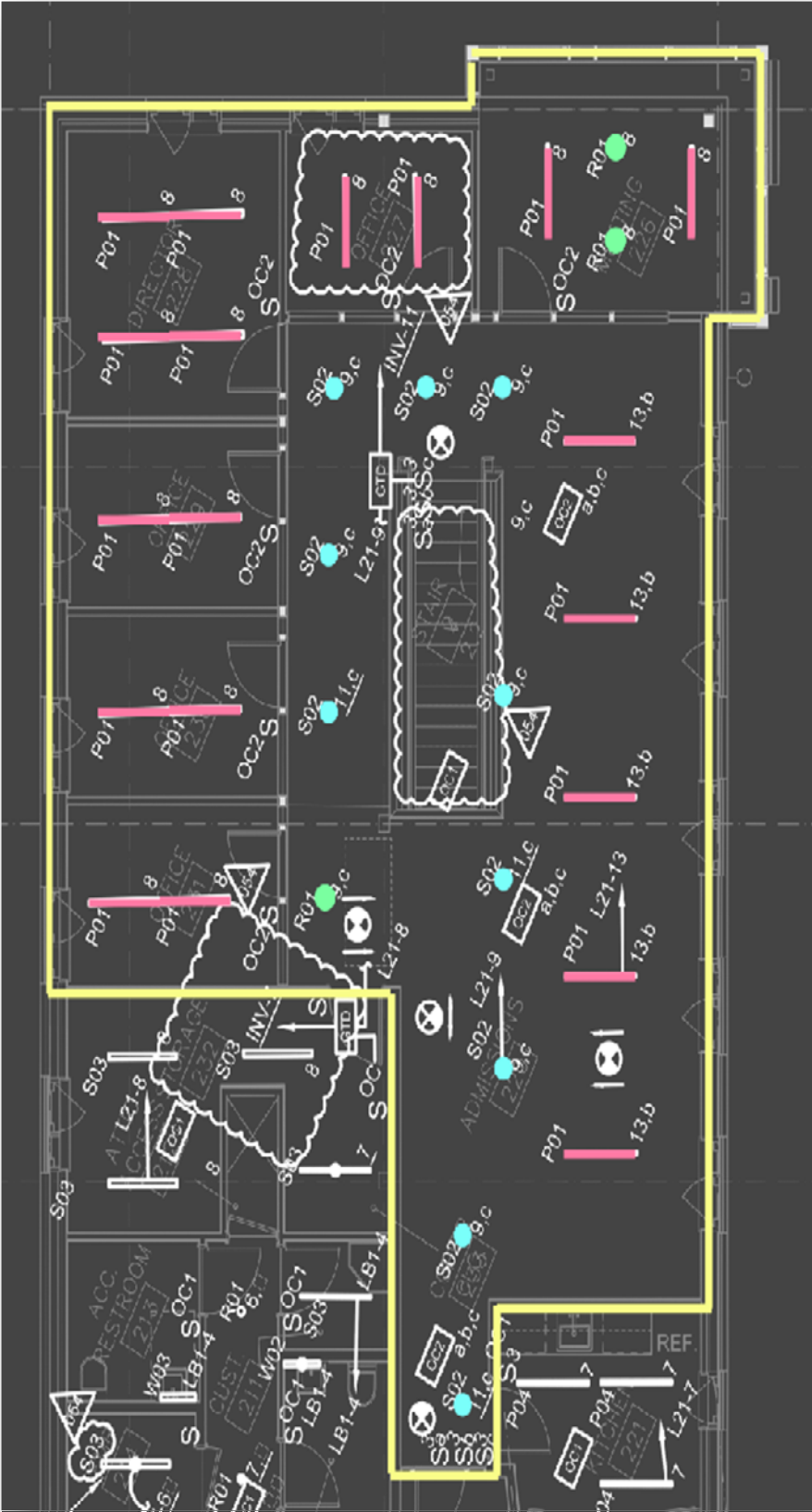
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Sustainability

Uniformity

Furnishings

Evaluation



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R01	Ceiling recessed LED downlight with 4.5" diameter aperture, regressed light source, and integral 0-10V dimming driver.	USAI: 1020-B1-10-LRTD4-9014-M2-35KS-30-NCSMVOLTAGE-DIML2-MOUNTING	INTEGRAL LED, 14W

Figure | 6 [Top] + Table | 3 [Bottom] - Existing Second Floor Admissions Luminaire layout and Fixture Schedule