The American Institute of Architects

RENOVATION OF THE AIA HEADQUARTERS BUILDING

Proposal for Design *Volume 2 of 3*

Project Approach

October 23, 2020

ZGF

Proposal Checklist

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Project Approach

Thoughtful yet efficient, measured yet intensive, precise yet nimble, focused yet visionary—these are just a few key descriptors of our team. In the following Project Approach, we have begun to articulate our preliminary ideas surrounding the AIA Headquarters Renovation's unique opportunities and challenges, as well as the process through which we will develop these ideas with the AIA. Our integrated approach will lead to a headquarters that reflects your organization's needs and aspirations today, tomorrow, and the day after, while remaining within your schedule and budget parameters. We are eager to engage the AIA's stakeholders, as well as the architectural and Washington, DC communities, to create an ambassador project that represents health, equity, and environmental stewardship.

> ***We knew we could do something amazing, a moonshot idea, as well as being the correct stewards for the building.***
>
> R.G. Kahoe,
> Google Project Executive

Google, Spruce Goose
Playa Vista, California

A.
Creative / Design Plan

A. The Architect's philosophy of design.

Philosophy

ZGF and Michael Marshall Design (MMD) believe human performance, well-being, and inspiration are influenced by the physical environment. We think beyond technical solutions to integrate beauty, materiality, and craft into everything we touch. We design spaces, plan communities, create art, and develop responsive, humane environments for all.

We have no stylistic predilections and believe in design that transcends time. We believe that excellence should be reflected in every aspect of a building. All our work is derived from particulars of climate, place, and purpose. We strive to embody the culture of each institution, while at the same time respecting its significance in the eyes of the community it serves.

We have a passion for finding creative and sustainable ways of bringing new life to existing buildings. Our approach has broadened to become trans-disciplinary—intentionally bridging architecture, interior design, space strategy and planning, experiential design, and building performance. All of our projects are rooted in a strong belief in three fundamental attributes that are essential to success: leadership, partnership, and communication.

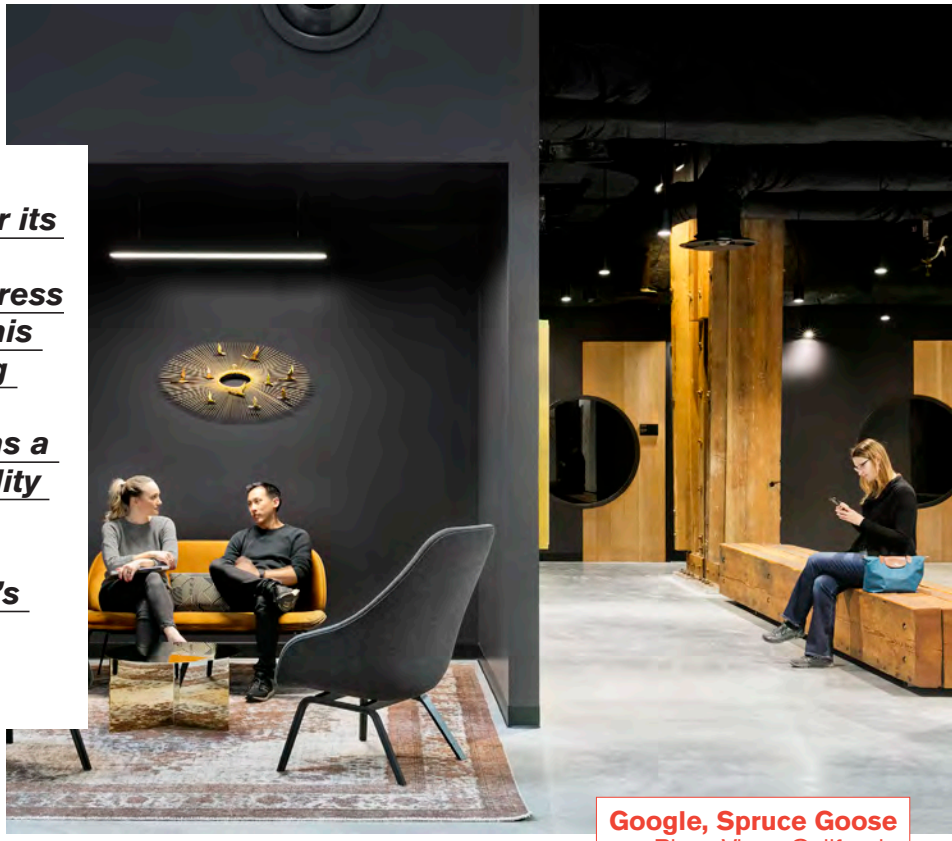
» ***Leadership*** Identifying and articulating key working assumptions for the project that relate directly to your goals and expectations; providing a framework for action; maintaining focus; creating a dialogue for open, accurate, and constant communication; and driving decisions to maintain progress towards a successful outcome.

» ***Partnership*** Engaging the full resources of the team to capitalize on each member's individual value; establishing a clear set of goals and objectives; clarifying roles, responsibilities, and expectations; and monitoring progress.

» ***Communication*** Creating an environment fosters collaboration among the entire project team; and maintaining full transparency so that each member of the team can contribute to the project's success.

The AIA headquarters renewal will dramatically transform AIA's home for its staff, members, and visitors. This once-in-a-generation project will address the urgent need for climate action. This renewal will leverage forward-looking design to enhance and foster AIA's connection to the community, serve as a model of stewardship and sustainability for the public and profession, and create a flexible and collaborative work environment that embodies AIA's mission and values.

AIA Headquarters Renovation, Vision Statement



Google, Spruce Goose
Playa Vista, California

Designing for Today, Tomorrow, and the Day After

Today, we are sitting at the nexus of three major sets of issues that already and will continue to have outsized impacts on the future of our profession and the world at large:

- **Health** COVID-19 public health crisis
- **Equity** Systemic racial injustice
- **Environment** Climate change

The COVID-19 public health crisis has brought a renewed focus on the importance of flexible, adaptable, and resilient design. We recognize the critical need for healthy spaces that protect their inhabitants while being able to evolve to accommodate future, unanticipated changes. Today, we have rapidly transitioned to working from home (or living at work!). While it has proven effective in many situations, the benefits that come from face-to-face interaction at the office, both for the individual and for the organization, cannot be denied. We know that we will return to the office, and we commit to partnering with AIA to uncover what form that may take for your staff and how your new workplace can best support them. We also recognize that design should consider future proofing for the next, unforeseen public health emergency.

The current social justice movement has highlighted the systemic racial injustice in the architectural profession, the built environment, and our society in general. We commit to justice, equity, diversity, and inclusion—both in our practice and our approach to design. Diversity enhances creativity, and the unique viewpoints of our team members allow us to bring a fresh perspective to each project and to generate innovative ideas and solutions.

> ***Over the past months as we have settled in, I have taken great pride in showing visitors around. I have also sensed a reinvigorated esprit de corps among the staff. We are inspired by our beautiful campus as we carry out our mission of improving the lives of disadvantaged and vulnerable people throughout the world.***
>
> Steven Hilton, Chairman of the Board,
> Conrad N. Hilton Foundation

Combatting climate change continues to be a critical priority for our profession. Buildings were responsible for nearly 50% of greenhouse gas emissions globally as of 2017. In recent years, we have further expanded our focus on life cycle analysis and eliminating emissions from building materials (embodied carbon), building upon our industry's advancements in minimizing energy use and incorporating renewable energy sources.

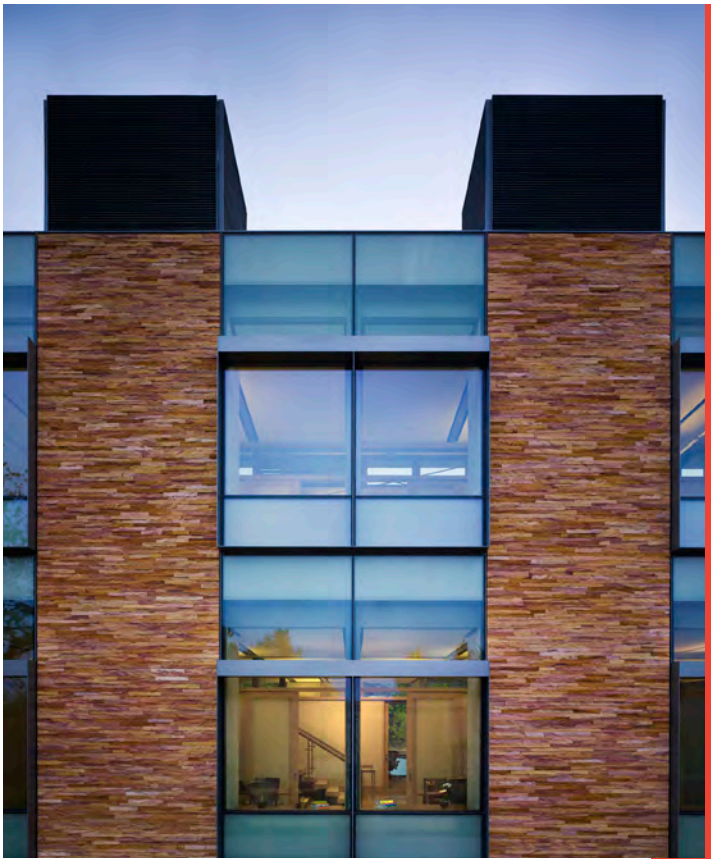
As we have begun to consider the AIA Headquarters Renovation, we find ourselves asking: how can this once-in-a-generation project represent the AIA as an organization, an employer, a cohort of more than 95,000 constituents, a brand, and a set of values in the broadest possible way? How can the headquarters be welcoming to all who are connected to the AIA—from local to national, sole practitioner to large firm, high school student to retiree, residential designer to laboratory planner? We acknowledge that people's experiences of the AIA are likely to be very different depending on their background. How can it serve as **the place in-between our individuality**, and demonstrate that **architecture is for everyone?** We cannot address these questions without addressing the interdependencies of designing for health, equity, and the environment, and we will use this as the starting place for our exploration with you.

B. The use of an Integrated Design Process.

Integrated Design Process

Design, as a process, requires both divergent and convergent thinking to purposefully uncover solutions that are unique and authentic to the overarching culture, vision, and psychology of an organization. The specific activities in our design process—from visioning, research, data-gathering, and analysis, to regular design meetings and milestone presentations—will ultimately be tailored to fit the AIA's unique workplace culture and this specific project engagement.

Our approach is based on proactive management of the design and construction process—budget, schedule, and quality—combined with an understanding that open communication, active participation by a committed team, and focus on your expressed project goals are critical to achieving something truly special. The success of any project is determined largely by the quality of the approach undertaken in the early design process. To address the AIA Headquarters Renovation, our team's composition is interdisciplinary, as we recognize that this project will be complicated and will require a breadth of knowledge that exceeds any one specialty. Steven Lewis, our IDP Facilitator, will acts as the steward of the AIA's project goals, implementing a holistic design process. Steven is skilled in the facilitation of charettes and will ensure that the process leverages contributions from every team member. The key is a broad and integrated investigation—one which carries no preconceptions and defines success as the intersection of value



Conrad N. Hilton Foundation Headquarters

In an effort to meet a goal of LEED Platinum® with a net-zero energy footprint, the design of the Conrad N. Hilton Foundation headquarters employed a unique buoyancy mechanical system intended to condition the space within traditional comfort zones without the use of air handlers. Because this system was a first of its kind, the early collaboration between ZGF, MATT Construction, and the engineering disciplines was essential. An integrated design, implementation, and commissioning team worked together from the early design phases through a year of occupancy to tune the systems to ensure user satisfaction and operational performance. Upon completion, the design team worked with the owner and commissioning agent to optimize all the systems and conduct a post-occupancy evaluation. The team monitored, measured, and adjusted the building to ensure the net-zero energy targets were achieved.

and performance. Clear goal setting will be essential to the success of the project. Our understanding of your aspirations will guide the design, analysis, and decision-making process.

Our philosophy is to intentionally bridge the disciplines of architecture, interior design, space planning, experiential graphics, and building performance to develop comprehensive insights on work and space. We will function holistically, with every member of the design, consultant, and client team involved in the project from its onset. This early engagement will allow us to investigate, test, evaluate, and develop a guiding strategy. We will solicit input from a broad cross-section of stakeholders so that they contribute to, and become invested in, the design ideas and solutions that emerge. We are well-versed in accommodating complex programs, addressing complex building issues, and reconciling the needs of complex, multi-headed user groups.

We have drafted a schedule on page 36 that we will work to confirm and develop in partnership with the AIA. Continual tracking will enable refinement of the schedule as the project proceeds. Identification of non-sequential tasks, along with proactive anticipation of upcoming tasks, can help provide schedule flexibility and control. A schedule for regular team meetings, based on the master schedule, will guide the team. Meeting notes will be issued to identify action items and assign responsibilities. A “rolling log” of issues will track all items. Detailed monthly reports will highlight upcoming work sessions, the status of the overall design and construction schedule, and potential issues affecting schedule and their resolution. This rigorous and organized process will keep all parties—and the overall project—on track.

C. How the Architect will interact with CM@Risk and AIA regarding design.

We recognize that our success as a team depends on close and early integration with the CM. We will rely heavily on the CM's advice to meet schedule and budget parameters, minimize unnecessary waste, and create efficiencies in the design and delivery of the project. The following will be critical facets of interaction among ZGF, MMD, the CM, our consultants, continued work with Goulston & Storrs for the entitlement process, and the AIA:

» Participation of consultants and the CM from the beginning of the design process, which improves understanding of the interrelationships of building systems, real time cost evaluation, constructability reviews, systems selection and integration, and life cycle analysis.

» Mutual ownership and responsibility for design quality, cost management, and schedule.

» An approach to documentation and coordination that reduces redundancies and focuses on maximizing value. Having the CM understand the intent of the many decisions made in the design process can allow for alternate suggestions to be made and economical solutions to be generated.

» Early involvement of key trades (as a supplement to the design / construction team) can be critical in the design of major building systems, such as the exterior envelope and MEP systems. This early engagement can facilitate material selection, system detailing, and help refine the current budget / cost estimate. Identifying items, processes and systems that are performance-based allows suppliers and subcontractors the flexibility to incorporate their own processes and designs, minimizing design team time redrawing this work.

From day one, the CM will be engaged in all discussions on project schedule, phasing, cost management, material selection, and systems design. This was crucial to the design and delivery of Expensify's Landmark Office, where ZGF worked closely with the CM to conduct extensive due diligence, historic research, and seismic and code analysis, ultimately developing a work plan to build a series of open and closed workspaces in areas that would have otherwise been unusable.

ZGF and MMD will maintain an active role throughout the project's entire design and construction process to see that the work is completed on time, on budget, to the AIA's standards, and that the design intent is executed. This is only possible when we maintain close working relationships with the CM and consultants for the duration to align design and construction objectives, project milestones, and all anticipated and potential challenges. Construction contract administration will be executed by those individuals who have been responsible for the preparation of construction documents, and who are therefore able to work efficiently with the CM to review and check shop drawings and requests for information. We consistently receive high marks from contractors for our collaborative attitude and timely response throughout construction.

D. How the Architect will achieve the sustainability goals in the Scope of Work.

Our approach to sustainability is rooted in holistic systems thinking, like the AIA's Framework for Design Excellence. We recognize that good design is sustainable design and that all facets of the team have a role in meeting the project aspirations. ZGF's internal Project Performance Team brings vast expertise and evidence-based design support with everything from in-house early energy design to daylight modeling and embodied carbon analysis using Whole Building LCA.

ZGF and MMD share the AIA's commitment to climate action. ZGF was one of the first firms to sign on to the AIA 2030 Commitment, and we have been reporting on our design portfolio performance since 2010. We approach our responsibility to mitigate climate change by looking at all aspects of the design, including the carbon impacts of operating the building—both on-site and through the grid from which it pulls, the embodied carbon of the materials we specify, the transportation of building users, and the landscape's function as a potential carbon sink.

Our approach to reducing operational carbon will build on the solid work already put forth in the Basis of Design Report. Building envelope, equipment, and lighting upgrades will set up the project to meet its 2030 goals in the near future. We will work collaboratively with AIA and the rest of our team to optimize strategies to create a highly sustainable building.

In 2018, Lona Rerick chaired the AIA Materials Knowledge Working Group and led the group's creation of the Materials Pledge. Modeled after the 2030 Challenge, the Materials Pledge is a holistic set of aspirations created to define and classify sustainable materials. A truly sustainable material supports human health, climate health, ecosystem health, and social health and equity in a circular economy. She will bring this leadership thinking to the application of the AIA Framework for Design Excellence and the AIA 2030 Commitment to this project.

Currently under construction, the CalSTRS Headquarters Expansion in West Sacramento, California is targeting LEED v4 Platinum, WELL v2 Gold, and Living Building Challenge v3.1 Materials Petal certification. Engineered by PAE, the project will produce more than 1,040 MWh of solar power, which equates approximately 64% of the total annual energy by cost and collect rainwater in a 40,000 gallon tank for on-site irrigation. Like the AIA Headquarters Renewal, the CalSTRS Headquarters will be a model of sustainable building with a focus on resiliency as well as employee health and retention.

E. How the Architect plans to address unique features and challenges of the Project (including the impacts of COVID-19).

What we have heard, read, and seen so far presents a clear and ambitious vision for the future of the AIA Headquarters Building in Washington, DC. AIA's passion and commitment to this once-in-a-generation opportunity has been immediately apparent and has left a deep impression on our team. We have begun to consider the major, interconnected components of this project: the **interdependence** of health, equity, and the environment to realize a new future; a place for uniting **community** and driving progress in the industry at large; an external **presence** that serves as the face of the AIA; and a resilient **workplace** for AIA leadership and staff. Given these ambitious but achievable goals, we have started to depict a range of considerations for the AIA Headquarters Renovation. Far from being design solutions, these thoughts instead represent the first step in our working conversation.

Interdependence

In order re-envision the AIA Headquarters Building for today, tomorrow, and the day after, we cannot isolate any of the societal issues we are facing—COVID-19 and future unforeseen health crises, systemic racial injustice, and climate change—nor the major components of the renovation, including the workplace, the visitor and community experience, and the architectural presence. We must consider them in connection with each other in order to articulate a design vision that is inclusive to all, offers long-term resilience, and is a beacon of environmental stewardship. This is perhaps the greatest challenge and opportunity that the project presents. It is also what most inspires our team.

Community

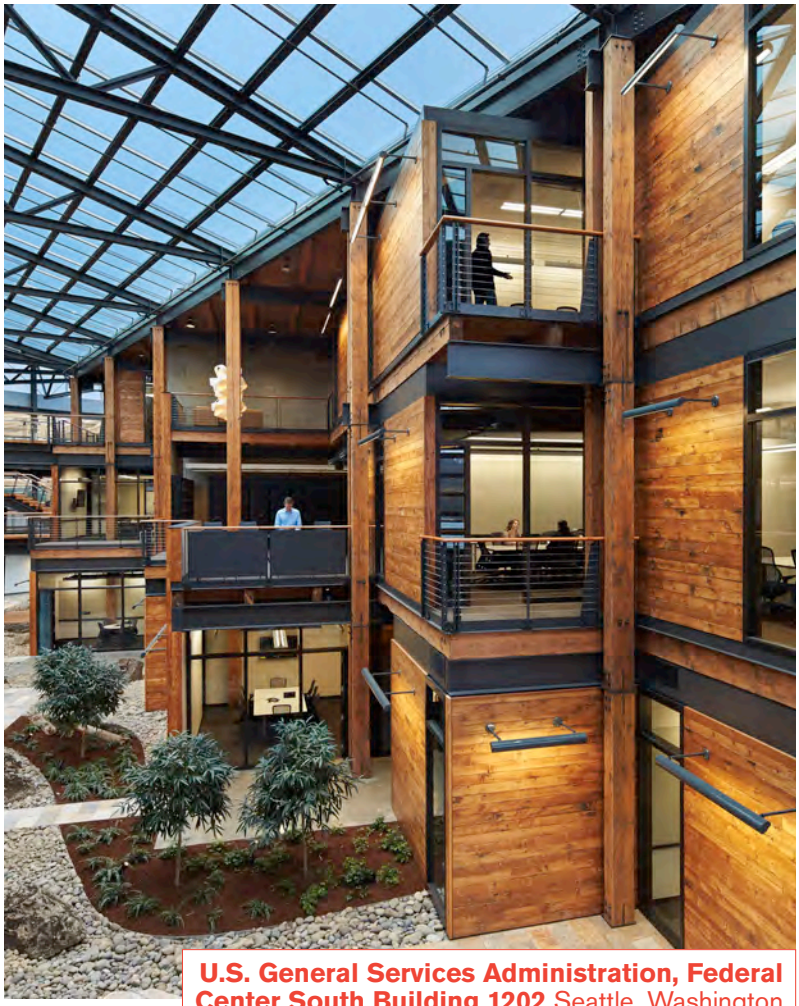
The AIA Headquarters Renovation has the potential to usher in a new age of architecture where equity, diversity, inclusion, health, and performance are equally considered. We value the design intent of the original entry sequence into the building and the public spaces, yet we recognize they are largely underutilized, inactive spaces. Simultaneously, we acknowledge that there are as many different experiences of the AIA as there are staff, constituents, and visitors. We will strive to activate and equalize the experience of being at the AIA headquarters and demonstrate that architecture is for everyone.

THE AIA HEADQUARTERS AS AN EMBASSY TO THE PROFESSION

The AIA headquarters will work in concert with The Octagon to inspire architects and the public alike, generating interest and conveying our profession's profound impact on society. One example of a powerful gesture could be to re-brand the courtyard as the Whitney M. Young Jr. courtyard and incorporate design elements, such as digital media, that directly address current issues and events.

Presence

In 1968, when The Architect's Collaborative was selected for the design of the then-new headquarters building, they were chosen for their view of the building as an environment of action—not an architectural statement. We believe this project should embody the same ethos. We will aim for the renewal to reflect the history and legacy of the building and the AIA, while creating space for change and evolution—thus embracing a strong, equitable future.



U.S. General Services Administration, Federal Center South Building 1202 Seattle, Washington

We are fortunate that the AIA Headquarters Building is only steps away from the National Mall, museums, and monuments. We believe the headquarters can be the gateway—literally and metaphorically—to the public's understanding of the architecture profession. The courtyard and main entrance should be on the itinerary of anyone visiting the Mall, in addition to visiting the Octagon, just as they visit the other nearby national museums. This would enhance the AIA's image in the public eye.

Starting with a new entrance sequence from street level along New York Avenue, it will be critical to address ADA access via an appropriate ramp. This begins to address that, as an institution, we embrace diversity,

> ***We will re-imagine the AIA Headquarters as the appropriate, welcoming center to our profession, showcasing the role of architects in the future.***

inclusion, and accessibility for all. The newly enhanced courtyard will then better support the various activities of the AIA and also provide a venue for revenue-generating rental events, with the possibility of making the gift shop, bookstore, and a café amenities for the community. The multipurpose space adjacent to the courtyard could also be enhanced by the addition of doors or some form of access directly to the exterior, blurring the distinction between the inside and outside as event space. The main entrance level should continue to serve as a showcase for our membership, with various exhibitions and events, but be brought to new levels of activation.

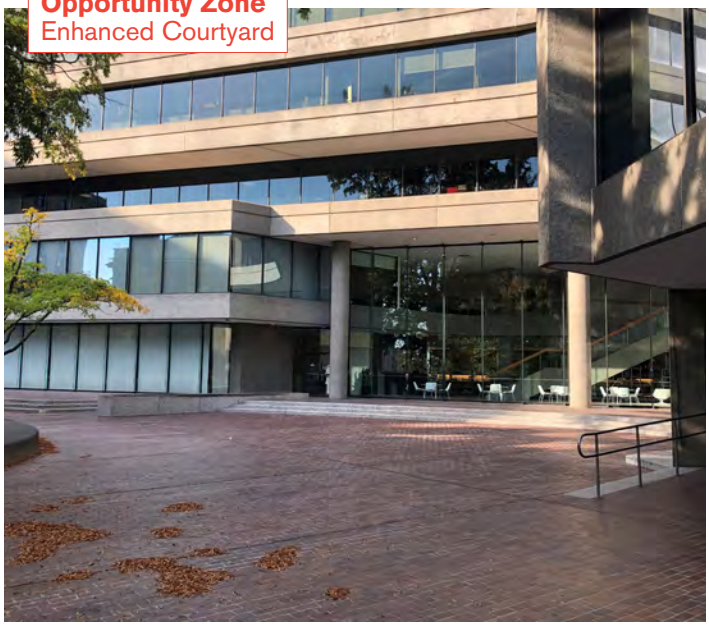
We will be stewards of the environment by preserving key features of the building envelope—reducing the embodied carbon while improving the performance of the enclosure with triple-pane insulated windows and insulated walls—reducing future energy consumption.

Workplace

The desire for flexible workplace environments that foster collaboration, inspire teams, and embrace inclusion are common requests of our clients. We consider the brick-and-mortar of creative workplaces as the "connective tissue" of organizations. Even though social connection is well-documented as one of the fundamental psychological needs of all humans, the pandemic has required us to dramatically alter our habits and behaviors in order to protect our friends, families, and coworkers. In thinking about the "workplace of the future," we must rethink the workplace to maximize opportunities for bringing people together in new and more meaningful ways, while prioritizing safety in the short-term.

Opportunity Zone
Along New York Avenue

Opportunity Zone
Enhanced Courtyard

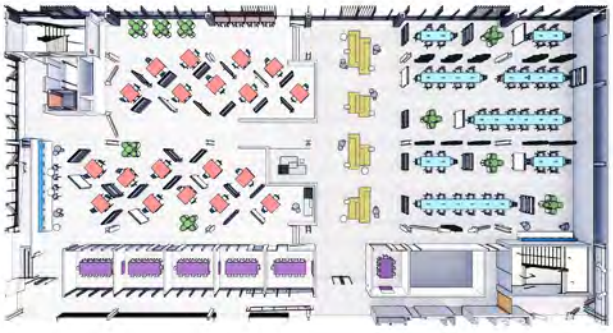


Kit of Parts

Connecting activities to spaces is imperative in finding the optimal correlation between preferred ways of working and supportive environments. By establishing a programmatic kit of parts, we can offer individual choice and long-term flexibility, balancing collaborative areas and a mix of quiet and contemplative spaces in multiple settings.

Heavy Collaboration

FEWER ENCLOSED SPACES - ANCILLARY SETTINGS MIXED WITH WORKSTATIONS



Team Collaboration
Breakout Tables
Ancillary Seating
Workstations
Conference Seating

The Usual Suspects

OPEN WORKPLACE WITH COLLABORATION ZONES SURROUNDED BY ENCLOSED TEAM SPACES

Workstations
Team Collaboration
Ancillary Seating
Shared Offices
Conference Seating

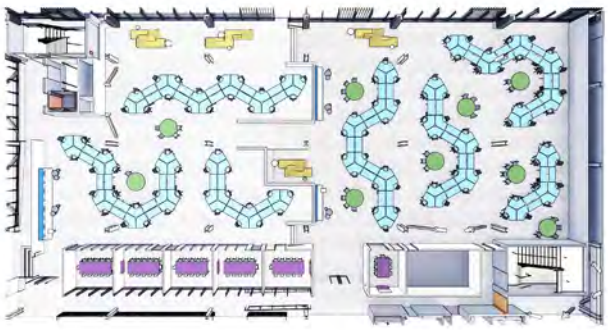
The Campground

SHELTERED INDIVIDUAL DESKS COUPLED WITH NODES OF DUAL / COMMUNAL COLLABORATION

Table Height Seating
Bar Height Seating
Conference Seating

Socially-Distanced

OPEN WORKSPACE WITH COMMUNAL COLLABORATION NODES AND A FEW PRIVATE CONFERENCE SPACES



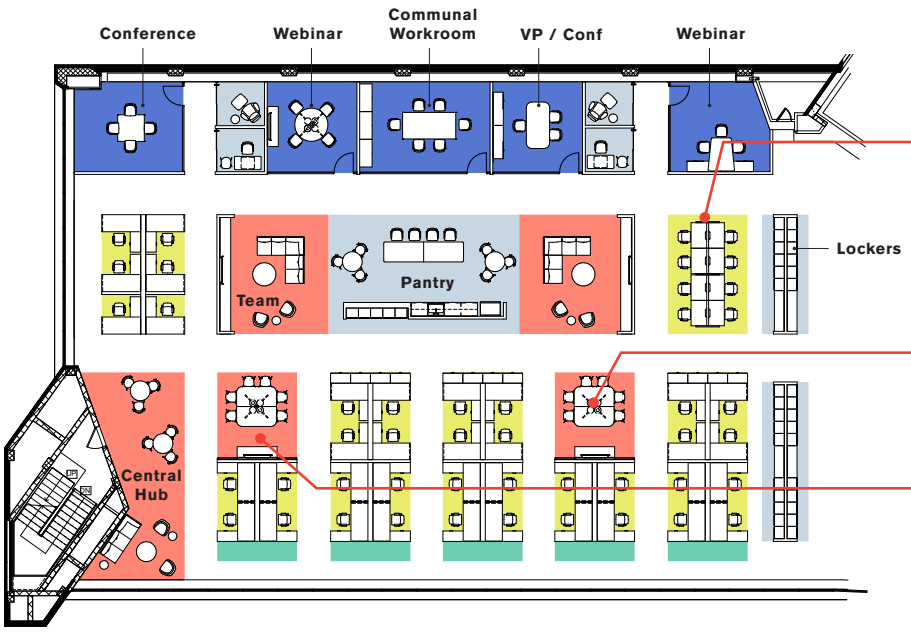
Workstation Pods
Team Collaboration
Ancillary Seating
Conference Seating

Resilient Design

Basis of Design

» Based on the workplace plan presented in the Basis of Design document, we studied different options for workplace strategies that are resilient by being healthy and adaptable and promoting equity.

Pockets of Activation



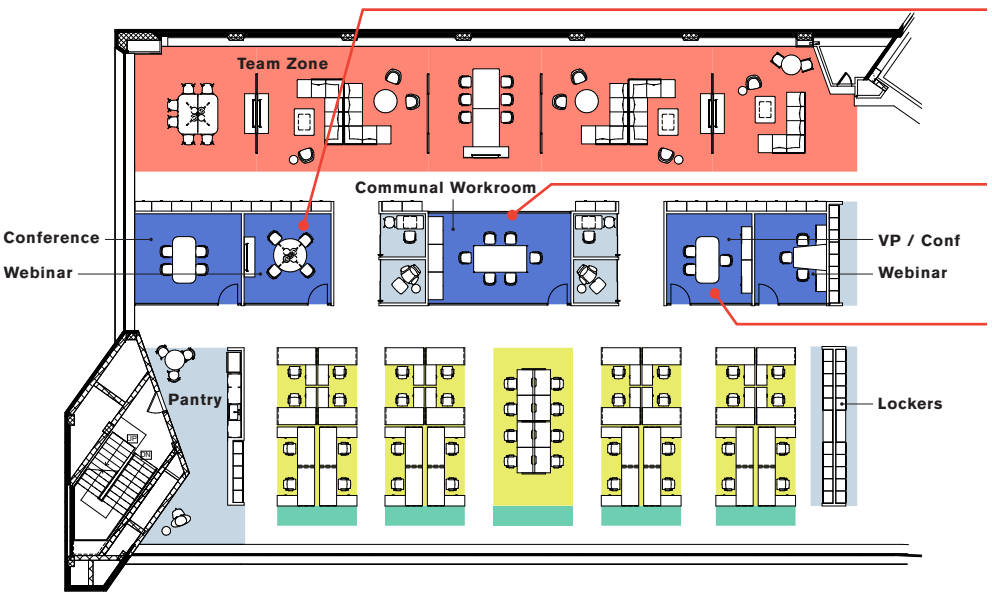
EQUITY Bring workstations closer to the private offices for transparency and to promote egalitarianism.

HEALTH Break up workstations with collaboration spaces; create smaller, more separate team areas.

FLEXIBILITY Decentralize team spaces to blend work and collaboration spaces, easing the workplace transformation process.

Workpsace Team Areas Enclosed Culture Support

Easing Transformation

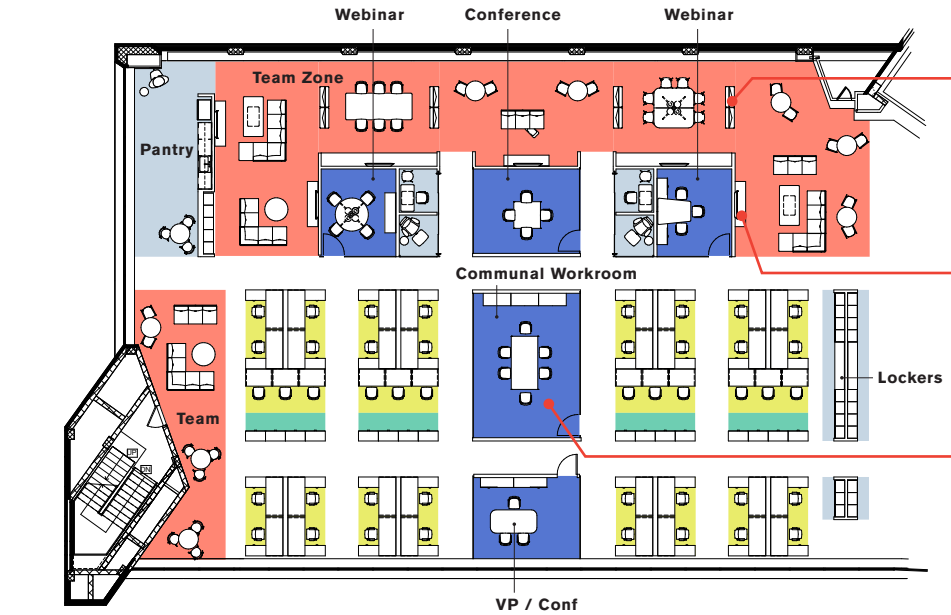


TRANSFORMATION Separate the open team and open workstations on day one to ease the transition from cubicles and enclosed offices.

RESILIENCY Pull enclosed rooms off the perimeter to create additional walls and maximize the kit of parts.

EQUITY Bring even those in offices closer to the primary workspace for transparency and to promote egalitarianism.

Visual Neighborhood Connections



FLEXIBILITY Create a continuous teaming area divided by real-time movable panels, versus fixed audio-visual walls.

RESILIENCY Use a single partition to enclose a conference room but also support audio-visual for the open team areas.

HEALTH Use glass demountable partitions to maintain visible connections while providing physically separate zones.

Workpsace Team Areas Enclosed Culture Support

B.
Management Plan

A. The design management of the Architect's team, including workshops, meetings, collaboration, interaction, and interfacing with the CM and the AIA.

Collaboration, Interaction, and Design Management

ZGF and MMD have worked extensively in collaborative team environments to deliver large, complex architectural projects, leading multidisciplinary teams to accomplish this work. Our management approach is based on a concerted effort to look forward and around corners. To ensure design quality, we understand the need to have all members of the team (the AIA, ZGF, MMD, the CM, and our consultants) moving simultaneously toward the same goal. We will set formal milestones along the way where we can evaluate all aspects of the total program, including design, cost, and schedule. This will be particularly critical to remaining within the AIA's $52,000,000 budget for hard costs. We recognize the importance of communication and of our role in stimulating and extracting feedback and sharing information among all team members.

Visioning, Goal Setting, Program Validation, and Building Planning

We understand that as part of the Basis of Design you have already established a vision and project goals. Our first step with you will be to validate and reinforce your level of confidence in the program, vision, goals, and planning to date. Our goal will be to understand which aspects of the Basis of Design are rock solid, and which require further refinement.

Fundamentally, ZGF and MMD's work is rooted in our clients' missions. We recognize that projects must relate to an organization's broader set of drivers. Yet, to develop nimble and implementable plans, processes must be collaborative and iterative—involving exploration of many options, discussions, and carefully timed "check-in" moments to adjust course. Our approach allows us to integrate global thinking—along with a very rational and thorough analysis of institutional goals and opportunities—to understand demand not just for today, but also for tomorrow and the day after.

> ***While the new terminal will give travelers more space, it will come with an important reduction: when complete PDX will use 50% less energy per SF while doubling the size of the building.***
>
> Port of Portand News Release

Port of Portland, PDXNext Terminal Core Redevelopment Portland, Oregon

Our proposed approach and work plan are developed around a series of **Integrated Design Events (IDEs)**—highly participatory workshops throughout the design process that bring stakeholders together to collectively explore new possibilities, confirm requirements, and develop strategies. We envision each IDE as spanning several days, and we will schedule them on regular intervals to address topics tied to project deliverables and milestones. We find it most productive to bookend each IDE with team leadership meetings—at the beginning to confirm intended outcomes and event goals, and at the end to confirm our findings. Outcomes of each IDE will result in both quantitative (programmatic) and qualitative recommendations to the AIA, defining new operating opportunities and exploring how the design of your headquarters can best support these ideas.

We propose commencing the project with a **two-day Kick-Off Workshop, which will serve as IDE 1**. At this workshop, we will conduct visioning exercises and establish project governance. The Kick-Off is one of the most critical moments in the life of a project. Our collaborative process begins here: we will identify key project decision makers and stakeholders, and we will develop a Project Charter to articulate our guiding principles. During this workshop, we will define the project's governance structure, identifying a Project Steering Committee (if not already established) with ultimate decision-making responsibility. This workshop will also provide an opportunity for the team to clarify expectations, confirm the timetable for critical decisions, and set up rules for engagement moving forward. The Project Charter will become a guidepost against which we can evaluate decisions and measure success.

To ensure the project's path to the **AIA 2030 Commitment**, we will focus on concepts for lowering operational energy use and carbon (embodied in materials, operations, and transportation, as well as sequestered on-site) in the Kick-Off Workshop. We will then check in on

the goals with energy modeling, whole project carbon accounting, product optimization, embodied carbon research (using EPDs and EC3), and Whole Building LCA as part of each key deliverable. ZGF and MMD, along with James Corner Field Operations (FO), will bring expertise in ecological issues surrounding climate change, natural resources, sustainability, and environmental resiliency, as well as the social issues surrounding communities, inclusion, diversity, and equity.

An important element of this early goal-setting process is identifying key attributes of similar projects at peer institutions. Our workshops will include case studies of similar designs, and we will plan digital project tours (or in-person if circumstances permit) of comparable projects during this time frame. We will conduct a Pull-Plan session to establish an agreed upon schedule, and we will work with Vermeulens to establish benchmark pricing that reflects the quality, scope, and economic environment of the project. This will help set the framework for the project team to meet budget goals in collaboration with the selected CM. We will use continuous cost tracking throughout the design process with real-time feedback from the construction side for a streamlined and more efficient Value Management process.

Our proposed draft schedule / work plan (which we will need to confirm with you) proposes four additional multi-day workshops during this phase. These workshops will allow us to gather diverse stakeholders and integrate cross-functional feedback into the concept design options. In support of this process, we recommend meetings to occur every three weeks with the core team members to maintain momentum, reaffirm objectives, and refine the program. Described below in greater detail is our proposed approach to initial development of the work, validation of the goals, and the beginning of building planning.

During **IDE 2** we will build upon the Basis of Design document. Focusing on Program Validation, we will confirm program requirements and component sizes, develop optimal adjacencies, and explore building and site constraints. We will further define the criteria for project success with feedback from the AIA Board of Directors, the AIA Building Committee, the AIA EVP and CEO, the AIA Chief of Staff, the AIA VP of Finance, the AIA Director of Facilities, the AIA Senior Leadership Team and the AIA Project Executive, and any other relevant stakeholders. We will also facilitate a collaborative work session with employees to establish the fundamental elements of a successful home for the AIA. We will invite constructive feedback and identify potential partners as collaborative users and stakeholders of the future headquarters. This feedback loop will continue to inform the project's development throughout the Program Validation and Concept Design phase. Additionally, this early collaboration with users enables active participation in the process of change and promotes collective ownership of decisions. We will submit the program verification package following this IDE.

During **IDEs 3 and 4**, our team will continue to refine the program based on feedback received from the review of the program verification package.

We will also introduce potential aesthetic approaches to align with the vision. Users will help us refine and test options. Our cost consultant, Vermeulens, will provide input on costs associated with proposed options that will help to focus the development of program and design. We will also confirm energy performance benchmarks, study options for building systems, and integrate wellness criteria into the program. Finally, we will fold in reviews of construction costs and preliminary phasing opportunities to confirm alignment with all project goals.

This phase concludes with **IDE 5**, where we will finalize the project program and the three preferred concepts, and we will present the Concept Design package. We will work with you to identify the most appropriate materials to convey the design direction, which can include some combination of design drawings, models, renderings, animations, and virtual reality (VR) demonstrations. These materials can also be tailored for use in fundraising or in efforts to secure industry partner commitments. Additionally, side-by-side page turn sessions with stakeholders will allow for an interactive review process that facilitates design progress. Cost and schedule will also be reviewed at this time to ensure alignment with all project goals.

ACHIEVING VISION AND GOALS, TRANSITIONING INTO SCHEMATIC DESIGN, AND DEVELOPING DESIGN SCHEMES

As a team, we value a design process that develops a close, integrated collaboration among all team members. Together we will seek to develop a set of core project values, goals, and aspirations that will become touchstones as the project progresses and create a common vocabulary for the team. While establishment of the project vision and goals occurs mostly in Program Validation / Concept Design and Schematic Design (SD), the implementation and eventual achievement of these goals begin to manifest from Design Development (DD) all the way through the Construction Contract Administration (CCA) phase. Described herein, is our detailed approach to those phases.

Schematic Design

At the start of SD, we propose a **Final Concepts / SD Kick-Off Workshop** to reaffirm the project vision and goals, review the extent to which the conceptual design meets these goals, and identify any work yet to be done to ensure success. The team will also acknowledge Concept Design review comments and their incorporation into the SD process. During SD we will continue to utilize our IDE process to progress the project. Every workshop will test solutions against the cross-functional feedback and

Camilla Watson leads a User Group Meeting for the Clifford L. Allenby Building.

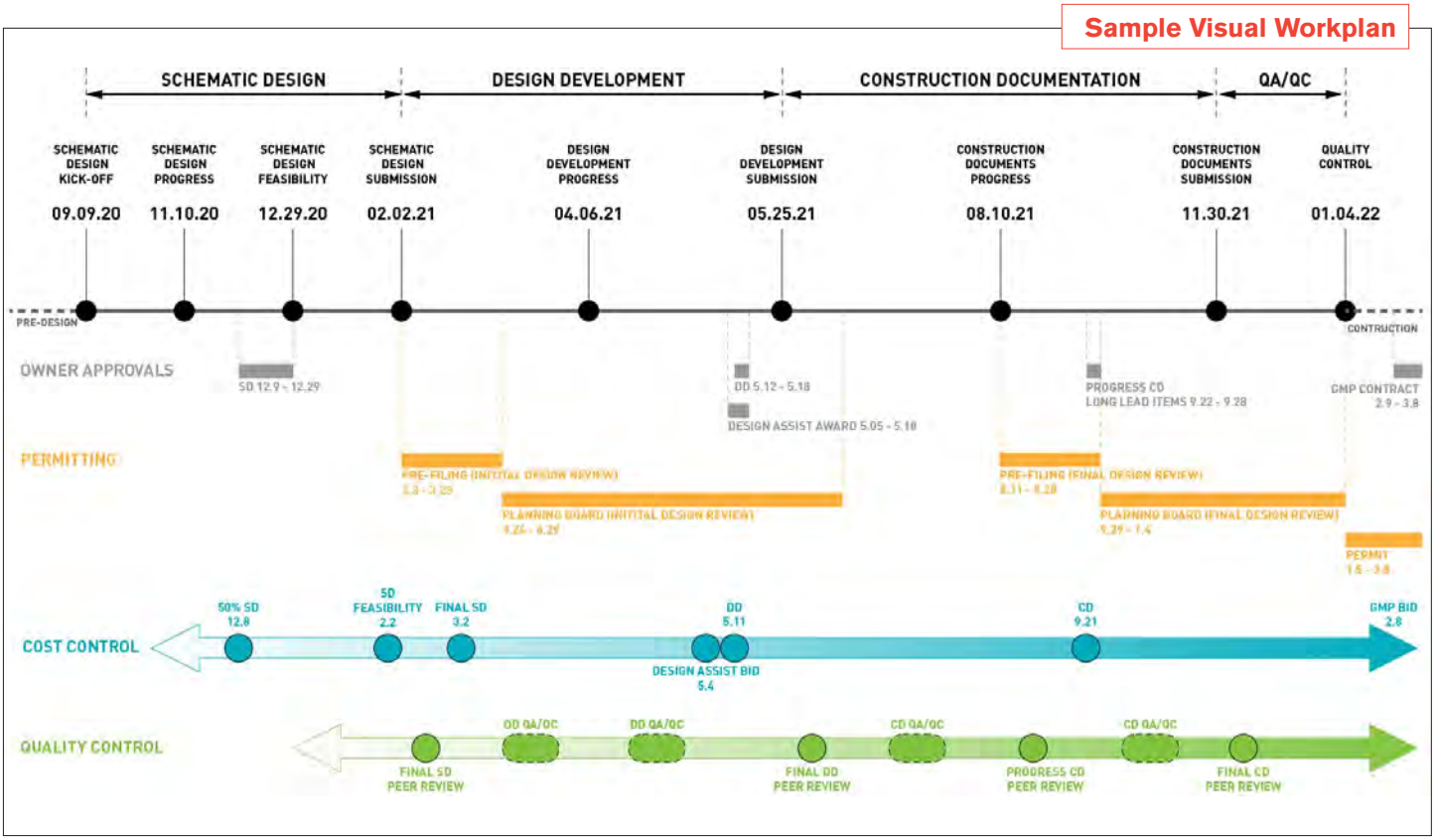
established goals for the project. In total, we suggest that SD consist of four workshops to engage stakeholders in advancing the design. We will study and refine any design alternatives to the preferred concepts that emerged during the Program Validation / Concept Design phase and select the strongest scheme to develop further. At the conclusion of this phase, we will submit an SD package and presentation materials to the AIA for review and approval.

Design Development

DD builds upon the design direction established during SD. At the beginning of DD, we will review our strategy for the integrated design process to come. For instance, if the SD phase yields a specific phased construction approach, we will structure DD to allow for deeper dives into this individual effort, either in stand-alone workshops or topic-specific breakout sessions during our workshops. Every workshop, despite greater attention to defining design detail, will test solutions against the goals and priorities established in the Project Charter to maintain alignment of goals.

These workshops will include thorough analysis and discussion of critical needs within each building space, facilitated by our team. This process is cross-functional to ensure information is not siloed and will include attention to change management to help prepare users for the transition to a new headquarters environment. During this period, the team will make decisions regarding the look and feel of the building, the site, building and envelope systems, as well as provisions for equipment.

Sample Visual Workplan



Ongoing analysis of building energy performance and input from the AIA will refine the design and define optimum MEP systems.

During this phase, we will continue to work closely with the AIA and the CM to determine construction phasing, scheduling of document packages, and necessary content to expedite construction. At the end of the phase, our team will publish the DD documents summarizing the design direction and decisions made to date.

Construction Documents

During the CD phase, we will document the design agreed upon during DD and finalize documents and specifications for construction and pricing. Technical design will be completed to provide the CM with documents for bidding and construction. While user group work sessions are generally not required, we may wish to include a session as each package is finalized to show stakeholders how we implemented their feedback and decisions. Documents will be subject to ZGF and MMD's quality assurance program that includes 'fresh eyes' (senior staff who have not been working on the project) at milestone reviews to ensure the necessary completeness and clarity required for bidding. Given the complexity of this project, it will be especially critical to produce a highly coordinated and detailed package and to create clearly delineated phasing documents to help minimize field problems and coordination issues during construction.

User Engagement Process

The process we propose for AIA is one that we have recently employed for the California Department of General Services (DGS), Clifford L. Allenby Building. For this 374,000 SF net-zero energy office building, which is being delivered by an integrated design-build team, we conducted a series of three three-day workshops with representatives of DGS and each of the three departments that will occupy the building—the California Health and Human Services Agency, Department of State Hospitals, and Department of Developmental Services. The first day of each workshop involved an "all-hands" meeting during which the team reviewed the work done to date and set the stage for the following individual occupant meetings. This first session also included exploration of issues that were common among all three tenant groups. This was followed by a series of focused discussions specific to each individual tenant group and a work session targeting the building common areas with stakeholders and representatives selected by DGS. In the afternoon of the third day there was another "all-hands" meeting during which the team reported what they had learned, gathered feedback on the process, identified areas for improvement, and then gained consensus on next steps. Through this series of workshops, we established the ground rules that helped to frame the questions surrounding the project, as well as to inform their solutions.

Review Period

At the end of each phase (Concept, SD, DD, 50% CD, 75% CD, 100% CD), the team will submit packages for review by the AIA. Upon receipt of comments, the team will prepare responses and schedule necessary meetings to review them with the AIA for compliance. We recommend that the CM perform a concurrent constructability review of each package and be part of these review meetings to ensure all expectations are aligned. Responses to any comments will be reflected in the next package issuance in the following phase.

Cost Estimate and Reconciliation

Concept, SD, DD, 50% CD, 75% CD, and 100% CD submissions will be reviewed by Vermeulens and the CM for production of cost estimates. Upon receipt and review of cost estimates from both parties, ZGF and MMD will schedule and lead cost reconciliation meetings to carefully analyze and reconcile both cost estimates, compare them against the project budget, and identify strategies for Value Management in case of cost overruns against the project budget.

Construction Contract Administration

ZGF and MMD will focus on providing consistency of staff as a project moves into construction. It is our standard practice that those individuals who are responsible for developing the design and construction documents execute the CCA phase with sustained leadership involvement. The construction communications process—RFIs, change order requests, and supplemental instructions—will be mutually agreed upon by the AIA and the CM. Despite a more intense effort from the design team during design, ZGF and MMD's commitments to projects are as focused on supporting the construction team as they are on any of the other phases. Timely, consistent, and thorough responses to RFIs and submittals is our commitment as true partners.

ZGF, Los Angeles Office Renovation
Los Angeles, California

Experience with Washington, DC Approvals Processes

Since 2002, ZGF has worked on planning, urban design, and architecture projects that have contributed to Washington, DC's urban fabric. Designing across scales, our experience in DC includes building construction projects, adaptive reuse strategies, vision plans, small area plans, planned unit developments, and public realm designs. Our work for public agencies, non-profits, educational institutions, and private developers covers all eight Wards of the District and the Monumental Core. Through these efforts, we have developed extensive knowledge and the constructive relationships required to garner support from local Advisory Neighborhood Commissions and Business Improvement Districts, to acquire the necessary approvals from DC Agencies (Zoning Commission, Historic Preservation Review Board, Department of the Environment, DCRA) and Federal Agencies (National Capital Planning Commission, U.S. Commission of Fine Arts, National Park Service, General Services Administration), and to collaborate with quasi-public stakeholders (Washington Metro-WMATA, Pepco, DC WASA, Washington Gas).

Our foundation for receiving approvals in Washington, DC is built on finding solutions that are mutually beneficial to the owner / developer, the District and / or Federal entity, the users of the built environment, and the larger community. We have also found that strategic stakeholder engagement during the design process will both lead to more innovative and comprehensive solutions and create a stewardship to help navigate DC's multi-layered regulatory environment. The following are select examples of our experience working with the U.S. Commission of Fine Arts and other stakeholders (including National Capital Planning Commission, DC Agencies such as the Historic Preservation Review Board, and local Advisory Neighborhood Commissions):

National Capital Planning Commission / U.S. General Services Administration, SW Ecodistrict Washington, DC

NATIONAL CAPITAL PLANNING COMMISSION, SW ECODISTRICT PLAN AND NATIONAL PARK SERVICE BANNEKER PARK IMPROVEMENTS

Our experience leading the SW Ecodistrict Plan establishes a basis for working with all the stakeholders (Federal and District Agencies, SW BID, local ANCs). The plan was formally accepted by NCPC, included consultations with DCOP on the new zoning requirements and DOEE on proposed stormwater regulations. The Banneker Park Improvements, first developed as a concept in the SW Ecodistict Plan and implemented with the National Park Service, was formally approved by the US Commission of Fine Arts.

DISTRICT DEPARTMENT OF TRANSPORTATION, CAR BARN TRAINING CENTER

This project required reviews with NCPC and CFA and approval from the DC Historic Preservation Review Board in addition to extensive community engagement. ZGF planned and designed the new Car Barn Training Center, which houses DDOT operations, streetcar storage and maintenance, and areas for workforce training. The facility is adjacent to the Spingarn Senior High School, also listed on the National Register of Historic Places. The project's design is complementary to its context and achieves compatibility with its historic neighbor through a contemporary use of historic materials, scale, and proportion.

US GSA, DEPARTMENT OF HOMELAND SECURITY, ST. ELIZABETHS WEST CAMPUS

ZGF is programming, planning, and designing the Department of Homeland Security's new headquarters facilities on the St. Elizabeths West Campus. The site is listed on the National Registry of Historic Places and the project has required extensive engagement and review with the Consulting Parties, including CFA, SHPO, NCPC, local ANCs, and other interested stakeholders.

500 L'ENFANT PLAZA

While L'Enfant Plaza is a private development, 500 L'Enfant Plaza, a new 247,000 SF commercial office building, required CFA Approval as a special condition of the original L'Enfant Plaza Master Plan. In response to the challenging context and site, a bold design was developed for this urban infill project—one that pays homage to the site's history while engaging in an architectural dialogue with the surrounding buildings. The design provides formal echoes of the existing L'Enfant Plaza architecture through its form. Its dynamic angular planes create a playful gesture in response to the Department of Housing and Urban Development Headquarters' encroaching curvilinear arms.

JBG Smith, 500 L'Enfant Plaza Washington, DC

B. Any tools that will be used to collaborate with CM and AIA, including, for instance, workshops, design meetings, and design reviews.

Communication and Collaboration Tools

To assist us in managing a large team, we will utilize processes and tools that have evolved from other projects and we will adapt them to the specific requirements of the AIA Headquarters Renovation. They include:

WORK SESSIONS AND GOAL-SETTING WORKSHOPS

We will begin the process with goal-setting workshops that will use exercises and discussions to understand the AIA's unique drivers and vision, setting the course for the project. In today's virtual world, these workshops can be conducted remotely using tools like **MS Whiteboard** or **Miro** for real-time collaboration.

We will also hold frequent work sessions to provide ongoing review and input into the design effort by all team members, allowing decisions to be made on a continuing basis and, thereby, avoiding major changes in design direction. In addition to monitoring schedule, program and budget are ongoing topics of review at each meeting.

WORK PLAN AND SCHEDULE

We have established a draft work plan and schedule, located on page 36, which we will continually refine in partnership with the AIA, our consultants, and the CM. This will enable all consultant team members to clearly understand how their input feeds into the overall design process, what specific tasks they are responsible for, and when they are to be accomplished. We will also develop a visual work plan that will be presented at each phase milestone, illustrating an overall road map for the phase, the current status of work, key goals, recent decisions, and action items for the remainder of the phase.

Maryam will work with the AIA's stakeholders to establish a meeting schedule with the AIA, the CM, ZGF, MMD, and relevant consultants allowing the team to absorb feedback and prepare for the next session. Participants will vary depending on the meeting topic, but the status of the schedule and work plan will be reviewed as a regular agenda item.

MEETING DOCUMENTATION

We rely on meeting minutes to record discussions, action items, and decisions. Once the project kicks off, we will establish a team dashboard on a web-based document management platform that will serve as the project team's central hub. This site will be easily accessible to all team members and will contain the latest versions of all documents, including monthly content and communications issuances. ZGF and MMD will maintain the project dashboard to ensure all documents remain current and up to date.

DOCUMENT COORDINATION

We will conduct quality control review workshops with the design team and engineering consultants to ensure completeness and the coordination of all disciplines. In addition, in-house peer reviews at each major milestone are performed by senior design and technical architects, who are not directly involved in the documentation of the project and therefore can provide a more objective review of documents with a fresh set of eyes.

This ensures that design goals are being met, the documents are well-coordinated without redundancy, and there is consistency between the drawings and specifications.

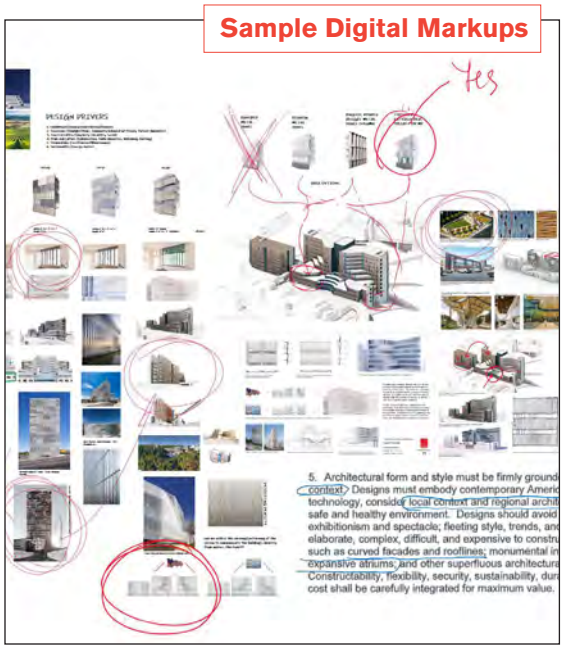
DESIGN AND VISUALIZATION TOOLS

ZGF and MMD are leaders in design and visualization technology. Today, we utilize 3D modeling, rapid prototyping, and visualization tools to model the quality and physical characteristics of space. Our process often relies on developing alternatives in real-time during our work sessions, from hand sketches to SketchUp, so that we all can fully understand the implications of design and make decisions quickly. In recent years, we have incorporated virtual reality into both our design process and our client presentations. From quick visualizations with Google Cardboard and Samsung Gear VR to immersive walk-throughs of our projects using the Oculus Rift and the HTC Vive, we are looking toward a future where fully immersive virtual reality is integral to our design process and communication with our clients.

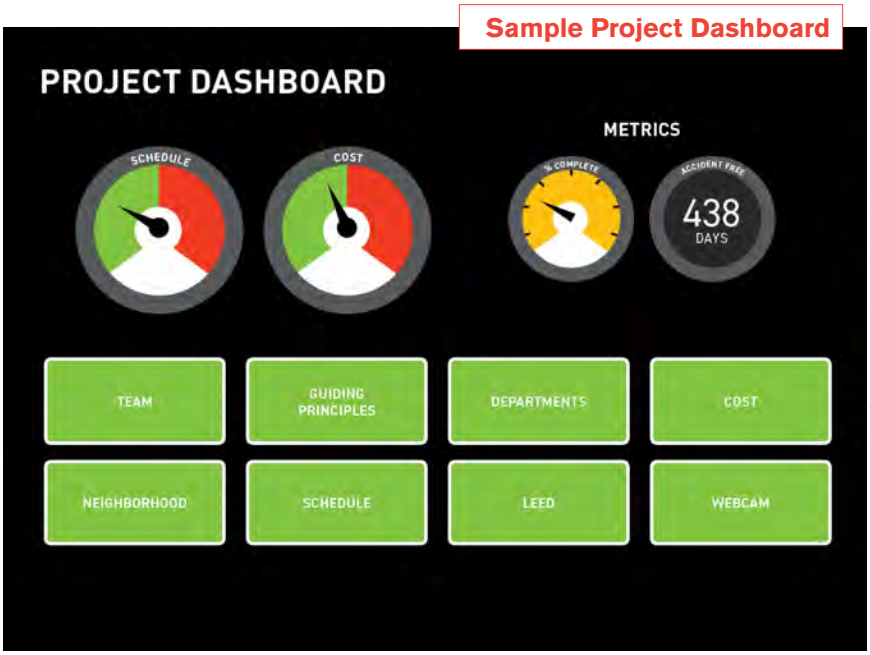
We are currently employing virtual reality in initial concept phases to test massing, views, scale, program relationships, review solar conditions, and to efficiently evaluate schemes.

During the design phase, virtual reality provides the opportunity to study design options in full-scale, verify design intent, and rapidly create prototypes. It also allows us to test space configurations and equipment layouts in real-time and understand wayfinding and line-of-sight. We have also found virtual reality extraordinarily valuable to our clients in presentation contexts to build user group consensus. Our capabilities in modeling, prototyping, physical mock-ups, and virtual reality has allowed building users to feel as if they've lived in the new space even before move-in. These tools for innovative design support one of our key project objectives: no surprises!

Sample Digital Markups



Sample Project Dashboard



C. The Proposer's approach to creating design solutions that use the AIA Design Excellence Guidelines.

Framework for Design Excellence

To transform the AIA Headquarters Building into an environment where people can perform at their best, that enhances the AIA's connection to the community, and that serves as a model of stewardship for the public and the profession, we commit to the AIA's Framework for Design Excellence and demonstrate here how we have embodied these principles in the past.

Design for Integration

GOALS

- Utilize a facilitated Integrated Design Process.
- Achieve project vision by building upon the Basis of Design, Framework for Design Excellence, Climate Action Plan, and 2021-2025 Strategic Plan.
- Provide multiple benefits across the triple bottom line—social, economic, and environmental.
- Create a project that people will fight to preserve.

PRECEDENT

The net-zero energy Clifford L. Allenby Building will house three State of California departments of public health. The project has utilized triple bottom line analysis to experiment with emerging technologies that will more holistically address sustainability impacts. Early analysis was largely focused on LEED credits related to energy and water usage, given the state of software at the time of design development, but more recent versions have a larger and less LEED-centric functionality. The final design features many elements that contribute to the public sphere and achieve high-performance within the project's budget.

Design for Equitable Communities

GOALS

- Partner with the community to define shared goals—good design is for everyone.
- Make the project accessible to someone who might not have otherwise benefited from it.
- Catalyze equity, diversity, and inclusion.
- Promote alternative transportation and decrease single occupancy vehicle usage.
- Provide bicycle storage for 25-50% employees and showers for 3-5%.

PRECEDENT

In partnership with the District of Columbia Office of Planning, ZGF developed a Public Realm Framework Plan for improvements around the Columbia Heights metro, with the goals of strengthening community identity, celebrating diversity, and creating a lively experience. A special design committee of community stakeholders and several interactive public workshops were organized to elicit input from the neighborhood. The design theme of a "kaleidoscope" was developed during one of the first public workshops to symbolize and embody the rich diversity of Columbia Heights. The resulting civic plaza design includes an interactive water fountain, which can also be used to stage performances and hold farmers markets.

Design for Ecology

GOALS

- Integrate nature for human health and wellbeing and as a model for the profession.
- Increase onsite vegetation and utilize 100% native vegetation in streetscapes, the courtyard, and on green roof (as applicable).
- Provide bird collision deterrence strategies.

PRECEDENT

At 500 L'Enfant Plaza—a site surrounded by brutalist midcentury buildings designed by I.M. Pei and Marcel Breuer—ZGF was challenged to establish a sculptural response to the setting while supporting the ecological health of the site over time. Native plantings were selected for the landscaped roof terrace, which also integrates stormwater management systems, and streetscape to promote habitat restoration.

Design for Water

GOALS

» Reduce water consumption by 60% or more by reducing outdoor water use, reusing process water, and capturing greywater and rainwater.

» Add a cistern to collect and store.

PRECEDENT

The PAE Living Building is set to be the largest commercial Living Building ever certified. Part of its performance strategy incorporates measures to achieve net-zero water: 100% of the building's water demand will be collected and treated on-site through at 71,000-gallon cistern, composting toilets, and urine diversion for fertilizer generation.

Design for Economy

GOALS

» Reduce operating costs by 75% or more.

» Fully utilize ROI and Lifecycle Cost Analysis in decision-making—balancing first cost with long-term value.

PRECEDENT

A key demonstration of our integrated approach to first cost and lifecycle cost analysis is the 550,000 SF double LEED Platinum® Twelve West building. Across an integrated team, including the owners, CM, and engineers, we evaluated numerous strategies with a host of metrics in an interactive and updated spreadsheet that examined financial return on investment, energy, water, and carbon savings, as well as contribution to LEED. The ultimate rainwater and condensate capture system is an unusual strategy, but a good example of this integrated evaluation process. While the required filtration and additional non-potable water supply for office toilets entailed a $200,000 premium, we were able to secure related reductions in stormwater system development charges from the City of Portland that offset 90% of this cost and achieved a simple payback of less than five years.

Design for Energy

GOALS

» Reduce on-site carbon consumption by 80% or more.

» Achieve an EUI of 44, with the goal of creating an all-electric building except for an emergency generator.

» Provide accommodations for a future PV array on the roof.

PRECEDENT

Our experience includes supporting our clients to uncover creative operational strategies in order to realize their goals. The Rocky Mountain Institute Innovation Center, a LEED Platinum®, Passive House, Living Building Petal-certified office and convening center, utilized power purchase agreements to achieve net-zero energy. Its PV system is owned by a third-party entity and investor-financed, allowing RMI to pay a pre-determined amount for the energy produced. Investors receive a stable return and can take advantage of tax incentives, that RMI—as a non-profit—would be unable to use. While common in many locations, this innovative model was a first for the local utility in Colorado and was made possible through close coordination of the ZGF, PAE, and local utility and investment entities.

Design for Wellness

GOALS

» Achieve WELL Gold certification.

» Incorporate biophilia to connect people with place and nature.

» Utilize design elements that improve occupant comfort.

» Serve as a future model for wellness, even more so than ever before COVID-19.

PRECEDENT

ZGF is working with the California State Teachers' Retirement System (CalSTRS) to design a new 265,000 SF, WELL v2 Gold office building to support their rapidly growing workforce. The expansion of the CalSTRS campus incorporates measures to provide an environment to improve employee well-being, which considers access to natural daylight; providing clean, filtered outside air and water; using solar shading to minimize glare and thermal hot spots; using sit-stand desks; and installing healthier materials using the Red2Green tool to review all project products for hazardous ingredients as defined by the Living Building Challenge Red List.

Design for Resources

GOALS

» Limit embodied carbon to one third of what would be consumed by entirely new construction.

» Research and employ materials that reduce hazards and support equitable labor in the supply chain.

» Evaluate and recommend third-party health certifications, such as *Declare* or *Cradle to Cradle*.

» Utilize materials that are free from the Living Building Challenge v4.0 Red List.

» Celebrate local materials and craft.

PRECEDENT

Our team understands our responsibility as designers to help mitigate climate change by using low embodied carbon materials. We will prioritize healthier materials that avoid "worst-in-class" hazardous ingredients, defined by the LBC Red List, that minimize the global warming potential impact of this major renovation. On a 782,000 SF campus modernization project for Microsoft, we are currently conducting a deep dive on embodied carbon using Tally to conduct a whole building lifecycle assessment, specifying low-embodied carbon materials, and optimizing use of products that include Environmental Product Declarations.

Design for Change

GOALS

» Create two workplace design solutions to offer future resilience against evolution in use.

» Plan the building infrastructure to offer long-term flexibility.

PRECEDENT

In late 2019, ZGF was awarded and began the design process to convert a former shopping mall into a 584,000 SF workplace for a prominent technology client. A goal of the project from the outset was to create a flexible, resilient solution that could adapt as the organization's needs changed over time. Now, as a result of the pandemic, this goal has become ever more important. We are currently designing a "kit of parts" with a flexible ceiling grid, HVAC, and lighting and power configurations to allow the space to flex from dense open workspace to smaller open neighborhoods and enclosed team spaces, and everything in between.

Design for Discovery

GOALS

» Apply lessons learned from the full team's experience to inform this once-in-a-generation opportunity.

» Create a learning and teaching opportunity for all AIA constituents through regular communication of the design process, analysis, and decision-making.

» Lead a workplace transformation process that prepares AIA employees for working in a new way and transitions them into their new space.

» Conduct a Post-Occupancy Evaluation to analyze the success of design intentions and project performance.

PRECEDENT

ZGF continues to evolve and refine our data collection and best practices. We recently launched an initiative to conduct pre- and post-occupancy evaluations on every project, working with end users to understand their existing state and collect the data needed to validate design. Our multidisciplinary team, which includes statisticians, architects, and computational design experts, enables ZGF to apply a rigor to data collection—now including a first-of-its-kind machine learning application—and analysis that surpasses the industry norm, in the service of better understanding the connection between the built environment, wellness, and productivity. From our pre- and post-occupancy analyses, we are learning how to design spaces that are optimized for users' preferred ways of working and, by using scientifically rigorous methods, we are delivering evidence-based solutions that help our clients realize their missions within the spaces they inhabit.

In 2018, we developed custom machine-learning applications that will one day replace occupancy surveys that are otherwise conducted by hand. These applications work by capturing anonymized video and data of people, office equipment, furniture, and movement in a given space. Coupled with qualitative survey data and environmental information (daylight, electric lighting, CO_2, temperature, sensors in the floor that track footsteps, etc.), we can generate visualizations that help us understand key relationships between design, space utilization, and the user experience. And most importantly, these visualizations aid in making design recommendations to clients in a way that is easily understandable for non-architects.

D. The Architects approach to undertaking the work collaboratively in a virtual environment (if necessary).

Normally, we would be telling you about all the ways we will connect and collaborate—through face-to-face interaction, site visits, workshops, and design sessions. But acknowledging we could be reliant on virtual connectivity for some time, we have retooled and accelerated our capabilities for remote interaction. Over the past several months, virtual meetings and workshops have become second nature to us all—to engage our client teams and stakeholders, and to maintain collaboration amongst all design team members. Platforms including Microsoft Teams, Skype, GoTo Meetings, and Zoom have proven effective at connecting our people and facilitating great design discussions, maintaining our regular cycle of team meetings, presentations, and informal catch-ups. Some examples include:

» This summer, we used a combination of Revit + Enscape + Yulio to help a client visualize a 300,000 SF hospital and cancer center. From the comfort of their own living rooms, in the middle of our workshop, stakeholders used their smart phones to jump into the scene via a QR link to a 360° panoramic view. We coordinate with consultants and contractors this way too.

» A digital “pin-up” board is being utilized with the University of California, Davis and Wexford Science + Technology on the 1,200,000 SF Aggie Square project to provide feedback and mark-ups on drawings at the end of each day. We are also marking up drawings in real-time during client meetings on Bluebeam Revu.

» In collaboration with FO, we have been using a virtual project document dashboard, which provides all team members with access to the latest project information, and a visual workplan, which allows the team to track key decisions, phasing timelines, and next steps virtually.

» Coordination of complex project and client teams is in our DNA. The PDXNext Terminal Core Redevelopment project includes more than 60 design staff, several dozen consultants, the owner, contractor, and key trade partners. With Bluebeam Studio and MS Whiteboard, we have an ever-current set of drawings where we make simultaneous, virtual mark-ups; maintain a shared storyboard to organize individual comments; track ongoing action items; and clarify cost estimate considerations. All in real-time.

» We also still rely on tried-and-true decision-making tools, such as evaluation matrices where we can compare, contrast, and rank different project scenarios against baseline project goals and criteria.

Port of Portland, PDXNext Terminal Core Redevelopment Portland, Oregon

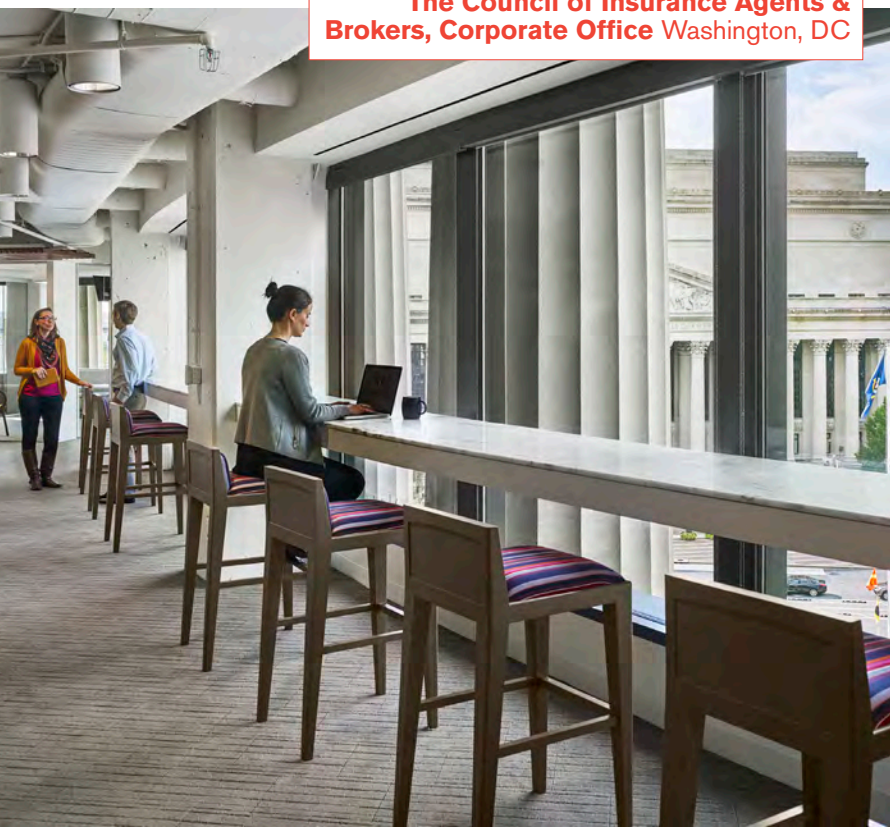
C.
Quality Management Plan

A. The design management of the Architect's team, including workshops, meetings, collaboration, interaction, and interfacing with CM and the AIA.

Design Quality Standards

Our team will utilize ZGF's Red Book, a set of standards designed to achieve quality and clarity of information in our design drawings, contract drawings, and specifications, which we have refined through use on innumerable projects. The Red Book is a living document that we regularly update and review. It is organized to address a broad spectrum of project delivery best practices and to follow the chronological evolution of a project from the start of design to completion of construction, as well as post-occupancy. Given our commitment to design excellence, we embrace the spirit of continuous improvement, encouraging each employee to push the evolution of these guidelines.

The Council of Insurance Agents & Brokers, Corporate Office Washington, DC



Quality management is ingrained throughout our entire design and delivery process, and each individual project has dedicated quality management staff planned specifically across each project phase. Specific to the AIA Headquarters Renovation, Maryam Katouzian, our Project Manager, will be directly involved with the production of drawings and specifications, overseeing the process throughout the life of the project. Our team will also benefit from Lona Rerick's specification expertise, along with the support of ZGF's entire in-house specification writing team. Lona will be integral in the project's material selection, ensuring compatibility and longevity, as well as compliance with the AIA's sustainability goals.

B. The process that the Architect will implement in accomplishing the standards.

Implementation of Design Quality Standards

For ZGF and MMD, quality management is a proactive and mindful process where we emphasize "doing the job right the first time." Quality control is our retrospective process of measuring and monitoring performance, including all our consultants, who are all integral to project quality. We also believe the success of the project lies in the hands of every team member. We have found that team meetings foster understanding of current project status, ensure each team member has clearly defined tasks, and provide direction as necessary to meet the scheduled deadlines. James Woolum, Partner-in-Charge, and Maryam Katouzian, Project Manager, will lead these meetings to set the goals with input from all.

Our quality management program includes 1) an effective project workplan constantly evaluated, which is vital to planning, organizing, and managing a complex team effort; and 2) a participatory design process that encourages innovation and always maintains open communication. We utilize staffing and accounting software tools that allow us to track the work completed to date, as compared to the developed work plan approved for the project. These tools, combined with our experience, allow us to quickly identify any issues that might arise during design or construction and immediately alert the greater team, as well as apply the right resources to ensure the expected level of service and quality are achieved.

During the design process, we use both formal and informal peer reviews. Informally, we schedule regular pin-up sessions and charrettes with senior design and technical staff to ensure the best ideas are being carried forward and that innovation is rooted in sound building science and cost parameters. We also schedule senior staff for formal peer reviews at schematic design, design development, and construction document phases. Our goal is to both identify project risks and opportunities that lead to a fully coordinated set of construction and design documents.

In addition, ZGF is at the forefront of collaboration technologies that are essential to assuring technical quality, promoting communication, and allowing teams to work together effectively in real-time. Whether we set up a private cloud to allow remote real-time access to the Revit models in BIM 360, publish a PDF document set in Bluebeam Studio to see other's markups in real-time, or exchange

Peer Review

Among the numerous senior technical architects who are highly qualified to serve as QM peer reviewers for the AIA Headquarters Renovation is Kian Shamloo, a Principal in our Washington, DC office who brings over 33 years of experience. Kian has provided quality management for office, civic, and education projects nationwide, including renovations of existing facilities. He brings extensive experience managing complex programs and has an unparalleled knowledge of technically challenging building types. His recent projects include Amazon / JBG SMITH's Metropolitan Park and U.S. General Services Administration, Department of Homeland Security's St. Elizabeths West Campus.

data via Newforma or e-Builder, we tailor a workflow for digital review and collaboration based on what will provide the greatest value to the greatest number of team members.

We also acknowledge the importance of our role in the enforcement of the construction documents, so that design integrity is maintained. Our team includes dedicated project architects who will coordinate RFIs, clarify all project issues, and be present at project site visits during construction contract administration.

C. The process for interface between the design quality and construction quality teams.

Design and Construction Quality Interface

Given the complexity of the AIA Headquarters Renovation, early engagement of the CM will be critical in enabling the team to develop design solutions within the $52,000,000 budget. As drawings develop, we will maintain close communication with the CM and organize constructability review sessions to go over details and discuss the project's various conditions. Additionally, we will host consistent design charettes with the full project team to get fresh perspectives on the overall project. These sessions, which can be hosted as live Bluebeam or Navisworks sessions, will overlap with the review and coordination of consultant drawings. We also will facilitate life cycle cost analysis of materials and systems in parallel with these efforts.

D. The staffing levels for design quality control process and document management and how that will provide sufficient coverage.

Staffing

In addition to the oversight and expertise provided by our core team for the AIA Headquarters Renovation, we will have a both a senior technical architect and a dedicated quality control supervisor assigned as reviewers. These two team members will come to the project with the same experience level but different points of view—one will act as a fresh set of eyes while the other is involved throughout the life of the project.

Implementing Quality Management in Complex, Phased Projects

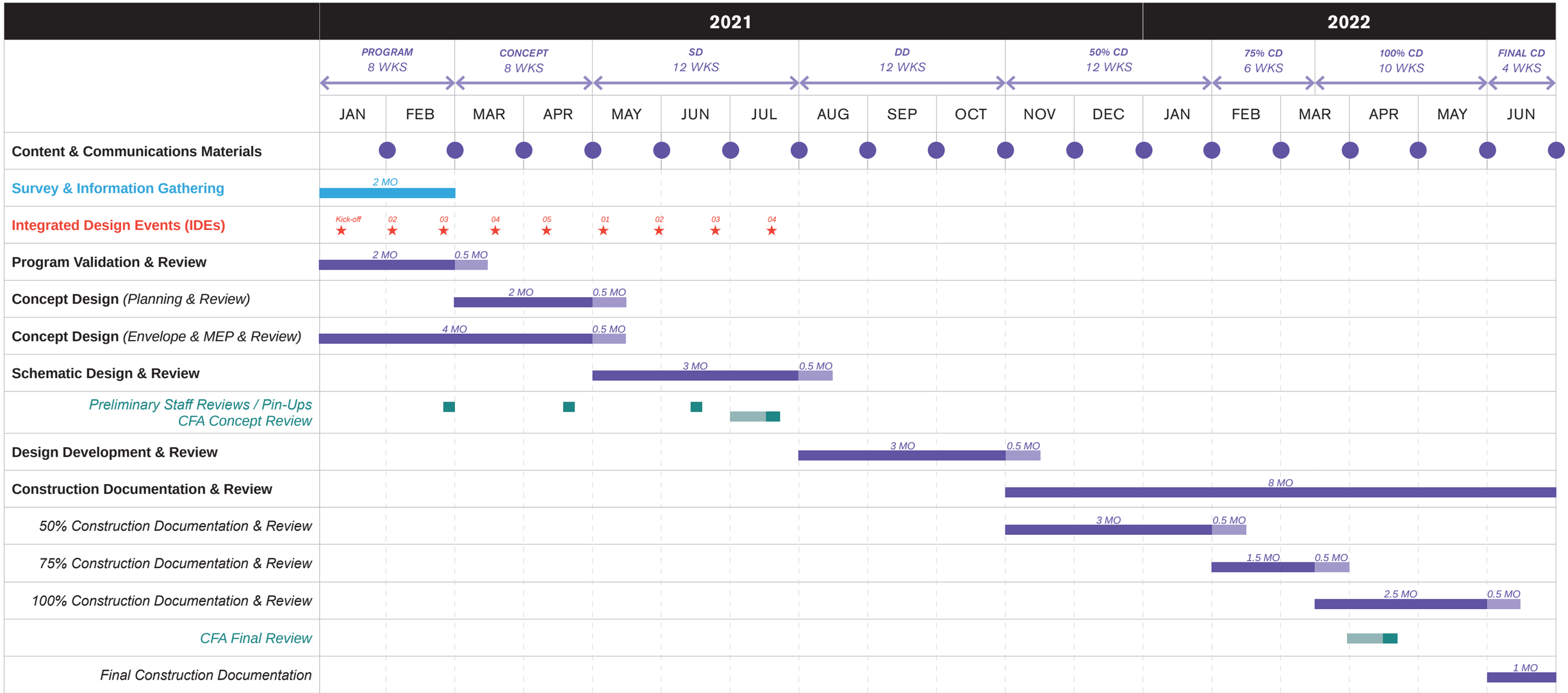
The National Institute of Standards and Technology (NIST) selected a Hensel Phelps / ZGF Design-Build team for a Single Award Task Order Construction Contract. As part of the team's first task order, NIST is undertaking the modernization and expansion of the radiation physics research laboratory capacity of Building 245. Completed in 1964, Building 245 is a highly specialized facility with concrete shield walls nearly 10 feet thick and large subterranean program areas. A primary goal for the project has been to phase construction to minimize disruption to ongoing research, which involves a complex sequence of moving program pieces during 15 microphases. To help NIST understand what the building will look like during each microphase (especially through the lens of life-safety, security, and shielding), ZGF produced new work, demo, and temporary plans representing each microphase. Although outside our scope, ZGF took the lead in creating clear and concise phasing documentation that distills all information related to the sequencing (shut-down requirements, logistical issues, site requirements) into a digestible format and ensures NIST and the entire project team have a common understanding. REVIT and BIM 360 have also been critical in coordinating the construction phases with all consultants. Although the project is Design-Build and consultants are not under our contract, ZGF has guided the rest of the project team in establishing standards within BIM 360 as they pertain to phasing, and we have helped lead the BIM coordination effort.

National Institute of Standards and Technology, Radiation Physics Modernization Project Gaithersburg, Maryland

D.
Schedule Plan

A. The Schedule Plan shall describe the Proposer's plan to provide a design and approvals within 18 months of signing a contract.

ZGF and MMD's approach is client-driven—based on the scope, schedule, budget, and needs of each project. We will begin the process by validating the program and project goals already established in the extensive work that the AIA has documented in the Basis of Design. Concurrently, we will gather site information through surveying and begin working on concepts and solutions for the exterior building envelope and MEP systems. During each review period, the team will continue working to progress design and documentation while awaiting feedback. The AIA's review comments will then be incorporated in the next phase of work.



Buyout	1.5 months
Construction Contract Administration	24 months
Workplace Transition	2 months

E.
Budget Plan

A. The Proposer's plan to design the Project with regard to the maximum hard costs of $52,000,000.

The key to our team's plan to design the AIA Headquarters Renovation within the maximum hard costs of $52,000,000 is to gather all the right decision-makers in the right moments throughout the process, providing the team with necessary direction. We will work in concert with the CM and Vermeulens to establish our target value design process and monitor and align cost and scope through continuous cost modeling and refine options as we develop them, and we will use this information to guide the AIA to solutions within budget. We will also use benchmarking to evaluate the project against other projects of similar size and scope, comparing the projects both holistically and broken out by discipline—from building envelope to structure and building systems.

Our team will also work from the onset of the project to balance the cost of meeting the AIA's sustainability and energy performance goals with the expected building enclosure system upgrades, developing a solution that meets the AIA's stated targets for a path to the AIA 2030 Commitment while remaining within budget.

From a building systems perspective, we understand that meeting the AIA's goals of electrification and radiant heating and cooling would require replacement of many system components. In an effort to "do more with less," we will work with the AIA to prioritize replacements and determine which existing components can remain, achieving the AIA's sustainability goals within the set budget. Prioritizing elements such as the replacement of the steam boilers with an all-electric heating system, lighting upgrades, and envelope upgrades will greatly impact the overall project. Additionally, we will explore alternative strategies, for example:

- Commission test pipe materials to determine remaining useful life
- Consider if AHUs can be converted to DOAS and retrofitted with heat recovery
- Consider the cost effectiveness of PV over upgrades
- Consider community solar programs and explore virtual metering programs

Early life cycle cost analysis will allow the team to establish costs for various options and determine the most effective and economical approach.

Brandywine Realty Trust, Repositioning of 500 North Gulph Road King of Prussia, Pennsylvania

B. The Proposer's plan to keep the Project on budget.

ZGF and MMD are skilled in developing and implementing cost efficient design solutions that do not compromise quality or design integrity. We bring a reputation for extracting the most value for each of our clients from the project budget. As problem solvers, and in collaboration with the CM, our objective is to continuously provide appropriate design solutions and information that can be calibrated for cost control. The process of cost-effective design is supported by several key tools:

Design Tools Our team uses Revit and Navisworks as a design, documentation, and coordination platform. This platform enables an integrated Building Information Model (BIM) that is shared with the consultants, contractor, and subcontractors to maximize coordination, refine scope and project logistics, and assure greater accuracy during pricing and execution. At project inception, a BIM Execution Plan will be developed to establish clear protocol for development, use, and model exchange. We often integrate Virtual Reality or Augmented Reality models as virtual mock-ups to better inform the client, contractor, and consultant team on design intent.

Target Value Design Our close collaboration with Vermeulens, honed over the course of 18 projects, leads to the consistent review of costs throughout the progression of the design, ensuring that solutions remain within budget. Our continuous cost modeling throughout the phase and collaborative cost reconciliation with the CM at the end of each phase helps the team maintain alignment of scope and budget.

Optimizing Budget Through an Additive Approach

ZGF brings vast experience in designing projects within fixed budgets, and we are confident that we can deliver a transformative headquarters to the AIA within the maximum hard costs of $52,000,000. In our current work programming and designing Washington State University's new 40,000 SF Academic Building, the team is taking an additive rather than reductive approach to creating the new STEM Building. This means that from the beginning of the project, the scope was defined in terms of a complete baseline building that was ensured to meet budget requirements while incorporating programmatic must-haves. Rather than defining an idealized facility and constantly searching for areas to reduce scope while maintaining value, this process has led to improved project team morale, as stakeholders have not had to eliminate desired elements due to unforeseen budgetary constraints and escalation.

A valuable tool during this process has been a betterments list generated by WSU and the progressive design-build team. All the elements that the team recognizes will enhance the building are added to a matrix, and WSU continually prioritizes the components. As the project progresses, risk is reduced, and values are better defined and realized. The betterment scope is then added back and becomes part of the base.

We are proactive and aggressive in our attention to costs throughout design and construction. We know from experience that early reconciliation of the budget with the program and other local conditions is imperative. Key to this process is starting with historical data and visual benchmarks to establish our target value design cost components. We will work with Vermeulens to develop cost estimates that are updated and expanded in detail as the design progresses. As alternative systems and solutions are defined, their costs will be compared to a base estimate with the goal of accommodating functional and design requirements and delivering the best value. We will prepare and review estimates at the conclusion of each phase and reconcile costs with the project budget, identifying strategies for Value Management if needed.

By getting the CM's input as early as possible in the design process and throughout the progression of the project, our team will inject a realistic construction outlook to help calibrate and realign design goals accordingly. Historically, our projects that have obtained early engagement of design and construction teams have resulted in more effective management of project goals and aspirations within the given budget.

Quality Management ZGF and MMD have highly defined processes to ensure document review and quality control. Adherence to this internal process ensures greater efficiency of efforts, clarity of scope, and promotion of cost control. At the outset of the project, key milestones will be identified to address coordination, plan checks, code review, regulatory approvals, filing, occupancy, energy analysis, and other key project criteria. A rigorous review at each phase end will ensure the highest level of excellence throughout the project.

Project Leadership Our team is structured to provide leadership in each of the project's key components, with Tim Williams, Architect-of-Record, leading the building envelope and façade, Michael Marshall, Design Principal, overseeing the public spaces, and James Woolum, Partner-in-Charge, guiding the workplace. Tim will be contractually responsible to AIA for the delivery, quality control, and performance of the entire team. Maryam Katouzian, Project Manager, will serve as AIA's day-to-day contact, overseeing the daily efforts of the design and consulting team, developing and updating project work plans and schedules, monitoring contracts, and preparing status reports.

BALANCING BUDGET CONSTRAINTS AND DESIGN DRIVERS

ZGF designed the historic restoration and rehabilitation of the 60,000 SF, LEED Platinum® King Street Station, which was originally built and opened to the public with much fanfare in May 1906. Over 13 funding sources were tapped for this historic restoration. From the onset, the project required a balancing act between funds available and ambitious goals around design, community engagement, and sustainability. The team prioritized design options aligned with the project's drivers and budget, which resulted in a focus on the public's experience of the building. The team also adopted a phased strategy to complete work as funding became available. Repurposing on-site materials provided yet another strategy for budgetary relief, as well as practicality. For example, while installing geothermal wells, the team uncovered granite boulders from an adjacent building's old foundation. This reclaimed granite was fabricated into new exterior wall panels.

F.

Risk Mitigation Plan

A. The Risk Mitigation Plan shall describe the Proposer's approach to risk mitigation, including a risk matrix identifying key risks for the Project and how the Proposer intends to mitigate those risks.

ZGF and MMD bring extensive experience with highly complex phased renovations, and we have formed an integrated team of experts that will be prepared to address all unforeseen challenges. We have worked with owners and our contractor partners on formal risk management processes that impose discipline for the entire team to deal with potential threats to the project's success. One key to success is always keeping the big picture in focus. Another key is to recognize and track items and conditions that might become risks, as we have begun to do in the following matrix.

Potential Risks	Mitigation Strategies
SCHEDULE AND PHASING	
Complex phasing and building access strategies	» Work with the AIA and GSA to schedule time when specific building areas will be empty and construction can occur, particularly around the perimeter. Collaborate closely with the CM to help determine the optimal phasing strategy for the project.
EXISTING CONDITIONS	
Hazardous material mitigation and abatement, particularly throughout the GSA-leased floors	» Work with hazardous material consultant and the CM for full evaluation, mitigation, and abatement strategies for the presence of Asbestos Containing Materials, Lead Based Paints, and any other hazardous building materials.
MEP SYSTEMS	
Creation of an atrium	» Work with the AIA and the design team to establish mechanical system requirements for the incorporation of an atrium space in the building.
Incomplete records of existing MEP equipment / unknown existing MEP conditions	» Conduct CM audits of existing infrastructure and develop a Risk Log to help the team evaluate options.
Compatibility of existing MEP systems with desired radiant distribution system	» Facilitate a discussion with the current building maintenance personnel to understand operation of the current equipment.

LEVERAGING UNEXPECTED EXISTING CONDITIONS AS DESIGN OPPORTUNITIES

In the dynamic Chelsea neighborhood of New York City, ZGF programmed and designed a 59,355 SF workplace expansion for a global technology client with a passion for innovative design. The entire floor of this historic former factory was transformed into open plan workspace for over 250 employees. Given the complex nature of the building's existing conditions, design coordination among the entire team was vital to the success of the project. The design direction was inspired by the idea of found elements and the juxtaposition of those raw details with more refined materials and vibrant colors. During demolition, the team uncovered many details—a variety of floor materials, an old pipe, and an abandoned elevator and stair shaft—that the team incorporated into the design of the space. The biggest historical relic of all—an 18-inch-high concrete platform covering nearly 20% of the total floor area—was both the toughest design challenge and the most important design opportunity. Used from the outset as the primary organizing principle of the space planning, the plinth became the central zone for meeting spaces and food service, with workspace and client-facing conference rooms arrayed around the edges.

Potential Risks	Mitigation Strategies
ENVELOPE UPGRADE	
Thermal bridging around new window frames set in existing precast openings, which can impact occupant comfort, increased energy use / loss, and potential condensation *Aligning window thermal breaks with the interior insulation can also disrupt aesthetic design and lighting strategies*	» Perform thermal / hygrothermal analysis of the wall systems and discrete window perimeter details to guide the team toward the best approach.
BUDGET	
Ability to meet established hard costs budget given the goals articulated in the Basis of Design document	» Work with Vermeulens to prepare a benchmarking analysis of projects of comparable size and scope with key components and systems identified as $ / SF. In collaboration with the AIA, CM, Vermeulens, and the design team, calibrate the project goals and assumptions against the benchmarked values to determine Target Value Designs for each component. The project will be evaluated against these established values throughout the design and documentation phases.
Ability to meet MEP system goals within stated budget	» Work to reconcile the AIA's impressive goals with the budget, beginning by assessing the suitability of the building's existing equipment. Given the AIA's desire for conversion to all electric systems, major renovation of the TI spaces—including new DOAS units and radiant ceilings—and major plumbing and electrical work, the budget is very limited. Additionally, the piping distribution associated with the steam boiler is likely not suitable for an all-electric system.
Ability to meet technology system goals within stated budget	» Since budget allocation has been made only for telecommunications, the team will need to factor in a budget for the other two-thirds of the technology costs.
USER ENGAGEMENT	
Staff comfort with the workplace strategies being proposed	» Engage early and often to encourage a sense of ownership and buy-in among staff.

Alleviating Risk at the Historic Spruce Goose Hangar

Risk mitigation planning was critical to Google's Spruce Goose, which involved the adaptive reuse of a historic airplane hangar into workspace. Despite being listed on the California State Historic Register, all the hangar's existing finishes had to be addressed in the redesign since they were not fireproofed to current building codes, and hazardous materials needed to be mitigated. Additionally, the hangar's wood foundations could not reasonably be calculated for modern structural performance. ZGF began the complicated design and remediation process by selecting a contractor to partner with the design team, identifying potential risks, and establishing the road map for decision-making for each risk factor. Fundamental to the process was a set of up-front meetings to determine what restrictions would be placed on the structures by the State Historic Preservation Office (SHPO) and the Los Angeles Fire Department (LAFD), whose requirements would normally be contrary to each other. Through complex negotiations, the design team was able to satisfy both the LAFD's desire to fireproof the entire wood structure and SHPO's desire to keep the existing structure exposed by keeping the new four-story construction of workplace and collaboration spaces 20-feet away from any of the existing structure. This approach to working with Google, the contractor, and all the regulatory agencies collaboratively saved millions of dollars in construction costs.

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