

Lighting Proposal Memo

AE 481W

Tech Report 1 Part 1

Bucks County Justice Center

Doylestown, PA

Joshua Lange

Lighting/Electrical

Dr. Richard Mistrick

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Executive summary

This report is a summary of the spaces for which the lighting will be analyzed and designed throughout the Senior Project. For each of the spaces general information is presented including location in the building, size and geometry of the space, the finishes of the space, and the visual tasks that are expected to be performed in the space. This report also designates which space will have three lighting design concepts created and presented for it and which space will be specifically designed to achieve one of the psychological impressions.

For the large workspace Open Office 2520 was selected. This space is an “L” shaped open office space with 9’-0” ceilings and a significant amount of glazing on the west wall. Visual tasks include reading and writing, use of VDT’s, and face-to-face conversation.

For the special purpose room Ceremonial Courtroom 4100 was selected. This space is the largest of the courtrooms with 222 seats in the gallery. The ceiling is mostly 10’-6” and the finishes are mainly wood and acoustic paneling. Visual tasks include reading and writing, use of VDT’s, video recording and conferencing, electronic visual presentations, and visual presentations. This space was selected for the creation and presentation of three lighting design concepts.

For the circulation space Main Lobby 1000 was selected. This space is double height and has a large amount of glass and stone for its finishes. Visual tasks include wayfinding, security screenings, and indoor/outdoor transition. This space was selected to be designed in order to achieve one of the psychological impressions.

For the outdoor space the plaza outside of Main Lobby 1000 was selected. This space connects the new justice center with the old courthouse across the street. The primary finishes of this space are stone and brick. Visual tasks include wayfinding and safety.

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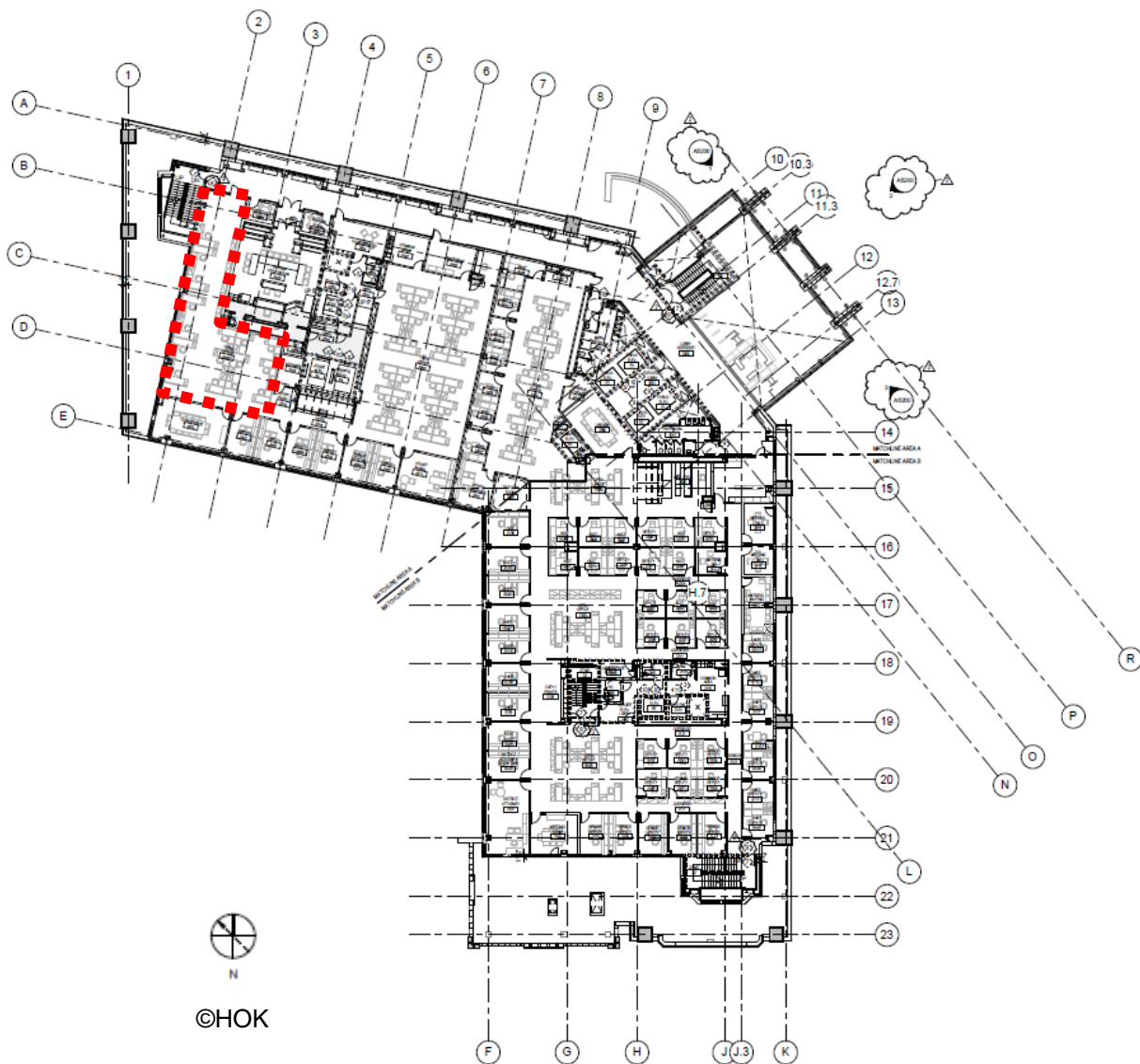
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1. Large Work Space

1.1 Introduction

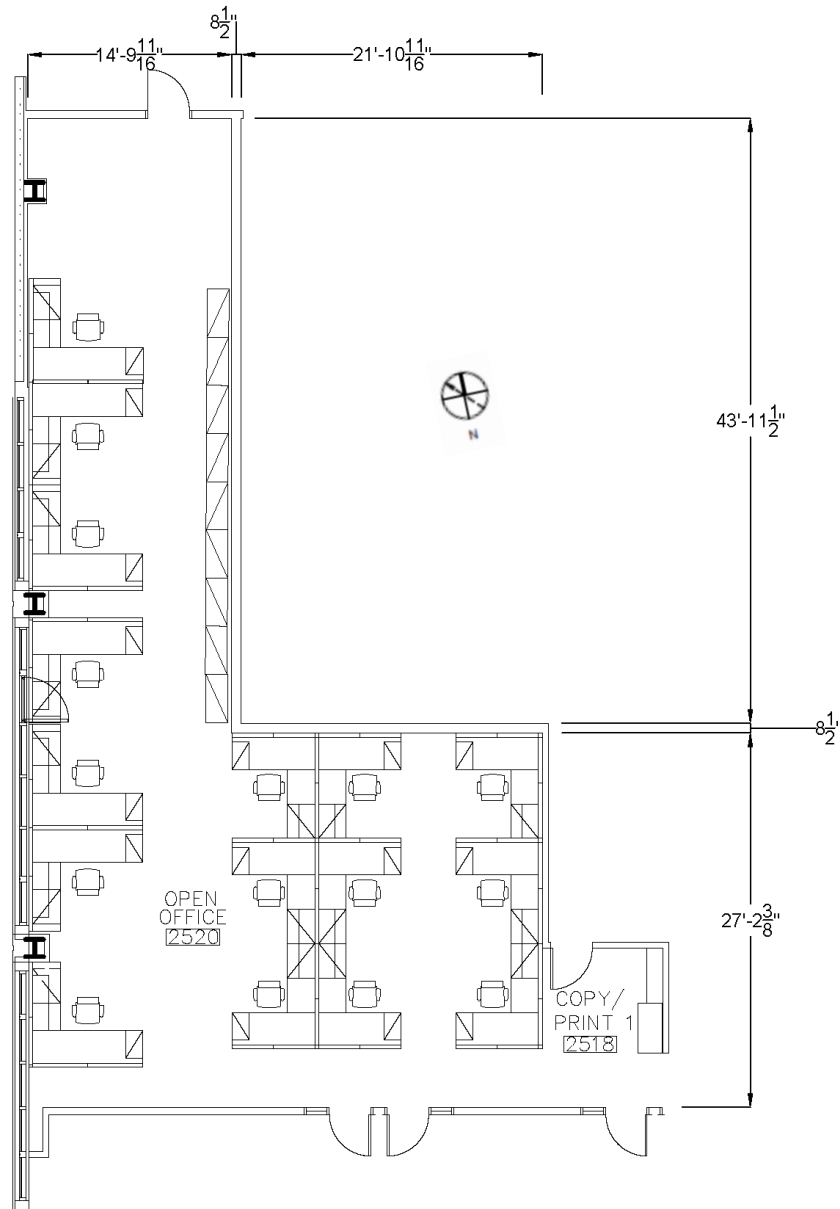
For the large work space Open Office 2520 was selected. Open Office 2520 is a 1600 SF “L” shaped open office located in the southwest corner of the building. This office has significant exterior exposure on the west side.

Image 1 – Open Office 2520 Location



1.2 Dimensions

Open Office 2520 has 9 foot ceilings with 11 foot high coves at the windows.



1.3 Materials

Table 1 – Open Office 2520 Finish Schedule

Ceiling Finish	Floor Finish	Wall Finish
ACOUSTICAL PANEL CEILING SIZE: 24 X 24 INCHES COLOR: WHITE	CARPET TILE MFR: BENTLEY PRINCE STREET STYLE: ILLUMINAIRE/4IU300620R COLOR: OPENING NIGHT/ 403674 INSTALL: ASHLAR	MFR: SHERWIN WILLIAMS COLOR: PURE WHITE 7005 FINISH: EGGSHELL

The windows located on the west wall start at 2'-4" AFF and go to the top of the window cove. They use the typical vision glass for the building that has a VLT of 48% and an SHGC of 0.25.

1.4 Task Analysis

This is an open office space so the tasks being performed would include the following:

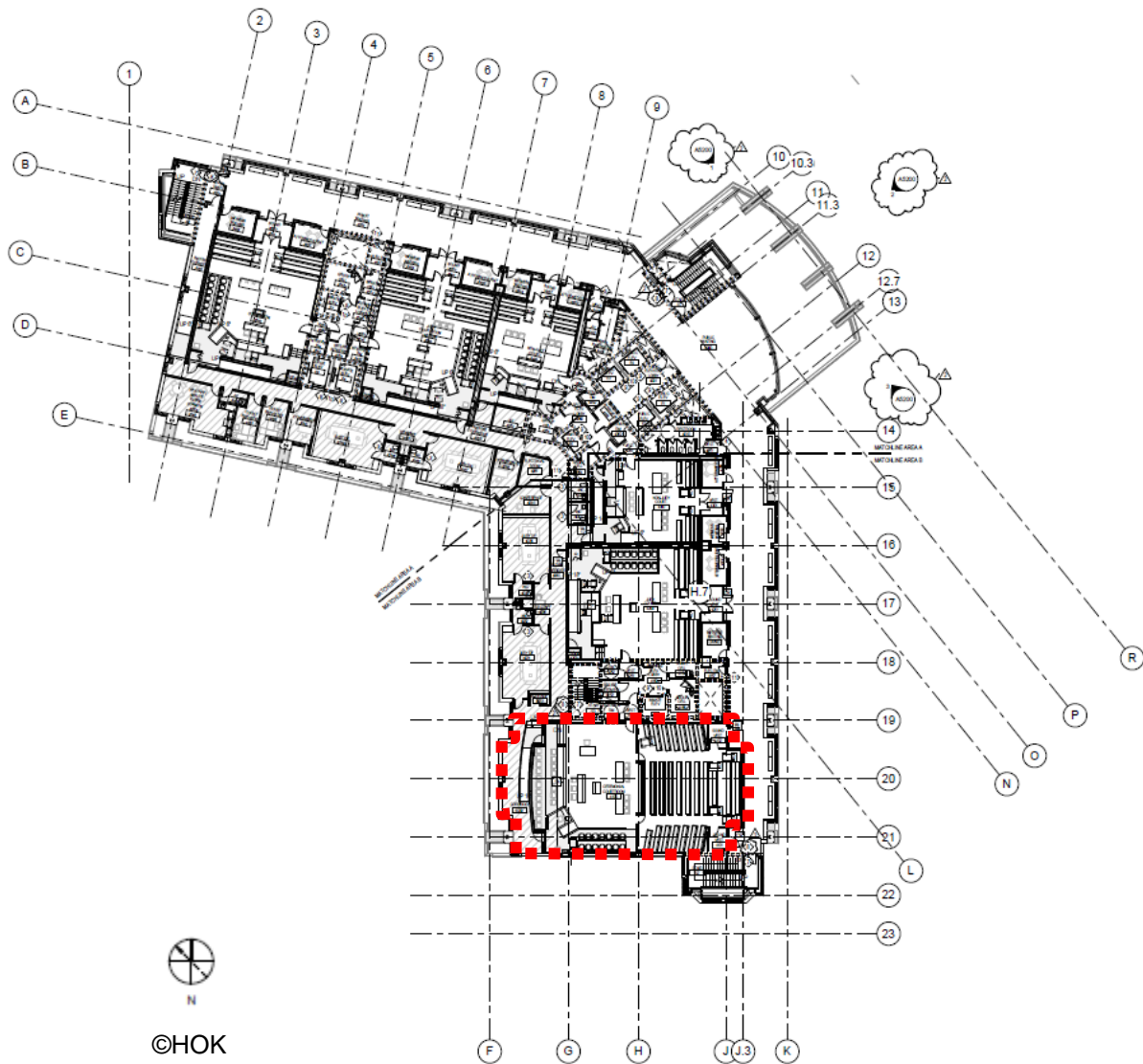
- Reading and writing of handwritten and printed media
- Use of VDT's
- Wayfinding
- Face-to-face conversation

2. Special Purpose Space

2.1 Introduction

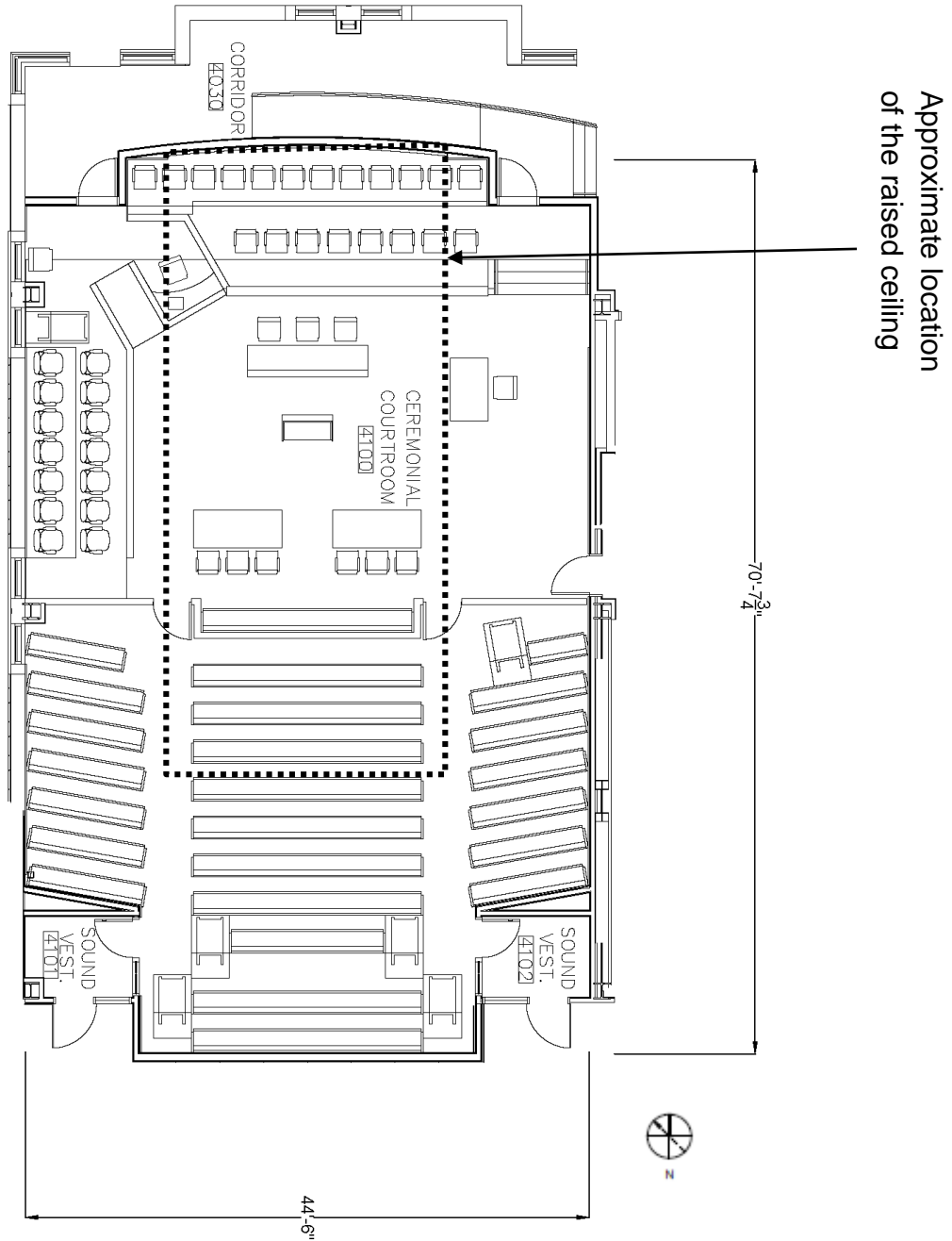
For the special purpose space Ceremonial Courtroom 4100 was selected. This 2900 SF courtroom is the largest of the courtrooms with 222 seats and is located in the southeast end of the building. This space was selected to have three design concepts developed and presented.

Image 2 - Ceremonial Courtroom 4100 Location



2.2 Dimensions

The ceiling of Ceremonial Courtroom 4100 is at 10'-6" with the center portion raised to 12'-0".



2.3 Materials

Table 2 – Ceremonial Courtroom 4100 Finish Schedule

Ceiling Finish	Floor Finish	Wall Finish
ACOUSTICAL PANEL CEILING SIZE: 24 X 24 INCHES COLOR: WHITE LR: ≥0.9 ACOUSTICAL PANEL CEILING SIZE: 72 X 24 INCHES COLOR: WHITE LR: ≥0.83	CARPET (COURTROOMS) MFR: INVISION STYLE: TUSSAH / 9144 COLOR: DUSK / 9211 INSTALL: BROADLOOM	HANDSET STONE MFR: COLD SPRINGS SPECIES: GRANITE: MOUNTAIN GREEN FINISH: DIAMOND TEN HARDWOOD VENEER PANEL MFR: DANZER GROUP LOG: #C596319 STYLE: BLACK WALNUT COLOR: QUARTERSAWN/FIGURED FABRIC WRAPPED PANEL MFR: DESIGNTEX STYLE: TWIST COLOR: CLAY SEAMLESS ACOUSTIC PANEL

Along the plan east (rear) wall there is a clearstory looking into the lobby. The plan south wall has several windows with motorized shades. Hardwood benches are used for the gallery seating.

2.4 Task Analysis

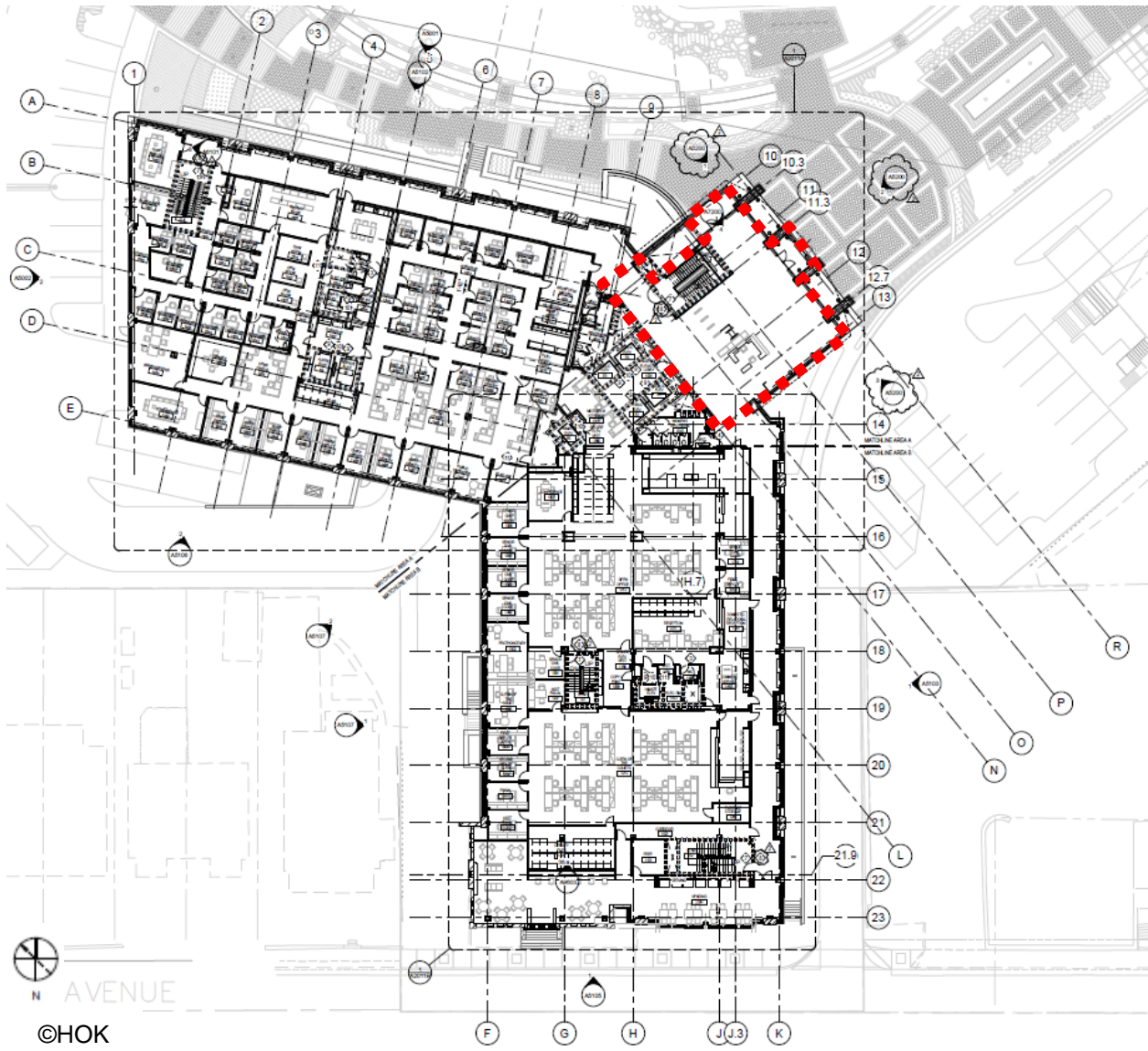
This space is a courtroom so the visual tasks of the space would include the following:

- Reading and writing of handwritten and printed media
- Use of VDT's
- Wayfinding
- Video recording and conferencing
- Electronic visual presentations of images, graphics, and videos
- Presentation of objects and printed posters and images

3. Circulation Space

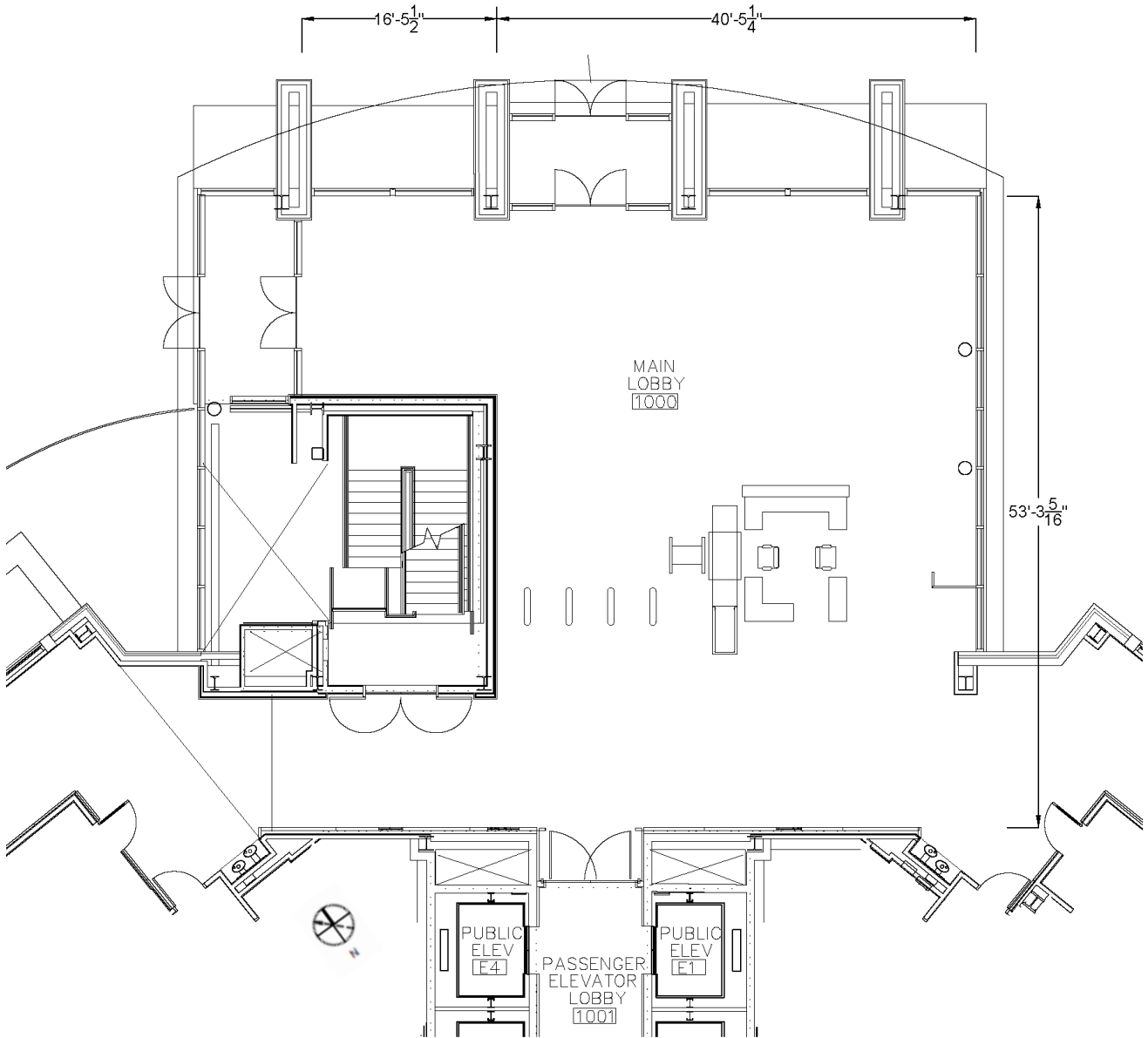
3.1 Introduction

For the circulation space Main Lobby 1000 was selected. Main Lobby 1000 is approximately 3000 SF and is located on the east side of the building at the intersection of the two wings. It is double height with a second floor balcony overlooking it. The east façade is primarily glass which provides extensive exposure to daylight. This space was selected to have specific attention applied to the lighting design in order to achieve one of the psychological impressions.



3.2 Dimensions

The ceiling of Main Lobby 1000 is 26'-2" in the center and 28'-6" around the edges.



3.3 Materials

Table 3 – Main Lobby 1000 Finish Schedule

Ceiling Finish	Floor Finish	Wall Finish
ACOUSTICAL METAL CEILING SIZE: 24 X 24 INCHES COLOR: WHITE LR: ≥0.6 GYPSUM CEILING COLOR: WHITE	STONE SPECIES: GRANITE: PENNSYLVANIA BLACK FINISH: POLISHED STONE SPECIES: GRANITE: MOUNTAIN GREEN FINISH: DIAMOND TEN	TERRACOTTA WALL TILE COLOR: CUSTOM BLEND SIZE: 12" X 36" STONE FINISH SPECIES: BOWDEN LIMESTONE FINISH: TEXTURED

3.4 Task Analysis

This space is the main lobby for a large courthouse so the visual tasks of the space would include the following:

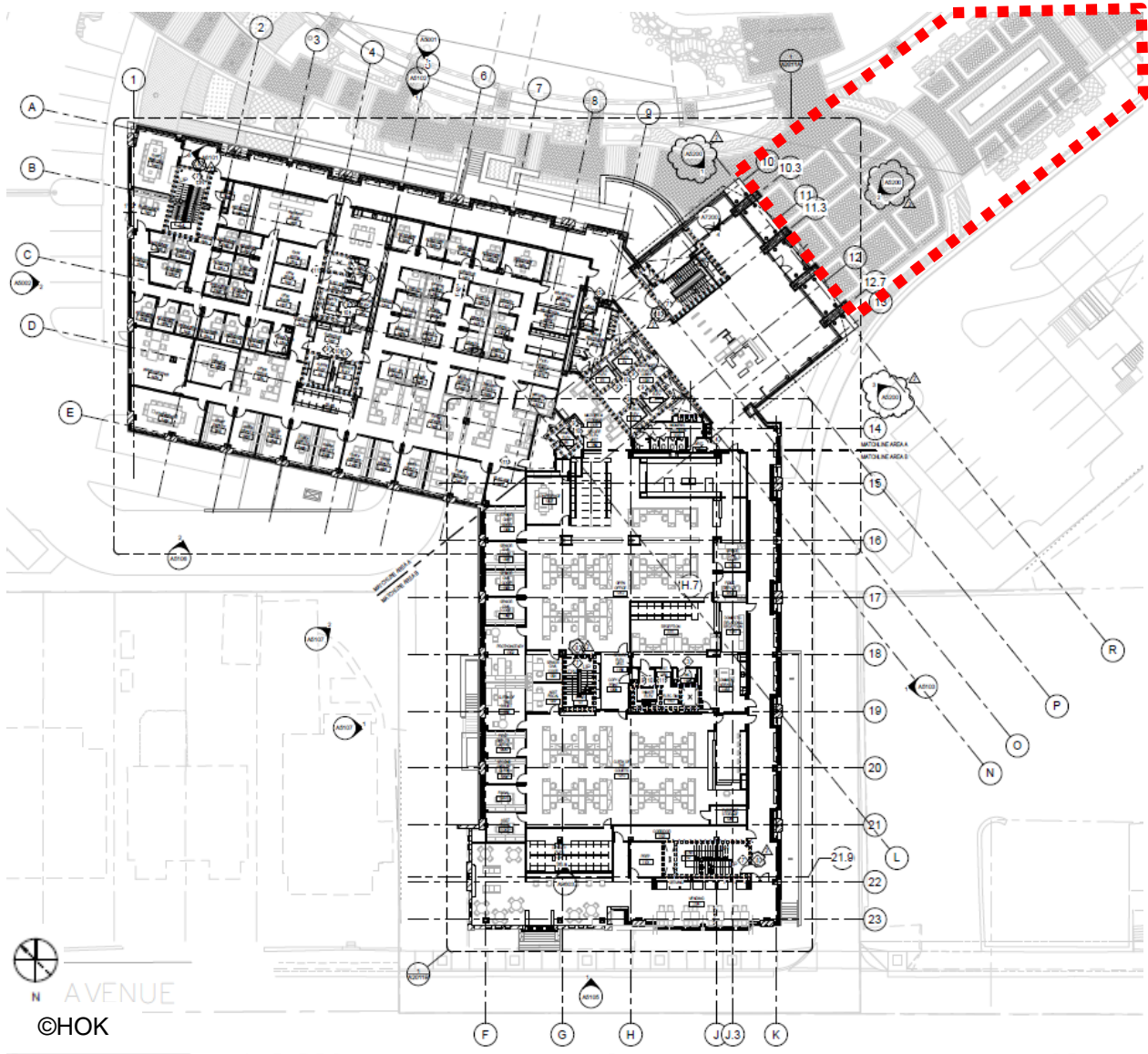
- Reading printed media
- Wayfinding
- Face-to-face communication
- Security screenings

Additionally, this space is highly visible from the exterior so this must be considered in the design. The difference between exterior and interior illumination levels must also be considered.

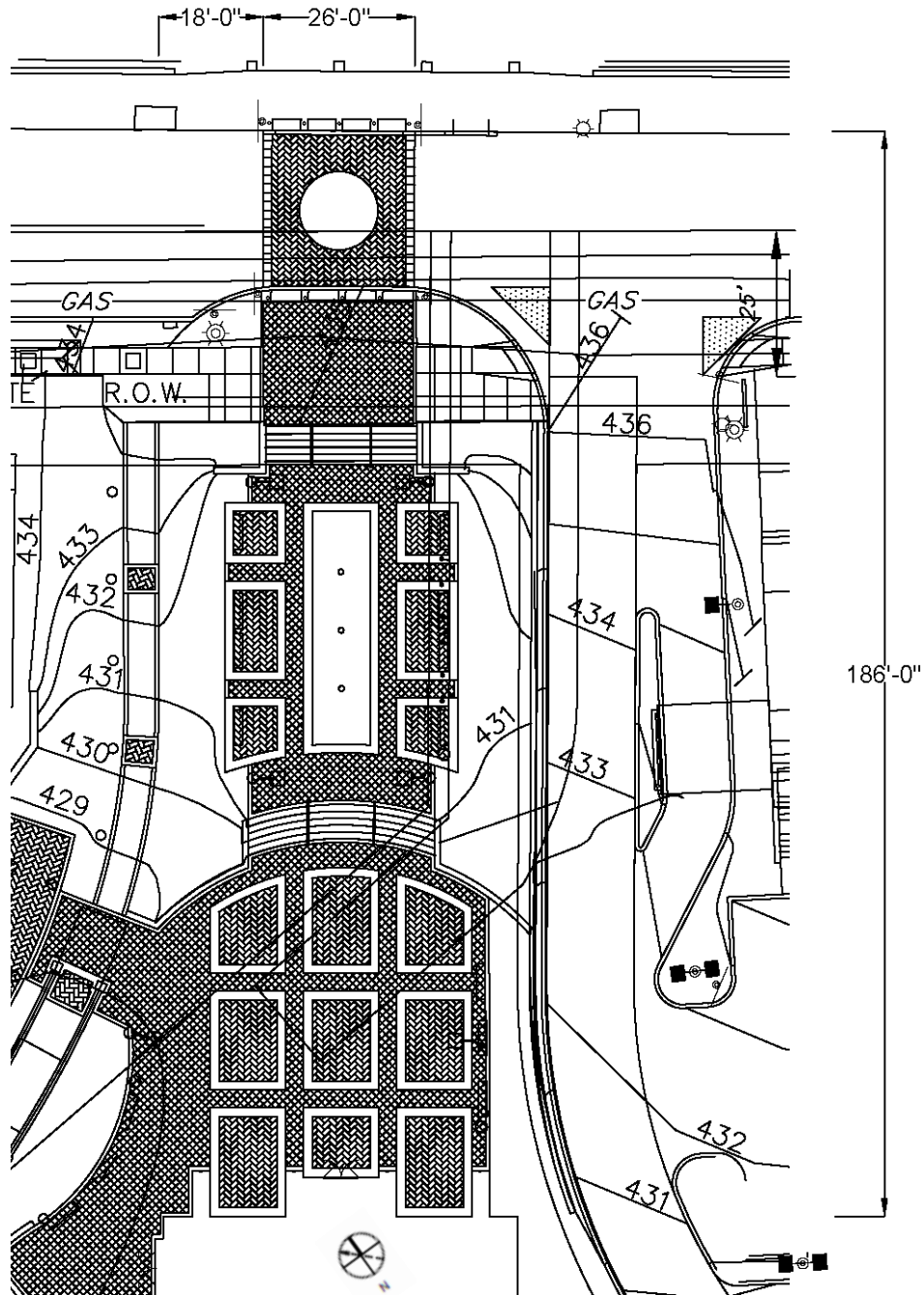
4. Outdoor Space

4.1 Introduction

For the Outdoor Space the Plaza outside of Main Lobby was selected. This space connects the main entrance of the new justice center to the old courthouse located across the street.



4.2 Dimensions



4.3 Materials

The primary materials used in this space are granite stone pavers 6" x 6", brick pavers in a herringbone pattern, granite stone paving bands 18" x 24", and stone steps. There are deep brown wooden benches located throughout the area. Located in the center of the plaza are three 30'-0" flagpoles.

4.4 Task Analysis

This space is the path to and from the main entrance so the visual tasks of the space would include the following:

- Wayfinding
- Face-to-face communication
- Security

This exterior space is one of the most highly visible portions of the exterior so it is very important that the design creates a pleasing image of the site.