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2023 AIA Fellowship

Candidate Varun Kohli
Organization Battery Park City Authority
Location New Hyde Park, New York
Chapter AIA New York State;

Category of Nomination

Object 2 > Practice (Technical Advancement)

Summary Statement

A fierce advocate for environmental and social sustainability, Varun Kohli creates and implements integrated design processes for significant projects globally. His meticulous approach purposefully dissolves the boundaries between built, human, and natural ecosystems.

Education

2006
Architectural Association School of Architecture
London, UK
Master of Science in Sustainable Environmental Design

2003
City College of New York
New York, NY
Bachelor of Architecture

1998
City College of New York
New York, NY
Bachelor of Science (Architecture)

Licensed in:

Registered Architect
State of New York
License No - 031990-01

Employment

2021 - Current
Battery Park City Authority (New York)
Assistant Vice President, Real Properties - Planning & Design

2019-2021
Buro Happold (New York)
Head of Sustainability & Analytics

2014-2019

HOK (New York)

Principal & Sustainable Design Leader

2012-13

Rensselaer Polytechnic Institute - Center for Architecture, Science & Ecology (New York City)

Adjunct Professor

2010-2015

Merge Studio (New York)

Founding Principal

2010-11

Harvard Graduate School of Design (Cambridge)

Visiting Lecturer

2007-2010

Skidmore, Owings, & Merrill (New York)

Associate

Varun Kohli, AIA, LEED AP
Assistant Vice President, Real Properties
Planning & Design
Battery Park City Authority, New York

Object of Nomination
Object Two - Practice (Technical Advancement)

Component Nomination
AIA New York Chapter

Sponsor
Mara Baum, FAIA, LEED FELLOW
Partner
DIALOG, San Francisco

October 1, 2022

RK Stewart, FAIA | Chair, Jury of Fellows
American Institute of Architects
Washington, DC

Re: Varun Kohli Application for FAIA | Object 2 – Practice (Technical Advancement)

Dear Mr. Stewart and Members of the Jury:

I am honored to provide this nomination for Varun Kohli in support of his FAIA candidacy. Varun has made a significant contribution to our profession through the incorporation and integration of social and environmental sustainability into a large number of communities and buildings. He has a wide geographic reach, having helped to create high-performing buildings, cities, policies, and programs that stretch across the globe. He has intentionally developed analytical processes and performative design methods that are replicable by others.

I've known Varun for nearly a decade. We met when we were both principals and sustainable design leaders with HOK – him in New York City, and me in San Francisco. We were part of a small group of HOK leaders that defined the 1600-person firm's global sustainability strategy. Varun influenced our overall direction while also leading tool development initiatives. One such tool streamlined a process for architecture teams to easily incorporate sustainability-focused parametric analytics into the design process, enabling others to create more sustainable buildings.

Varun also led HOK's partnership with the World Bank International Finance Corporation (IFC) "Excellence in Design for Greater Efficiencies" (Edge) program. Edge is a free measurement and certification tool designed to help projects in the developing world better incorporate passive design strategies into building projects – an accessible version of the LEED rating system. Varun spearheaded this partnership, providing technical guidance and a test bed for the program. Varun's leadership with that program lives on in the more than 500 buildings have achieved Edge certification.

I have often admired, and learned from, Varun's use of analytics to solve complex sustainability-related problems in major projects. As an example, Varun served as HOK's sustainable design leader for the new LaGuardia Airport Terminal B, where his daylight modeling directly enriches the experience of many of the 15 million travelers per year and the more than 9,000 staff.

With Buro Happold and later Battery Park City, Varun's work has directly addressed some of the most profound challenges that architects face today: how to create a thriving, vibrant city with limited carbon emissions that is also resilient in the face of a changing climate and resultant weather events. His groundbreaking work for a sustainable and resilient Battery Park City benefits millions of New Yorkers and tourists each year.

Varun has also been an active volunteer for the AIA and other industry groups, both locally and nationally. He was a member of the AIA COTE Advisory Group during a highly influential moment, as that committee was refining its measures of sustainable design, which were adopted by the AIA as the Framework for Design Excellence.

Varun has made ongoing significant contributions to the profession at both the project and policy level. I strongly encourage his elevation to the AIA College of Fellows.

Sincerely,



Mara Baum FAIA, LEED Fellow
Partner, DIALOG

1.0 SUMMARY OF ACHIEVEMENTS



A fierce advocate for environmental and social sustainability, Varun Kohli creates and implements integrated design processes for significant projects globally. His meticulous approach purposefully dissolves the boundaries between built, human, and natural ecosystems.

Throughout his career, Varun has played and continues to play a multitude of roles - a designer, an advisor, an educator - but always with a focus to enhance environmental and social value of design, locally and globally. He is a systems thinker and connects the dots to deliver clearly defined outcomes around environmental and social and economic.

Whether working with global firms, professional organizations or serving not-for-profit organizations, Varun works diligently to bridge gaps between teams, disciplines and geographies, with a clear purpose of creating better built environments. In all of these engagements, he strives for a greater purpose for social equity and environmental harmony.

As a leader, Varun creates opportunities for team members to excel and bring forth innovative processes and solutions. Varun leverages strategic planning to tackle complex projects and performance targets. Using his analytical problem solving and organizational skills he easily engages with teams and peers.

ADVANCING PRACTICE Integrating Ecosystems

Architecture sometimes ignores the natural ecosystem which it otherwise could and should embrace. This fractured relationship has led to an unsustainable built environment. Now that the impact of climate change is upon us, we are working to balance this relationship both by mitigating and adapting to climate change.

From early in his career, Varun focused on refining the process of integrated design to realize high-performance projects; be it office typologies such as **Hill County Office Complex** in 2008 or more recent complex building typologies like **LaGuardia's New Terminal B** in New York, which achieved LEED NC Gold certification. Throughout, Varun has focused on (re)defining the process of environmental integration.

With a strong belief that architects must play a larger role to combat climate change, Varun has lately taken on advisory projects such as the **Battery Park City Sustainability Plan** that has a direct impact. In a shift to the client side, in his current role at **Battery Park City Authority**, Varun ensures that human centric environmental sensitivities are integrated in the process of resiliency projects.

KNOWLEDGE SHARING Process and Data

Since early in his professional life, Varun has actively written, presented and published his work, processes and research. He has taught, partnered in research efforts and participated in reviews at various academic institutions. Varun has forged partnerships and led voluntary research efforts to advance knowledge sharing.

While Varun has authored numerous papers, he recently co-authored **Energy Modeling in Architecture - a practice guide** published by **RIBA**. In 2010, he taught a seminar course at **Harvard GSD** focused on environmentally responsive design process of building envelopes. He currently collaborates with **Yale Center for Ecosystems + Architecture (CEA)**.

While serving on the **AIA COTE Advisory Group**, Varun led research to create the **Design Datamap**. He also supported the cohort's development of the **Common App** aligned with the **AIA Framework for Design Excellence**.

In 2020, Varun led a multi-firm team to develop the **Climate Change Practice Guide** for the AIA, slated to be published soon.

SOCIAL IMPACT Purpose of Architecture

Architects and designers of the built environment contribute tremendously to the betterment of society. While we all define our own purpose, Varun has focused on supporting environmental and social causes with advocacy and partnerships, especially contributing in the developing world including India, his birth country.

While on his tenure with the **AIA COTE Advisory Group**, Varun worked with his cohort and the AIA advocacy staff team to promote sustainability in infrastructure investments on Capitol Hill.

While at HOK, Varun facilitated a partnership with **World Bank Group's Edge Buildings** program, designed to promote passive design strategies in projects funded by the World Bank in the developing world.

Closest to his heart is hands-on engagement in building sustainable environments that elevate humanity. In 2019, Varun took on pro bono project to design and help build a net-zero energy K-12 school in Pokhrama, a remote village in India. In 2021 he was invited to join the board of directors at **Pokhrama Foundation**, where he continues to support their efforts.

2

A dynamic parametrically designed ceiling at 4 Times Square lobby (New York)

2.1 SIGNIFICANT WORK EDUCATION & QUALIFICATIONS

In his current role at Battery Park City Authority, Varun leads strategic design and planning efforts for the 92 acre development in lower Manhattan with a focus on urban resiliency and decarbonization of existing and new buildings. Prior to joining Battery Park City Authority, Varun led the sustainability team at Buro Happold to draft Battery Park City's Sustainability Plan and Green Guidelines. For over a decade, Varun has worked on integrating environmental analytics with design in firms including HOK and SOM as well as his own practice, Merge Studio in New York.

With his focus on integrating environmental sensitivities in design, Varun has collaborated with Yale Center for Ecosystems + Architecture (CEA) researchers on novel pedagogical models for environmental design studios. He recently authored a chapter in *Energy Modeling in Architecture; A practice guide*, published by RIBA.

Varun has also taught courses at Harvard GSD and RPI (CASE) and is a frequent critic at Princeton School of Architecture and U-Penn Design. He currently serves on the board of the 'Pokhrama Foundation,' working to build a net-zero school, providing K-12 education in a remote region of northern India.



Presenting Ebie Awards 2016 with Rand Ekman, FAIA at Urban Green Council Event

Education

2006
Architectural Association School of
Architecture
London, UK
**Master of Science in Sustainable
Environmental Design**

2003
City College of New York
New York, NY
Bachelor of Architecture

1998
City College of New York
New York, NY
Bachelor of Science (Architecture)

Qualifications

2007
Registered Architect
State of New York
License #031990-01

2007
USGBC
LEED Building Design & Construction,
AP

Select Professional Affiliations

American Institute of Architects
Member, 2007-2011, 2014-Current

US Green Building Council
Member, 2007-Current

Urban Land Institute
Member, 2018-Current

Urban Green Council, New York
Member, 2014-Current

Urban Design Forum, New York
Fellow, 2022

Architectural Association, London
Member, 2007-Current

Society of Indo-American Engineers &
Architects, New York
Member, 2005-Current

2.1 SIGNIFICANT WORK EXPERIENCE

Key Professional Roles

2021 - Current

Battery Park City Authority (New York)

Assistant Vice President, Real Properties - Planning & Design

At BPCA, Varun leads all design and planning efforts for Battery Park City, a 92-acre development in lower Manhattan with a focus on resiliency and decarbonization projects.

2019-2021

Buro Happold (New York)

Head of Sustainability & Analytics

As part of global sustainability leadership, Varun led a team of sustainability experts and analysts to provide services including energy and carbon, health and well-being, resource conservation and other advisory roles in the built environment.

2014-2019

HOK (New York)

Principal & Sustainable Design Leader

As part of HOK New York's leadership group, Varun managed design projects and led sustainable design and consulting practice for the office. He was part of HOK's firm-wide Technical Board.

2010-2015

Merge Studio (New York)

Founding Principal

Varun founded and led this boutique design firm with a focus on environmentally responsive architecture and design.

2007-2010

Skidmore, Owings, & Merrill (New York)

Associate

Varun led design projects with a focus on sustainability integration in various national and international projects.

BURO HAPPOLD



SOM



Presenting at Indian Institute of Interior Designers (IIID) Event, Baroda, India (2009)

Key Academic Roles

2020-Current

Yale University, Yale Center for Ecosystems + Architecture (New Haven, CT)

Collaborator

Varun works with Yale CEA on novel pedagogical models for environmental design studios and collaborates to assess future technology integration in potential projects.

2012-13

Rensselaer Polytechnic Institute - Center for Architecture, Science & Ecology (New York, NY)

Adjunct Professor

Varun led a graduate level research design studio, 'Environmental Parametrics' that applied computational design processes to integrate environmental analytics in architecture.

2010-11

Harvard University, Graduate School of Design (Cambridge, MA)

Visiting Lecturer

At GSD, Varun taught a graduate level elective seminar course titled [*Environmentally Responsive Building Skins*](#) focused on building energy transfers.

Design Jury/Reviews

Princeton University; School of Architecture

University of Pennsylvania; Weitzman School of Design

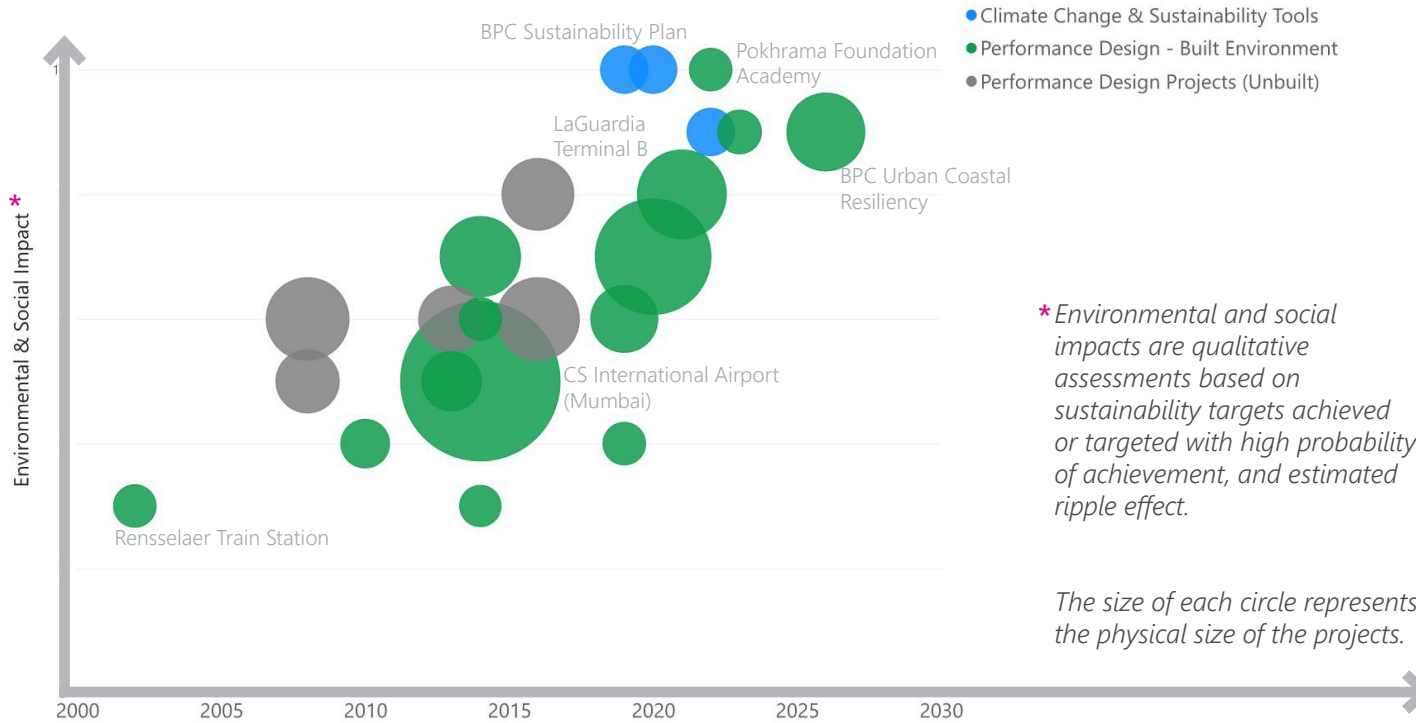
Harvard University; Graduate School of Design

City College of New York; Bernard & Anne Spitzer School of Architecture

Pratt Institute; School of Architecture

Cornell University; College of Architecture, Art & Planning

2.1 SIGNIFICANT WORK CHRONOLOGICAL & GEOGRAPHIC IMPACT



Varun's professional work has morphed and evolved over time, as many career paths do. Along with his professional growth and evolution, two key aspects have been clear; 1) his work has become more focused around environmental and social sustainability and 2) the impact of his project has grown both for environmental and social sustainability.

Soon after his completion of graduate program at the Architectural Association in 2006, Varun's focus shifted from simply design to sustainable design integration. In his roles at SOM and HOK he worked on design projects with passion, creating processes and tools to facilitate an intelligent integrated design process.

In recent years however, he has moved on to projects where the impact is perhaps broader. Helping create a pathway to decarbonization of existing buildings or working on neighborhood or city scale resiliency projects is where Varun sees larger environmental, social and economic impacts.

Knowing these subtle shifts in his professional work will help a reader better understand the nature of projects exhibited in this portfolio.

"Varun is an exceptional architect whose passion for sustainability and high performance buildings is woven into all of his projects."

Kenneth Drucker, FAIA
Design Principal
HOK

2.1 SIGNIFICANT WORK PERFORMANCE DESIGN - BUILT ENVIRONMENT



Urban Coastal Resiliency at Battery Park City*
New York, NY

Battery Park City (BPC) is preparing to protect itself from the impacts of climate change. With predicted sea level rise and frequent severe storms, BPC is redesigning and building a flood barrier system along its coastal edge to protect from up to a 100 year storm in the 2050s.

As a client design executive, Varun leads a large consultant team and all matters of design, planning and sustainability for two major BPC resiliency projects. The projects are being developed in coordination with other NYC Lower Manhattan Coastal Resiliency (LMCR) projects.

Affiliation: Battery Park City Authority
Project Role: Client Side Design Executive
Size: 1.2 miles of water-front
Expected Completion: **2026**
Certifications: **Waterfront Edge Design Guidelines (WEDG) Certified**, FEMA, **ILFI Zero Carbon**



Edelman Fossil Park & Museum - Rowan University*
Glassboro, NJ

The Fossil Park and Museum facility at Rowan University had a clear target to achieve carbon neutrality in alignment with (and ahead of) UN Sustainable Development Goals (SDG) framework.

Varun led the team of sustainable design experts who worked closely with Ennead Architects, designers of the project. The project is targeting 'Zero Carbon Certification' from International Living Futures Institute (ILFI).

Affiliation: Buro Happold
Project Role: Sustainability Consulting Lead
Size: 44,000 sf
Expected Completion: **2023**
Certifications: **ILFI Zero Energy Certification**



Pokhrama Foundation Academy - Phase 1 (Pro bono)*
Pokhrama Village (India)

Pokhrama Foundation is building a K-12 school for the children of Pokhrama and surrounding villages. With a lack of quality accessible schools, Pokhrama Foundation Academy (PFA) has found growing demand in the region to provide free or subsidized education.

Varun initially led the design of the campus and then focused on Phase 1 of the project. He brought a global team of designers together for the project. Now, as part of the Board of Directors of Pokhrama Foundation, Varun is active in all aspects of PFA.

Affiliation: Merge Studio & Pokhrama Foundation
Project Role: Design Lead/ Board Member
Size: 40,000sf (Phase 1)
Expected Completion: Q4/ **2022**
Target: **Net-Zero Carbon**



LaGuardia Airport New Terminal B*
New York, NY

LaGuardia's Terminal B is a 850,000 sf facility that replaced an aging central terminal. The project used Public Private Partnership (PPP) delivery model, a first for a large public project in New York.

The new terminal B is designed to the highest sustainability and standards and in a first, has achieved LEED NC Gold rating under the most stringent rating version 4. Varun led a team of sustainability experts with HOK, their client and CM, Skanska and Vantage Airports, the facility management company, to deliver an integrated, high-performance aviation facility.

Affiliation: HOK
Project Role: Sustainable Design Lead
Size: 850,000 sf
Completed: **2021**
Certifications: **LEED NC Gold (v.4)**, **Envision Platinum**

* Included in Exhibits

2.1 SIGNIFICANT WORK PERFORMANCE DESIGN - BUILT ENVIRONMENT



Brigade World Trade Center Complex*

Chennai (India)

Along the major north-south corridor in the southern city of Chennai, Brigade has built a mixed-use development comprising of commercial towers, a hotel block, retail and residential (under construction) towers.

Varun led the design and sustainability teams at HOK to deliver a truly integrated design for the project. The commercial towers, tallest in the city, total roughly a million square feet and are designed using environmental analytics embedded in a computational design process.

Affiliation: HOK
Project Role: Design Lead
Size: 1.6M sf
Office Complex Completed: **2020**
Certifications: **LEED NC Gold** (Target)



LG North American Headquarters*

Englewood Cliff, NJ

LG's North American HQ building is nestled at the edge of the Palisades Interstate Park. It is designed to stay hidden in the view-shed from Manhattan.

The building is designed with a high performance facade and LG's own high-efficiency heat-pumps (split system) and photo-voltaic solar panels on the roof. The project has maximized pervious surfaces, including green roof to assist with storm-water management and minimize urban heat island effect. The building achieved LEED NC Platinum rating.

Affiliation: HOK
Project Role: Sustainable Design Lead
Size: 350,000 sf
Completed: **2019**
Certifications: **LEED NC Platinum**



Penn State University Chemical and Biomedical Engineering Building*

University Park, PA

Laboratory buildings are complex both in its programmatic layout and its building systems. When Penn State University decided to build their new lab building, bringing together both Chemical and Biomedical Engineering disciplines, they asked that the building also be high-performance.

Varun worked with the design and engineering teams to ensure the building envelope was designed in sync with its systems for higher efficiency and occupant comfort and health.

Affiliation: HOK
Project Role: Sustainable Design Lead
Size: 193,000 sf
Completed: **2019**
Certifications: **LEED NC Gold**



4 Times Square Lobby Renovation*

New York, NY

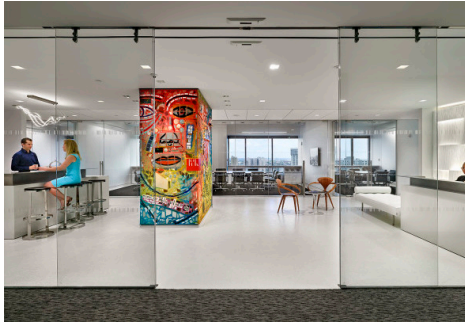
In 2018/19, 4 Times Square (now 152 W. 42nd Street), a landmark tower in the heart of Times Square was repositioned. The process included a complete redesign of the building lobby.

Varun led the design team at HOK to propose and build a parametrically designed ceiling built through a digital fabrication process. All other surfaces of the lobby were kept minimal to contrast a dynamic ceiling. The dynamic ceiling, a key design element is a subtle attractor for pedestrians passing by outside the lobby.

Affiliation: HOK
Project Role: Design Lead
Size: 10,000 sf
Completed: **2019**

* Included in Exhibits

2.1 SIGNIFICANT WORK PERFORMANCE DESIGN - BUILT ENVIRONMENT



HOK Office Interiors
Philadelphia, PA

When HOK opened its office in Philadelphia, it was designed for sustainability and occupant comfort in mind. The project achieved LEED Commercial Interiors (2009) Silver certification from USGBC.

The sustainability team led by Varun ran daylighting studies to inform window treatments and interior furniture and finish material to enhance daylighting in the space. With efficient lighting system and daylight sensors, energy use was greatly reduced for this new office space.

Affiliation: HOK
Project Role: Sustainable Design Lead
Size: 7,000 sf
Completed: **2019**
Certification: **LEED CI Silver**



Bayleaf Restaurant
Townsville, QLD (Australia)

Located in the northern Queensland city of Townsville, Bayleaf is a high-end restaurant featuring Indian cuisine. A 3-dimensional ceiling pattern is the primary expression of design in this space. The pattern is inspired by that of an Indian bayleaf. The bright lit yellow voids between ceiling box panels and the colorful patterned fabric panels on the vertical wall surfaces are inspired by the colorful spices of the Indian sub-continent.

Varun led his design team in New York to deliver the design of the restaurant situated on the other side of the planet.

Affiliation: Merge Studio
Project Role: Partner-in-Charge
Size: 2,000 sf
Office Complex Completed: **2014**



Karle Town Centre Office Buildings*
Bangalore (India)

On an 80 acre site in northern Bangalore, Karle Infra is developing a large mixed-use development. In 2012, Merge Studio was commissioned to design the core and shell of the first two commercial buildings in the development.

As Partner-in-charge, Varun led all aspects of the project to develop a high performance building skin, strategies to unify multiple buildings on site and deliver a design to meet the stringent budget for the project.

Affiliation: Merge Studio
Project Role: Partner-In-Charge
Size: 900,000 sf
Completed: **2014**
Certifications: **LEED NC Gold**



Jashn HQ
Chennai (India)

This 30,000 sf. building was designed to house the head-quarters of an established real-estate developer in the city of Chennai. Varun led the design team to deliver a shimmering 'jewel box' building clad in layers of white transparency.

Aware of the challenge of designing a highly glazed building in the climate of Chennai, the team ran multiple studies to understand the impact of solar radiation on its skin. Using layers of high performance glazing with ceramic frit and channel glass as exterior shading panels, the internal heat gain thru the facade is comparable with energy code compliant facade.

Affiliation: Merge Studio
Project Role: Partner-in-Charge
Size: 30,000 sf
Completed: **2014**

* Included in Exhibits

2.1 SIGNIFICANT WORK PERFORMANCE DESIGN - BUILT ENVIRONMENT



Chatrapati Shivaji International Airport - Terminal 2

Mumbai (India)

A thoughtfully designed airport terminal in Mumbai, SOM's design team designed a building that reflects the local culture, climate and aesthetics of India. As the sustainable design lead, Varun worked with the designers and external consultants to ensure sustainability targets were established and met.

One key design aspect of the building is the intricate ceiling spans the entire terminal with coffered lighting that either house lighting or at locations open to skylights above. Varun led extensive studies to ensure the skylights provided ample daylight below.

Affiliation: Skidmore, Owings & Merrill
Project Role: Sustainable Design Lead
Size: 4.5M sf
Completed: **2014**
Certifications: **LEED NC Gold**



University Center - The New School

New York, NY

As part of the SOM design team, Varun developed tools to facilitate design decisions as it pertains to key sustainability drivers. An example is the creation of a program stacking assessment for its environmental quality goals and apt location in the stacking diagram (only for indoor environmental quality).

Working closely with external sustainability consultants the team developed a large matrix of sustainable design strategies and building systems and technologies, ran feasibility studies and sustainability charettes with the clients.

Affiliation: Skidmore, Owings & Merrill
Project Role: Sustainable Design Lead
Size: 350,000 sf
Completed: **2013**
Certifications: **LEED NC Gold**



Hoboken Ferry Terminal Restoration

Hoboken, NJ

At Beyer Blinder Belle, Varun worked on a various historic preservation projects including the Hoboken Ferry Terminal. In 2004, the terminal was nonfunctional with a desire to refurbish and reinstate ferry services between Hoboken and New York city.

As a project designer, Varun worked with the design team to document existing terminal, refurbish existing spaces and replace historic elements including intricate copper facade and fascia.

Affiliation: Beyer Blinder Belle
Project Role: Project Designer
Size: 139,000 sf
Completed: **2010**



Rensselaer Rail Station

Rensselaer, NY

In 2000 while working with Vollmer Associates, Varun was asked to design the "passarelle" (passageway) section of the new Rensselaer Rail station across the Hudson river from Albany.

Even at this early stage of his career, Varun was focused on user experience of passengers' views of trains arriving and departing under the "passarelle" while being mindful of occupant comfort. While designing with more glazing, he addressed thermal comfort and ensured that the project specifications included high-performance glazing with low-e coating.

Affiliation: Vollmer Associates (now Stantec)
Project Role: Project Designer
Size: 7,000 sf
Completed: **2002**

* Included in Exhibits

2.1 SIGNIFICANT WORK CLIMATE CHANGE & SUSTAINABILITY TOOLS



AIA Climate Action Business Playbook

As part of AIA's commitment to addressing climate change in the built environment, a series of resources and tools have been developed by the AIA for its community.

Varun led a team of consultants and designers to develop the Climate Change Practice Guide that outlines key processes, methodologies and metrics that assist design firms in meeting resiliency both internally in their operations as well as integrating it in their work.

Affiliation: Buro Happold
Project Role: Consultant Team Lead
Published: 2022
Publication Link: [Climate Action Business Playbook](#)

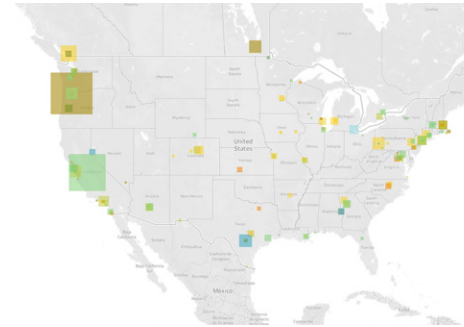


Battery Park City Sustainability Plan & Green Guidelines*

Battery Park City has always been on the forefront of sustainability. In 2020, they released a new Sustainability Plan, a Sustainability Implementation Plan and Green Guidelines for the 92-acre development in lower Manhattan.

Varun led his team of sustainability consultants and external consultants to author the documents, which are in use by Battery Park City Authority (BPCA). The three documents are designed to work in conjunction and provide a broad perspective, an implementation strategy and detailed guidelines to address sustainability.

Affiliation: Buro Happold
Project Role: Consultant Team Lead
Completed: 2020



AIA COTE Top Ten Awards Data-Map

The AIA Committee on the Environment Advisory Group has been conducting the COTE Top Ten Awards competition since 1997. In 2016, the committee published *Lessons From the Leading Edge*, led by Lance Hosey, which outlined the trends of the program for almost 20 years.

In 2017, as part of the committee, Varun proposed and led the research group to collate the data from all design awards since 1997 and create a visual datamap. The datamap allows for the information to be deciphered in various ways and be available for the AIA community to use on a live platform.

Affiliation: AIA COTE Advisory Group
Project Role: Research Sub-Committee Team Lead
Completed: 2019
Project Description: [Explore the new COTE Design Datamap](#)

Varun was a strong force on the AIA COTE Advisory Group. He led an initiative to bring the data of the COTE Top Ten to the finger tips of all architects through an interactive web platform, while also actively offering clarity and solutions to advance the impact of the Framework for Design Excellence.

Gunnar Hubbard, FAIA
Principal & Sustainability Practice Leader
Thornton Tomasetti

* Included in Exhibits

2.1 SIGNIFICANT WORK PERFORMANCE DESIGN PROJECTS (UNBUILT)



Javits Center Expansion - Invited Design-Build Competition

New York, NY

The expansion of the Jacob K. Javits Center celebrates the design of the original “Crystal Palace” completed in 1986 while creating a modern New York City convention and exposition center experience. As part of the design-build competition team, Varun led the HOK design team.

The proposed design includes a 90,000-square-foot expansion to the exposition floor with new entry, lobby, atrium and pre-function spaces. Primarily a hospitality space with enormous equipment loads, the building was targeting EUI reduction of over 13% below ASHRAE baseline.

Affiliation: HOK
Project Role: Design Lead
DB Proposal: 2016



SustaiNYC - Passive House Affordable Housing Competition

New York, NY

In 2016 the NYC Department of Housing, Preservation and Development (HPD) asked developers to propose affordable housing on a city block in East Harlem. One of the key asks was to design the project to Passive House standards.

Varun led the design team at HOK working with outside consultants and the developer team to propose a design solution for the project. The proposed design solution integrated large outdoor community spaces while providing over 600 affordable units.

Affiliation: HOK
Project Role: Design Lead
Project Proposal: 2016
Certification: (Designed for) Passive House Certification



Gold Coast Cultural Precinct - Design Competition

Gold Coast, QLD (Australia)

Merge Studio participated in a design competition for the new Gold Coast Cultural Precinct in Queensland, Australia. The proposal presented a master-plan and programmed buildings with a goal to not only reduce the carbon footprint, but set out a path to carbon neutrality for the entire precinct.

Varun assembled a team of designers and engineers spanning US, Europe, Asia and Australia to propose design solution that integrates natural ecology of the adjacent Nerang River with a pedestrian friendly art district for Gold Coast.

Affiliation: Merge Studio
Project Role: Partner-in-Charge
Competition Entry: 2013



Hill County SEZ Office Complex

Hyderabad (India)

To address the need of an expanding Indian IT industry, SOM was commissioned to design a 1.2 million sf commercial office building complex situated within a special economic zone (SEZ).

Varun led the sustainable design team and created a process of integrating and informing the design of the building. Taking cues from the vernacular, the building was organized in a courtyard shape which also enhanced daylighting. The building facade was meticulously designed to prevent solar radiation transmittance while infusing local art into modern shading elements.

Affiliation: Skidmore, Owings & Merrill
Project Role: Sustainable Design Lead
Design Completed: 2008
Awards: [*Holcim Awards for Sustainable Construction*](#)

2.1 SIGNIFICANT WORK PROFESSIONAL & SOCIAL IMPACT

Professional Contributions

American Institute of Architects

Committee on the Environment (COTE) Advisory Group, 2017-20

While serving on the COTE Advisory Group, Varun was part of the cohort that facilitated the adoption of *Framework for Design Excellence* by the AIA. The cohort also advocated along with AIA's staff to include sustainability in infrastructure bills. The team visited various senators' offices to explain the urgency of climate change.



AIA COTE Advisory Group in Washington DC, Feb. 2018

American Institute of Architects New York/ Center for Architecture

Committee on the Environment, 2010-Current
Design Awards Committee, 2022-23
Annual Luncheon Committee, 2020-21

Urban Land Institute

Sustainable Development Council, 2018-Current

Urban Land Institute New York

Sustainability Council, 2014-15
Infrastructure Council, 2022



Urban Green Council

New York, NY

Member, [The Trust for Urban Green](#), 2018-20

Member, Monthly Programs Committee, 2008-12 & 2015-17

Architect & Interiors Magazine (India)

Member, Advisory Board (2012-17)

Social Impact

Pokhrama Foundation

Member, [Board of Directors](#), 2021-Current

In the summer of 2019, Varun was asked by a friend at [Pokhrama Foundation](#) to help design a school facility in rural northern India. The school is being built in a region that lacks education facilities, especially for girls. After a year and a half of working pro bono for the foundation, Varun was invited to join the Board of Directors for the foundation.



Students of Pokhrama Foundation Academy, Jun. 2022

2.1 SIGNIFICANT WORK LECTURES, PRESENTATIONS & PANELS



METROPOLIS

A'18

AIA New York

U+I New York

AIA Conferences & Events

03/2021
AIA New York/ International Society of Sustainability Professionals (ISSP) (Virtual)
Panelist, [Green Design Advocacy in NYC](#)

06/2018
AIA A'18
New York, NY
[Building Skins: Convergence of Beauty and Thermodynamics](#)

12/2011
AIA New York/ Center for Architecture E=BLDGs
Presenter & Panelist, *Design for Energy: The Language of Sustainability*

10/2010
AIA New York/ Center for Architecture
Moderator, *Integration Series; Bridging Roles of Architect & Engineer (a COTE Event)*

Regional/National Conferences & Round-tables

03/2022
New York Build Expo 2022
New York, NY
Presenter/Panelist, [Key Trends in Urban Design](#)

09/2020
Climate Week NYC, Buro Happold Event
New York (Virtual)
Moderator/Panelist, *Future of Healthy Workplace Environments*

08/2019
NYC Climate Mobilization Act Round-table (Buro Happold)
New York, NY
Roundtable Facilitator

10/2018
[Metropolis Perspective Sustainability Symposium](#)
New York, NY
Panelist

03/2018
Consortium of Universities for Global Health (CUGH)
New York, NY
Presenter, *Eco-Synthesis in Design*

04/2015
Urban Land Institute, New York - Sustainable Building Council
New York, NY
Presenter, *NYC 2014 Energy Code Compliance; The Envelope*

04/2013
IBPSA NYC
CASE/RPI Interdisciplinary Research Studio Project Presentation



At Metropolis Perspective Sustainability Symposium in New York, 2018

2.1 SIGNIFICANT WORK LECTURES, PRESENTATIONS & PANELS



Presenting at Nirman 2009 conference in Ahmedabad, India



PLEA*
DUBLIN
2008

Towards Zero
Energy Building

International Conferences

09/2017
Advanced Building Skins Conference
Bern (Switzerland)
Form Follows Performance

12/2014
Conference for Confederation of Real Estate Developers Association of India (CREDAI)
Ahmedabad (India)
Presenter, *CONSERVE; the mantra of Indian Developer Market*

06/2013
ZakWorld of Facades Conference
Chennai (India)
Presenter/Panelist, *High Performance Facade*

03/2013
ACRECONF2013
New Delhi (India)
Presenter, *Architectural Language of Performative Design*

09/2011
2nd Annual Façade Design & Engineering Conference
Mumbai (India)
Presenter; *Building Skins- Responsive + Performative*

09/2011
United Technologies Sustainable Design National Discussion
Mumbai/New Delhi (India)
Invited Panelist

11/2009
Indian Institute of Interior Design
Event
Baroda (India)
Presenter, *SOM Global Project*

11/2009
Nirman 2009
Ahmedabad (India)
Environmentally Responsive Buildings; a necessity

09/2009
India Green Building Council (IGBC)
Green Building Congress
Hyderabad (India)
Presenter, *Towards Net Zero Energy; The Case of Pearl River Tower (SOM)*

11/2009
Nirman 2009
Ahmedabad (India)
Environmentally Responsive Buildings; a necessity

10/2008
Passive & Low Energy Architecture (PLEA)
Dublin (Ireland)
Paper & Presenter, *Form Follows the Sun*

10/2007
Passive & Low Energy Architecture (PLEA)
Geneva (Switzerland)
Poster presentation, *St. Anthony's Net-Zero School*

Academic Institutions

06/2022
Architectural Association; Sustainable Environmental Design (SED) Program
London (Virtual)
Presenter, *Where are you now? (WAYN)*

11/2018
HOK @ GSD
HOK Sustainable Projects Presentation to Harvard GSD Students
Cambridge, MA

11/2014
Harvard GSD
Cambridge, MA
Lecture, *CONSERVE- The Indian Developer Market & Sustainability*

10/2009
U-Penn Design (Graduate School)
Philadelphia, PA
Lecture, *Component Based Design*



Receiving a gift at Nirman 2009 conference in Ahmedabad, India

2.2 AWARDS, HONORS & RECOGNITION



Candidate Honors

2012

Architecture & Interiors India -
ITP Publishing House (India);
iGen Top50 Award

Architect & Interiors India magazine is one of the most widely circulated architecture and design journals in India. In 2012 when the magazine picked 50 influential next generation designers (hence iGen) working in India, Varun was part of that list and was commended for infusing sustainability in architecture projects in India.



2010

Society of Indo-American Engineers & Architects (SIAEA)
New York, NY
Professional Achievement Award

SIAEA is a group of engineers and designers mostly comprising of professionals of Indian sub-continent origin. The group promotes its members in the New York region and provides a platform to share knowledge and network. In 2010, Varun was one of two professionals under the age of 40 receive a 'Professional Achievement Award'.

Competition & Project Awards

LaGuardia Terminal B (HOK)
New York, NY

2022, National Academy of Construction - Recognition of Special Achievement Award

2021, Prix Versailles World Title – Airports

2021, Municipal Art Society of New York MASTerworks Award – Best New Infrastructure

2020, ENR New York Best Airport/ Transit & Project of the Year Finalist

LG North American Headquarters (HOK)
Englewood Cliffs, NJ

2021, USGBC Leadership Award - Mid-Atlantic & Northeast Region

2020, AIA New Jersey - Built Sustainability

2020, AIA Pennsylvania - Architectural Excellence COTE Award

Penn State University Chemical and Biomedical Engineering Building (HOK)
College Park, PA

2019, AIA Philadelphia Sustainability Awards

Chattrapati Shivaji International Airport (SOM)
Mumbai, India

2020, Institute Honor Award for Architecture, American Institute of Architects (AIA)

2012, American Architecture Award, Chicago Athenaeum

Hill County SEZ Office Complex (SOM)
Hyderabad, India

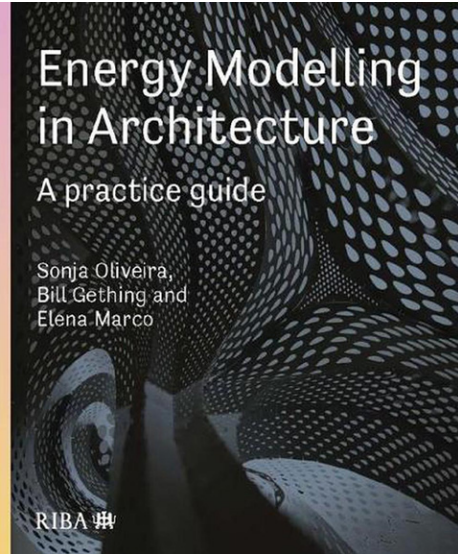
Holcim Awards for Sustainable Construction; [Energy Efficient Office Complex \(for Asia Pacific Region\)](#)

2020, Steel Institute of New York - [Gaining Urban Space Competition, Finalist](#)

Design team: daab Design Architects, Buro Happold, LERA Engineers

[2017 Metals in Construction Magazine Design Challenge](#) - Finalist
Structural eXterior Enclosure Team (HOK)

2.3 PUBLICATIONS



Cover of RIBA publication in 2020

Authorship: Books & Journals

2022
[Adapting to Climate Change at Battery Park City](#)
ARCHITECTURE New York State Q3
Author

2020
[Energy Modeling in Architecture – A practice guide](#)
RIBA Publishing
Co-Author of Chapter

2019
[Explore the new COTE Design Datamap](#)
AIA Knowledge Net
Author

2019
[FM's Role in Sustainable HVAC Planning](#)
Building Operating Management
Author

2014
[Glass Facades in Chennai: A Design Challenge](#)
Fensterbau Frontale India
Author

10/2011
[Board Members' Soapbox: 'Skin City'](#)
Architect & Interiors India
Author

02/2010
[Net-Zero City](#)
BuildoTech Magazine
Author

Kohli insists that architects should always be striving to design built environments that uplift the human spirit. "Our design community is now, more than ever, conscious of the impact a habitat has on its occupants and how better natural light, better air quality and removal of toxins can enhance its occupants' physical and cognitive capabilities," he observes.

ARCHITECT & Interiors (India),
Jun. 2018

Authorship: Papers, Guidelines & Standards

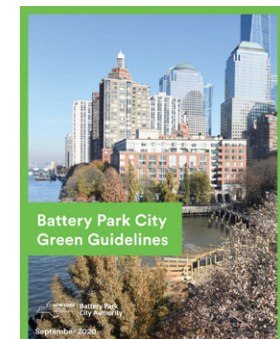
08/2022
[AIA Climate Action Business Playbook](#)
Team Lead/Co-Author; Buro Happold Sustainability Team

04/2022
[Battery Park City Climate Action Plan](#)
Client Side Executive Review; Battery Park City Authority

09/2020
[Battery Park City Sustainability Plan](#)
Team Lead/Co-Author; Buro Happold Sustainability Team

09/2020
[Battery Park City Sustainability Implementation Plan](#)
Team Lead/Co-Author, Buro Happold Sustainability & Analytics Team

09/2020
[Battery Park City Green Guidelines](#)
Team Lead/Co-Author, Buro Happold Sustainability & Analytics Team



Cover of BPC sustainability documents in 2020

10/2008
[Form Follows the Sun: Hill County SEZ Office Complex](#)
PLEA 2008 (Dublin) Conference Proceedings
Author

09/2007
[Environmentally Responsive Architecture; Passive Design for School in Southern India](#)
PALENC Conference Proceedings (Crete, Greece)
Co-Author w/ Simos Yannas

2.3 PUBLICATIONS

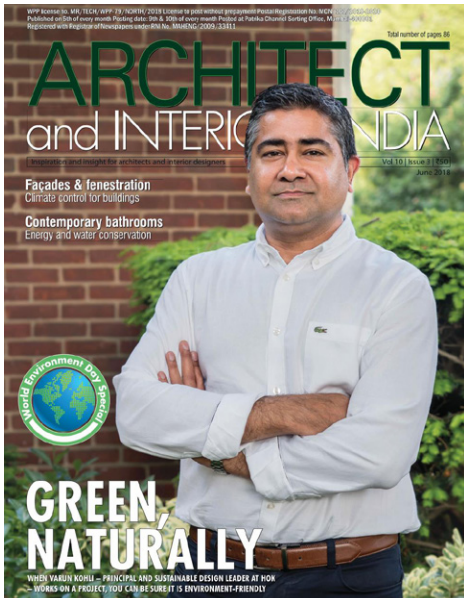
Candidate Profile/Project Feature

10/2019
[Head of Sustainability - New York, Varun Kohli joins Buro Happold](#)

Linked-in
Posted by Denzil Gallagher, Partner at Buro Happold

06/2018
[When Varun Kohli works on a project, you can be sure it is eco-friendly](#)
Architecture & Interiors India
Feature Article

12/2018
[Designer's Insight; Timeless Aesthetics](#)
INSITE Magazine
Feature article



On the cover of 'Architects and Interiors India' magazine

06/2017
[Varun Kohli joins AIA COTE Advisory Group](#)

AIA KnowledgeNet - Voices of Leadership
Profile by Kira Gould

03/2016
[Hot 100 Trendsetters; Celebrating the Who's Who of Contemporary Indian Architecture & Design](#)
Architecture & Interiors (India)
Profile

01/2015
[Merge Rides The Waves in Bangalore](#)
Architect's Newspaper
Project profile by Anna Bergren Miller

05/2014
[A Static Dynamic Skin](#)
Windows & Façade Magazine
Project Profile

12/2013
[Designer's Insight: Coffee & Collaboration](#)
INSITE Magazine (India)
Interview & Project Feature

10/2011
[Performative Façade Design](#)
Buildotech Magazine
Project Feature

Interviews & Citations

12/2019
[This Is the Temperature You Should Set Your Thermostat to in Winter](#)
BestLife

11/2019
[Map Offers Insight into COTE Top Ten Winners](#)
BuildingGreen
Interview & citation by Paula Melton

02/2019
[15 Products for Designing Sustainable, Healthy Buildings and Interiors](#)
Metropolis
Interview & citation by Avinash Rajagopal

11/2018
[AIA COTE to Release New Tools to Help Firms Achieve Sustainable Design](#)
Architect Magazine
Interview & citation by Katie Gerfen

"The idea was that we bring together the aesthetics of the facade and make it performative as well," explained Merge founder and advisor Varun Kohli. Despite financial constraints dictated by India's competitive development market, Merge delivered, designing a modular facade comprising metal and glass "waves" that cut solar gain while allowing light and air to penetrate the interior.

The Architect's Newspaper, Jan. 2015

06/2012
[Jashn HQ Building](#)
Buildotech Magazine
Project profile

10/2012
[Green Problems & Green Building Movement](#)
Architecture Update Magazine
Interview & citation

03/2012
[iGen Top50 Award](#)
Architecture & Interiors India
Profile

12/2011
[Buildings Perform in Multiple Senses](#)
AIA NY Center for Architecture
Quotes by Varun, written by Bill Millard

02/2010
[SOMething Special](#) (Featured Article on SOM work in India)
INSITE Magazine (India)
Interview & citation

12/2009
[In the Quest for Better Built Environment](#)
INSITE Magazine (India)
Citation; Authored by Roopa Sabnis Pinge

11/2009
The Indian Express (Ahmedabad);
[Nirman 2009: Experts call for more green buildings](#)

05/2009
[Sustainable Subcontinent](#)
GreenSource Magazine
Feature Article, Quotes & citation

3



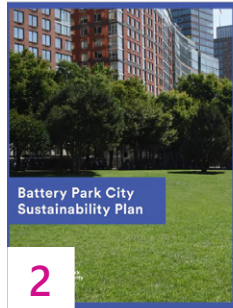
An urban oasis nestled between Karle Town Centre Hub1 & 2 commercial buildings (Bangalore, India)

3.0 EXHIBITS



1

LaGuardia Airport Terminal B
HOK



Battery Park City
Sustainability Plan

2

Decarbonizing Battery Park City
Buro Happold



Battery Park City
Sustainability
Implementation Plan



3

Battery Park City Urban Coastal Resiliency
Battery Park City Authority



4

Brigade World Trade Center Chennai
HOK



5

Karle Town Centre
Merge Studio



6

4 Times Square Lobby Redesign
HOK



7

LG North American Headquarters
HOK



8

Penn State University Chemical and Biomedical Engineering
HOK



9

Pokhrama Foundation Academy
Merge Studio/ Pokhrama Foundation



10

Edelman Fossil Park & Museum - Rowan University
Buro Happold

3.0 EXHIBIT 1 LaGuardia New Terminal B



Varun was a passionate and practical leader during the La Guardia Terminal B Redevelopment Project. During design development Varun managed a complex scope that crossed every discipline within the design team and was able to systematically collaborate taking into account ambitions goals and project risk. His leadership propelled the team to achieve the highest ambitions for the performance of the project and pushed for leading edge concepts in sustainable design.

Ryan Prime
Sustainability Practice Leader
VHB
Skanska's Sustainability Leader for LaGuardia Terminal B Project

Location
Queens, NY

Status
Completed 2021

Role
Sustainable Design Lead

Size
1.3 million sf / 120,775 sqm

Certifications
LEED NC Gold (v.4)

Institute for Sustainable Infrastructure **Envision Platinum**

Awards
Prix Versailles World Title – Airports

ENR New York Best Airport/ Transit and Project of the Year Finalist

Declaration of Responsibility

I have personal knowledge of the nominee's responsibility for the exhibit listed above. That responsibility included:

- sustainable design under direction of the nominee

Kenneth Drucker, FAIA
Design Principal
HOK
Design Oversight

Varun led a team of sustainable designers, analysts, engineers, consultants and construction managers to exceed sustainability and performance targets for the new gateway into New York City.

energy use reduction over ASHRAE compliant design

↓ **18%**

The Challenge

Sustainable aviation facilities may sound like an oxymoron, given the massive energy consuming building systems that are necessary in most aviation facilities including baggage handling systems and ground support services for parked aircrafts. At the same time, such projects are also opportunities for significant energy and carbon reduction through strategic building and systems design.

The Process

In a project of this magnitude with large multiple teams, a clear process of design and communication is important to ensure success. In coordination with all key members of the design-build team, Varun established higher sustainability targets for the project.

He led HOK's sustainability team to facilitate multiple streams of communication with design architects, structural and MEP engineers and CMs on the project.

The Impact

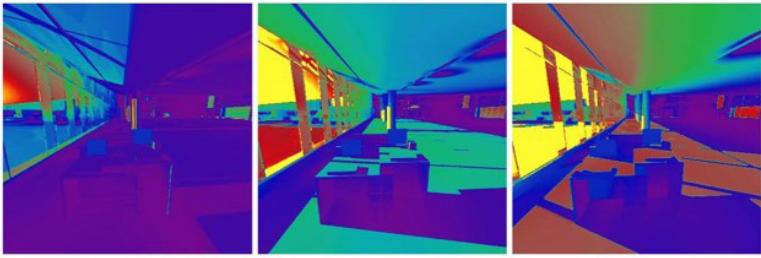
A complex, large airport terminal in a major city, LaGuardia's new Terminal B is a highly efficient facility that reduces energy use by roughly 18% and water use by 30%.

The new Terminal B uses passive design and active technology to create an optimal experiential quality of the terminal's internal environment for its travelers and employees alike.

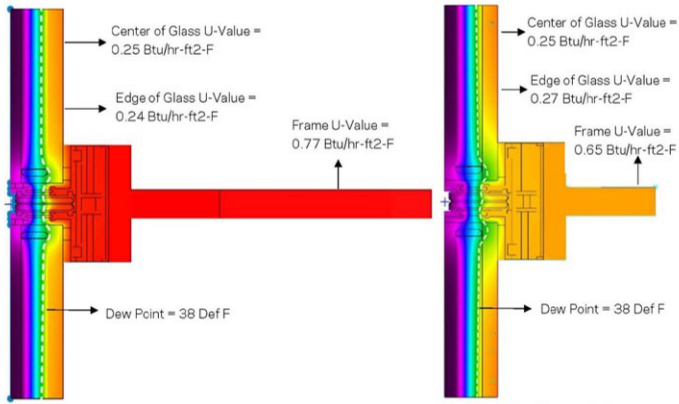
3.0 EXHIBIT 1 LaGuardia New Terminal B



3.0 EXHIBIT 1 LaGuardia New Terminal B



False color glare analysis at eastern concourse



Therm analysis to assess thermal bridging and effective u-values



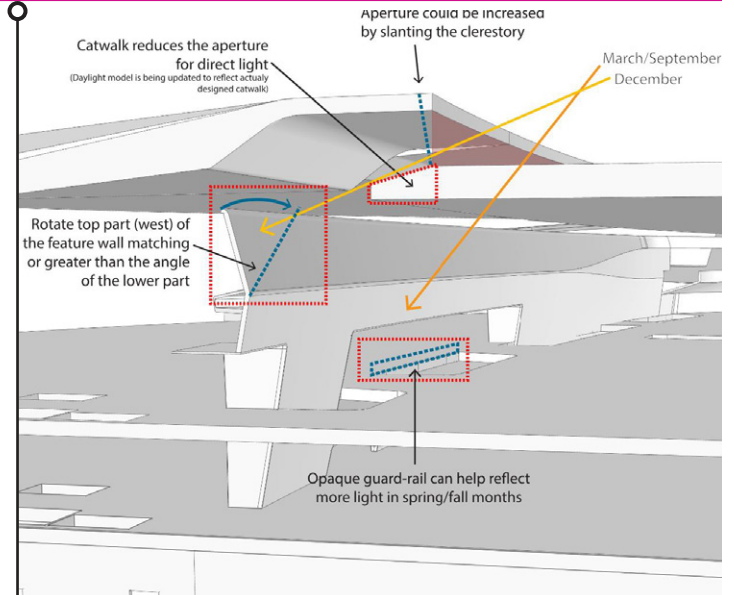
Frit pattern on high-performance facade at eastern concourse

Analytics Informing Occupant Comfort & Well-Being

An internal environment must maximize its occupants' visual and thermal comfort. With enhanced natural light, air quality and biophilic design, the terminal and concourses help ease the traveler's journey and terminal employees' workdays.

In the concourses where passengers await to board their flights and employees work at gate check-ins, every zone was assessed for glare and thermal comfort. Detailed thermal studies of the facade informed the design.

In the main terminal building, clerestory windows maximize daylight not only on the departures level, but they also allow light to penetrate lower levels of the building.



Design strategies to maximize daylight



Carefully designed clerestory windows at departures hall

3.0 EXHIBIT 2 Decarbonizing Battery Park City

Varun co-led the authorship of the Sustainability Plan, Sustainability Implementation Plan and Green Guidelines for Battery Park City, a 92-acre planned development over landfill in lower Manhattan, to become carbon neutral by 2050 and eliminate approximately 168,879 tCO₂e/yr of GHG emissions from our atmosphere.



Aerial View of Battery Park City



Public Engagement Process

Location
New York, NY

Status
Sustainability Plan,
Implementation Plan and
Green Guidelines Completed,
2020

Applicant's Role
Consultant Team Lead

The Challenge

The path to urban decarbonization is through addressing existing building assets. With 22 million square feet of built-up area, Battery Park City (BPC) needed to create a plan and guidelines to mitigate carbon emissions. An initial assessment (2017 baseline) showed that BPC buildings were responsible for approximately 168,879 tCO₂e/yr of GHG emissions.

While a plan was laid out to achieve BPCA's sustainability goals, an even more challenging task was to create a new set of guidelines for existing buildings to assist property owners and management teams of a varying typology of buildings in Battery Park City.

The Path

Varun co-led the consultant team to deliver three documents to support Battery Park City's ambition to forge a sustainable path forward, including; 1) Sustainability Plan, 2) Implementation Plan and 3) Green Guidelines. These documents are comprehensive and detailed, yet designed for ease of use and accessibility to information.

The team included both in-house (Buro Happold) experts and engineers and external sub-consultants including architects, landscape architects and community engagement professionals, amongst others. This team, in constant coordination created plans and guidelines that complement each other in their structure and are designed to be easily used by the community.

The Impact

In major cities of the world such as New York, new buildings are far and few in between, and it is the existing stock of buildings that must be addressed to achieve decarbonization. Varun's role in developing this plan creates an exemplary path to decarbonization at an urban scale. The outcome of this work not only helps New York reduce its CO₂e emissions, but leads by example in how this could be accomplished.

Declaration of Responsibility

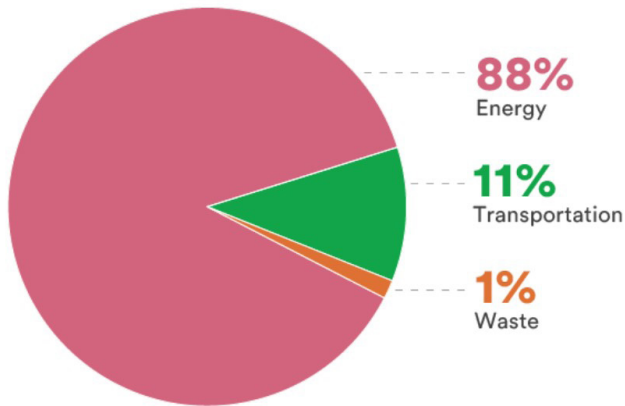
I have personal knowledge of the nominee's responsibility for the exhibit listed above.

That responsibility included:

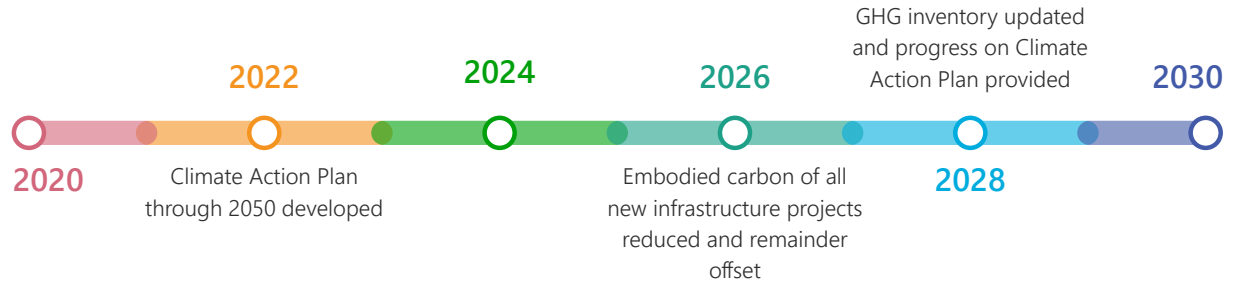
- sustainability consulting under direction of the nominee

Robert Okpala
Partner
Buro Happold
Partner in Charge

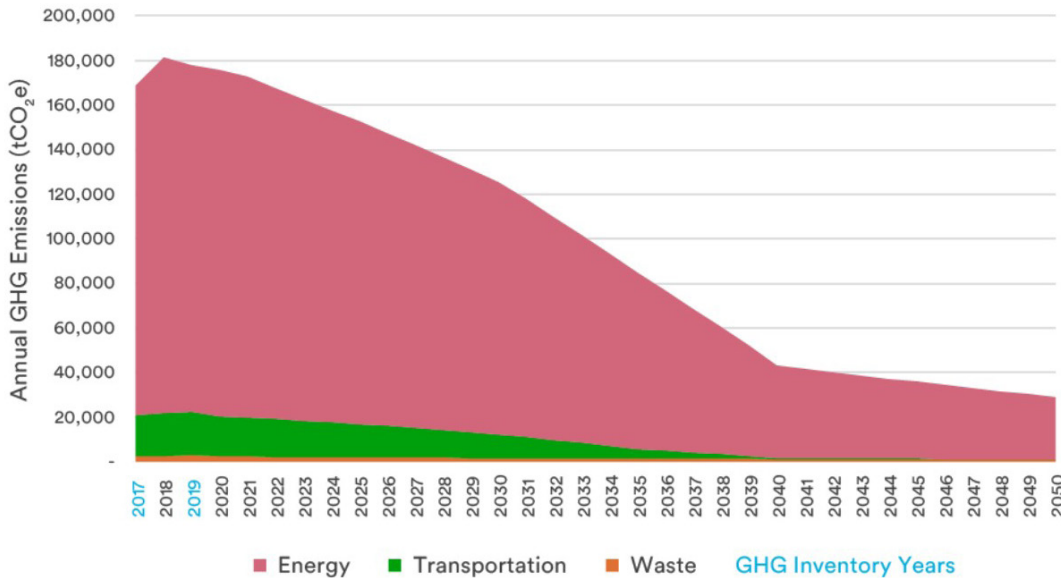
3.0 EXHIBIT 2 Decarbonizing Battery Park City



Battery Park City GHG Emissions Inventory (2017 Data)



GHG Reduction Milestones, Battery Park City Sustainability Plan



Battery Park City Carbon Neutral Pathway, Battery Park City Climate Action Plan

While decarbonization is a key target, the plan also lays out targets for water, waste, ecology and other site level enhancements creating even better urban environments for its residents and visitors.

Community engagement was a significant part of the project and as such, informing and educating the local community had a powerful impact in achieving goals to mitigate climate change and collectively create usable, healthy and desirable urban environments.

Climate Action Plan

In 2022, in accordance with the Sustainability Plan, Battery Park City Authority (BPCA) commissioned Buro Happold to develop a Climate Action Plan (CAP). For this work, Varun reversed roles and worked on the project as BPCA executive.

The CAP collected available data for energy, transportation and waste and created a dataset of GHG emissions based on the information. Using strategic GHG reduction strategies, the climate action plan lays out a path to achieving near net-zero emissions plan for entire Battery Park City.

3.0 EXHIBIT 3 Battery Park City Urban Coastal Resiliency



Location
New York, NY

Status
Under Construction

Applicant's Role
Client Side Design Executive

Certifications
ILFI Zero Carbon Certification
(Target) for Wagner Pavilion

WEDG Certification (Target)

Size
~2 Miles of Urban Coastal Edge

Key Design Consultants
AECOM - Engineering &
Landscape
Thomas Pfiefer & Partners -
Architecture

Declaration of Responsibility

I have personal knowledge of the nominee's responsibility for the exhibit listed above. That responsibility included:

- design management under the direction of the nominee

Gwen Dawson
VP, Real Properties
Battery Park City Authority
Client

Varun oversees design and planning for Battery Park City's coastal resiliency projects, transforming approximately two miles of prime urban waterfront public realm in lower Manhattan, to adapt to impacts of climate change including sea level rise and frequent storms.

The Challenge

With climate change induced sea-level rise (SLR), frequent high-intensity storms, storm surges as well as pluvial flooding, urban coastal communities are being forced to rapidly adapt.

New York and especially lower Manhattan faced the brunt of this during super-storm Sandy in 2012. Battery Park City (BPC), with approximately two miles of waterfront public realm, has taken upon itself to protect its assets in coordination with other lower Manhattan coastal resiliency projects.

The Plan

Flood Barrier Systems (FBS) are being designed and constructed along the waterfront at BPC in various phases. This intervention requires a large number of changes to public spaces, structures and other amenities. As lead client design executive, Varun ensures proposed designs retain or enhance the beloved public realm as well as our relationship to the water's edge. Simultaneously, he is implementing sustainable design principles in all projects including urban heat island effect, embodied carbon, green construction practices amongst other requirements.

The Impact

In the coming years, BPC's waterfront will change to adapt to climate change. It will respond to shifting community needs and create a new paradigm of urban waterfront redesign while protecting the community assets. This urban reconfiguration in an already established urban jewel can become exemplary for other cities that face similar climate change challenges.

"Varun has played an integral role in advancing the Battery Park City Authority's resiliency and sustainability initiatives while at the same time helping us both respect and accentuate the Authority's design legacy. His contributions will help this neighborhood continue to serve as a model for urban development for generations to come."

B.J. Jones
President & Chief Executive Officer
Battery Park City Authority

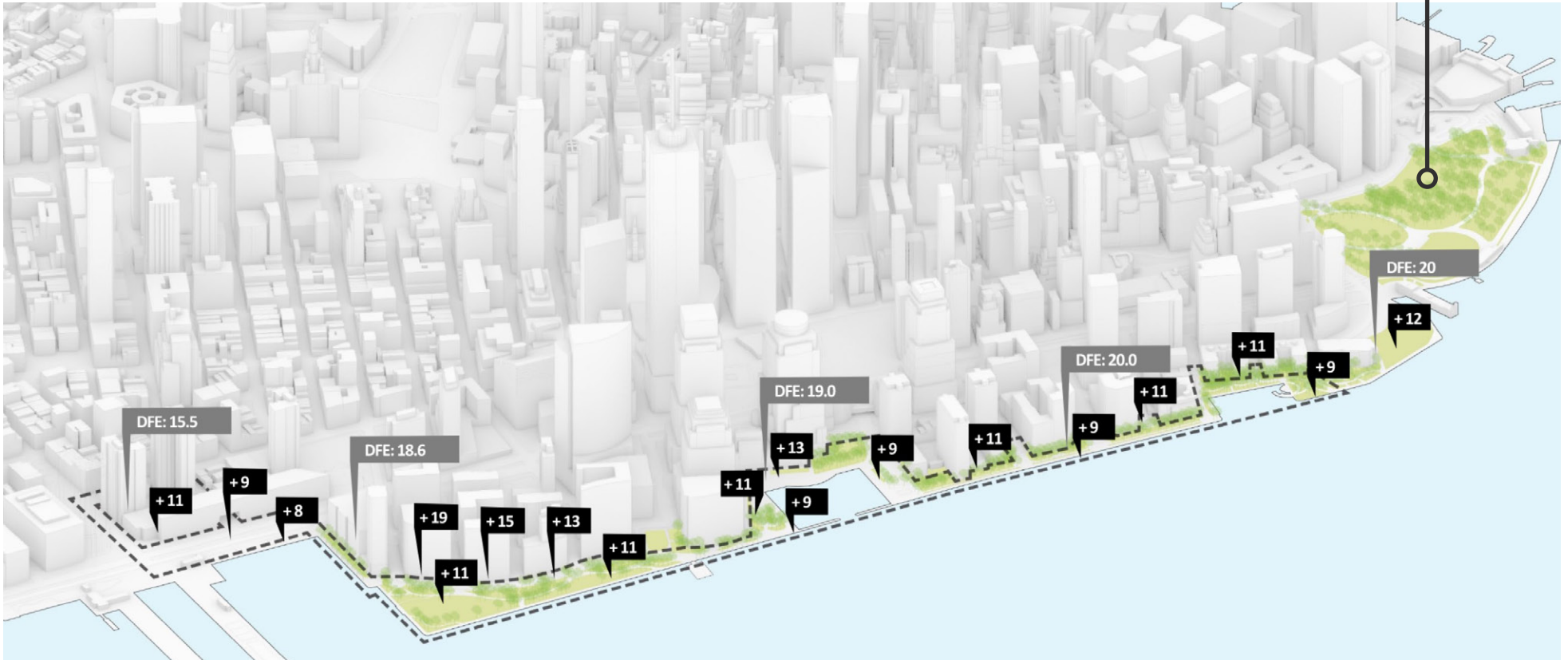
3.0 EXHIBIT 3 Battery Park City Urban Coastal Resiliency



South Cove during super-storm Sandy (2012)



Redesigned Wagner Park and pavilion as part of South BPC resiliency project



Current elevations in black compared with anticipated design flood elevations (DFEs) needed to prevent coastal flooding in 2050s

3.0 EXHIBIT 4 Brigade World Trade Centre Chennai



Location
Chennai, India

Status
Completed 2021

Applicant's Role
Design Lead

Certifications
LEED NC Gold (Target)

Size
16 Acre Site/~3.5M sf
development

Presentations
AIA A'18 - [Building Skins:
Convergence of Beauty and
Thermodynamics](#)

Publications
RIBA Publication: [Energy
Modeling in Architecture – A
practice guide](#)
Co-Author with Sonia Oliveira

Declaration of Responsibility

I have personal knowledge of the nominee's responsibility for the exhibit listed above. That responsibility included:

- project under the direction of the nominee

Kenneth Drucker, FAIA
Design Principal
HOK
Design Oversight

In Chennai, Varun led an integrated process for building facade design that has fused performance and aesthetics using computational design tools.



Site Plan

Aspiration

Chennai's new World Trade Center is the tallest commercial building in the city. With an aspirational client for this project, Varun led an intelligent design process using computational environmental analytics to deliver a facade design that responds to its immediate context, both in its aesthetic and performative response.

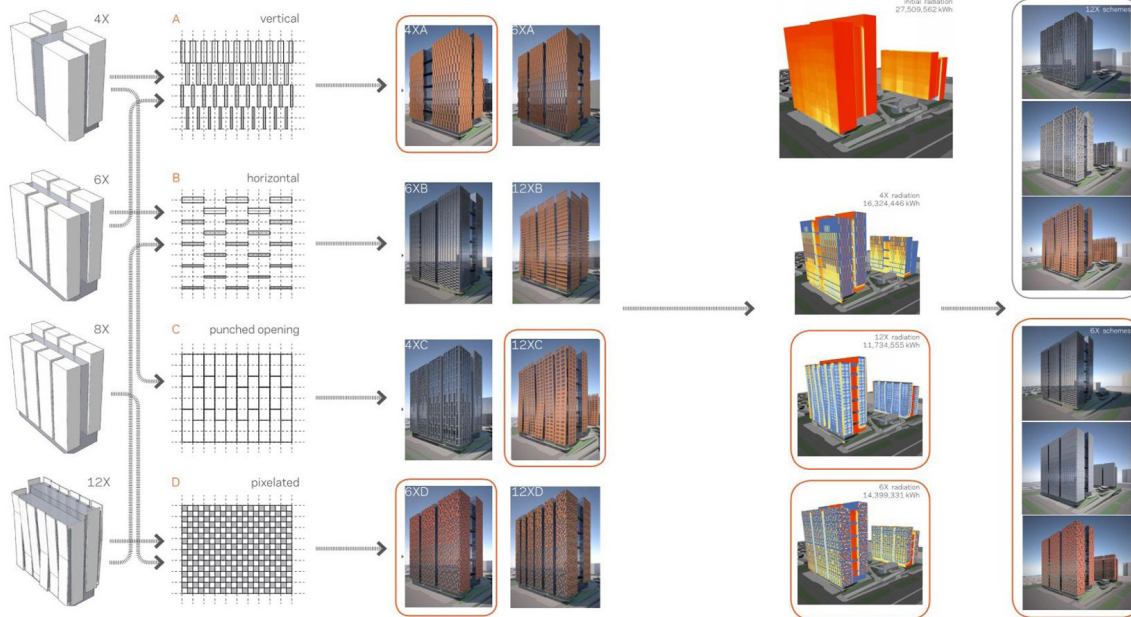
The Process

While the entire project including site planning, building placement and landscaping were being designed with environmental sustainability principles, Varun planned a more intense integrated process for the facade of the building.

"Varun demonstrated a thorough understanding of sustainability and was one of the driving forces in ensuring that the design was as energy efficient as possible. We found Varun to be extremely capable, very easy to work with and strived to ensure that we, as clients, are happy with the product. On completion of the project, we are now over-joyed with the outcome and can confidently say that Varun had a very large part to play in it."

M.R. Jaishankar
Chairman & Managing Director
Brigade Enterprises Ltd. (India)

3.0 EXHIBIT 4 Brigade World Trade Centre Chennai



Massing design development and integration of environmental analytics

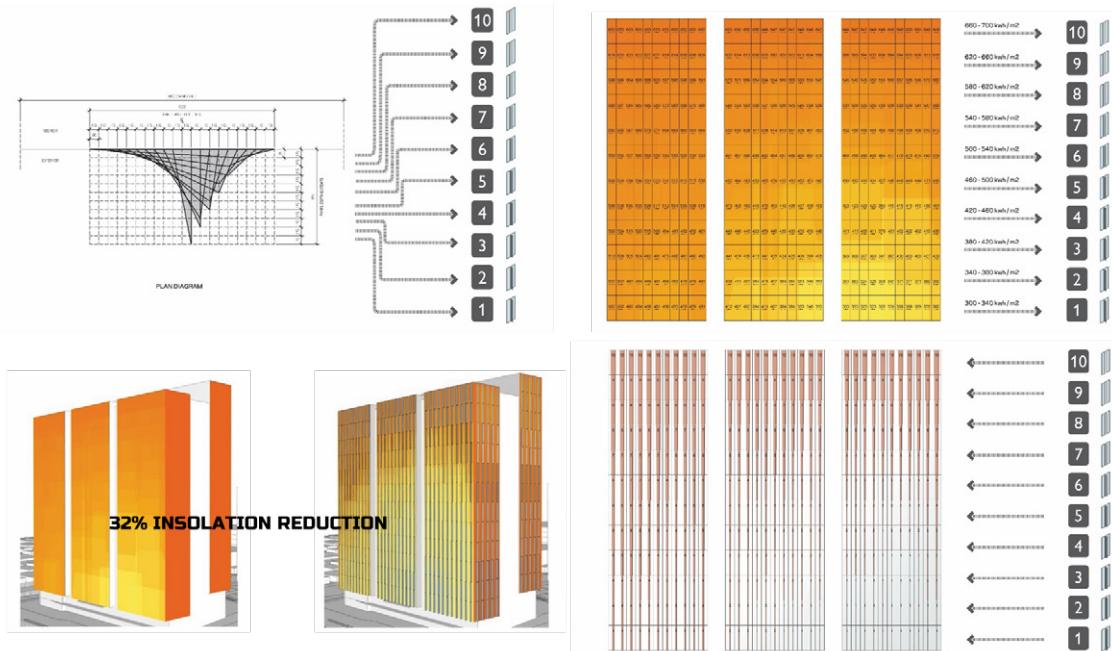
Given that building facades are most visible feature in a building and the largest building component for energy transfers, it is a key aspect of building design that must achieve multiple goals.

Within the design team, different expertise were brought together to facilitate a computational process where the development of design options would simultaneously be able to run through environmental analytics to assess defined key metrics such as radiation, daylighting, etc. The process allowed the design team to sift through multiple options of design and assess performance aspects almost in real time.

The Impact

The building is poised to achieve LEED Gold rating, with an anticipated 37% reduction in energy use index (EUI) from baseline. Most of these energy savings are attributable to the high-performance facade of the building, given that building service systems remain identical in both base-case and proposed design of the building energy model. Through this project, Varun has been able to demonstrate not only a more intelligent process of facade design, but also the significance of facade performance overall.

Furthermore, Varun used this project as a case study in a RIBA publication to explain the process of design for other industry professionals.



Facade design process to reduce incident solar radiation



Building elevations (looking west)

3.0 EXHIBIT 5 Karle Town Centre Office Buildings



Location
Bangalore, India

Status
Completed 2014

Applicant's Role
Partner in Charge

Certifications
LEED NC Gold

Size
925,000 sf

Publications
Architect's Newspaper;
[Merge Rides The Waves in Bangalore](#)

AIA NY Center for Architecture
[Buildings Perform in Multiple Senses](#)

Declaration of Responsibility

I have personal knowledge of the nominee's responsibility for the exhibit listed above. That responsibility included:

- nominee's firm executed project

Dhruva Karle
Member, Board of Directors
Karle Infra
Client

Varun led his practice to design a high-performance office complex in Bangalore, breaking the illusion of equating glass boxes to modern office buildings, especially in the developing world.

The Challenge

In 2011, Merge Studio, led by Varun, was commissioned to design and deliver a high-performance building in a highly competitive developer market in northern Bangalore. At the time, for office buildings in India, there was a preconceived notion of equating glass buildings with modernity, and often with poor glass performance. This meant high energy loads and uncomfortable spaces for occupants especially along the perimeter. Taking the challenge head on, Varun proposed a design that challenged fully glazed buildings and achieved LEED Gold rating.

The Focus

Varun led his team to design the first two office buildings with a focus on occupant comfort and energy efficiency while achieving high spatial efficiencies. Everything from orientation to lease spans was carefully assessed for maximized daylighting. Knowing that radiation is the primary load on buildings in India, the facade was designed to self-shade and minimize incident radiation.

At ground level, the plaza between the two towers enhanced comfort by creating sunken seating areas and ample trees. An 'internal street' slices through the buildings, offering comfortable and protected walkways.

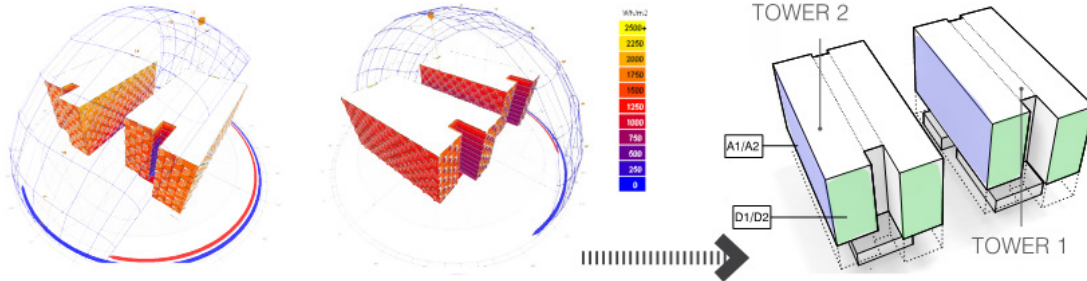
The Impact

The project challenged the accepted modern office typology in India and re-adapted it to local environmental and cultural context. The resulting spaces, both interior and exterior, are loved by the office goers. The plaza often hosts events when not taken over by every day occupants. The view between the two buildings looking west is favored shot of photography enthusiasts, many of which can be found on Instagram.

"It is interesting that even though the fins are uniform, the placement of the same across the elevation cause shadow movements in the facade that draws ones eye to the top of the building. The plaza in between the building is a popular selfie spot for campus occupants. Varun did an excellent job of creating spaces that were both functional, sustainable, welcoming and beautiful at the same time."

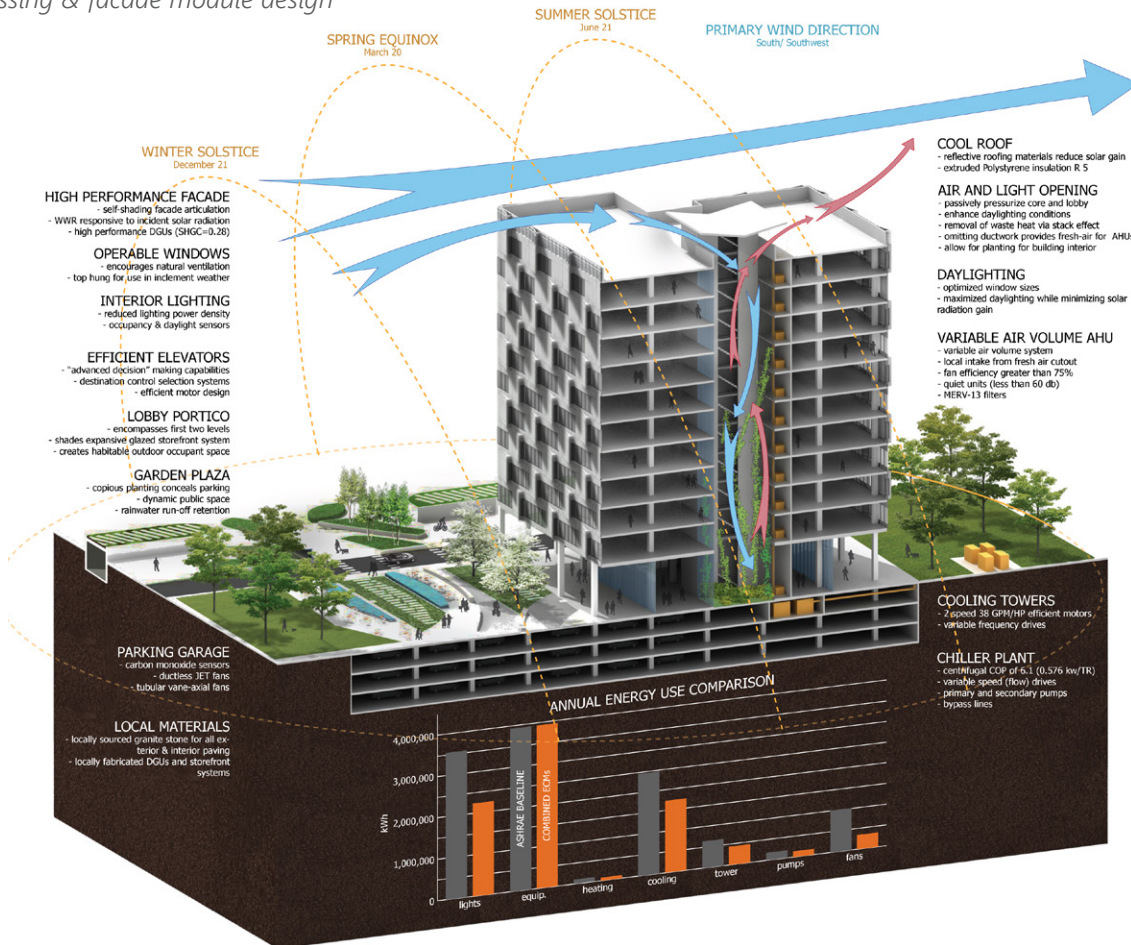
Dhruva Karle
Member, Board of Directors
Karle Infra

3.0 EXHIBIT 5 Karle Town Centre Office Buildings

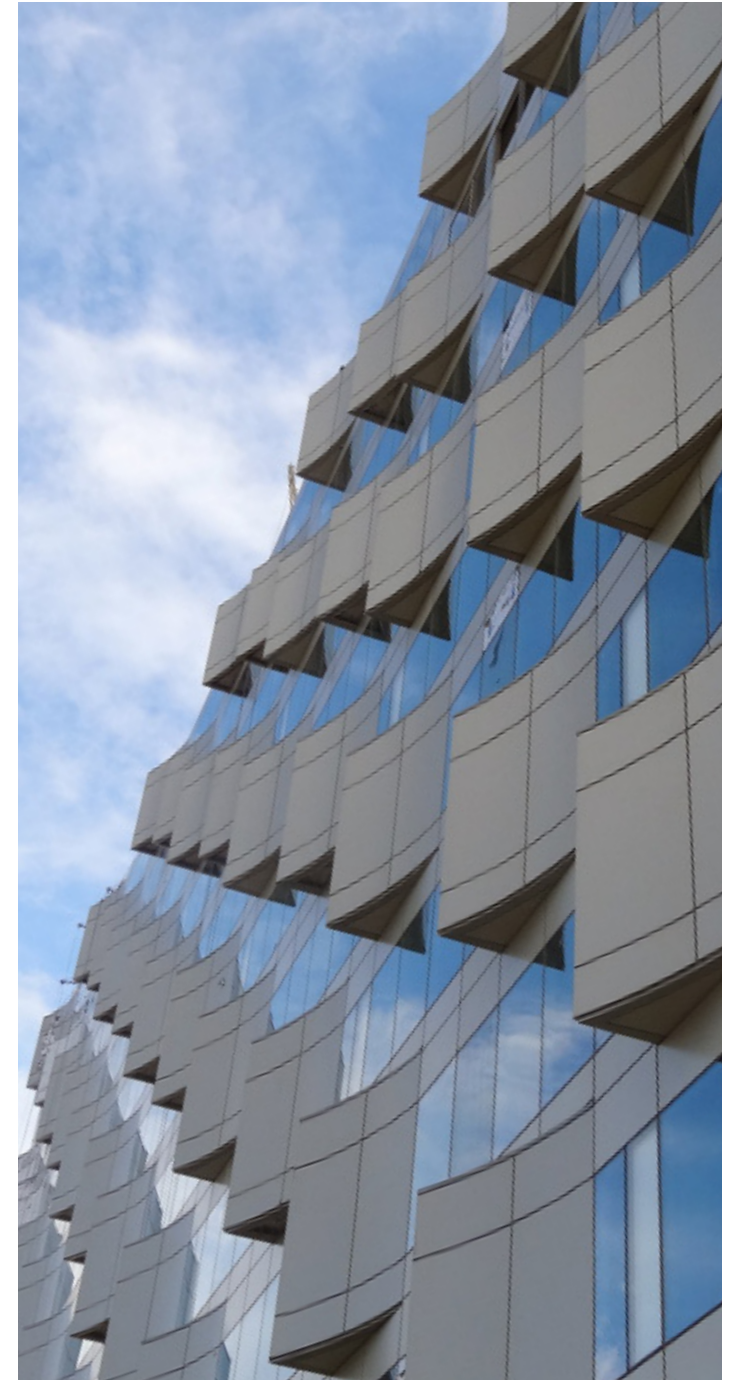


Modules respond to irradiation levels on facade

Massing & facade module design



Sustainable design strategies



3.0 EXHIBIT 6 4 Times Square Lobby Renovation



"We enjoyed that lobby renovation project with you and your leadership through the design. I often refer to that project as being an example of a very successful one, and as you know it takes excellent teamwork, you led the team by example. Your kind but firm approach to decisions required and recommendations was impeccable."

Thomas Duffe
COO
The Durst Organization

Location
New York, NY

Status
Completed 2018

Applicant's Role
Lead Designer

Size
10,000 sf

Awards
[CISCA 2017 Awards: Office](#)

Varun led an intelligent design process to create organic forms using digital parametric and environmental analytic tools to solve visual and aesthetic design problems, helping fabricate a complex geometry with relative ease.

Declaration of Responsibility

I have personal knowledge of the nominee's responsibility for the exhibit listed above. That responsibility included:

- project under the direction of the nominee

Kenneth Drucker, FAIA
Design Principal
HOK
Design Oversight

The Design Challenge

4 Times Square tower sits in the heart of Times Square and was a pioneer in sustainable design when completed in the 1990s. In 2016, the Durst Organization (its owner) looked to reposition the building and brought in HOK to redesign the lobby. The client wanted to update the lobby which was warm and inviting. Varun led the design team to create a clean minimal interiors, with one key 'attractor': the ceiling. As part of the positioning process, the tower was re-branded to '151 W. 42nd Street.'

Smart Design Processes

While this is primarily an interior design project, under Varun's leadership, the design team used a methodical parametric process to create a double curved ceiling that negotiates varying structural heights above. The diamond shaped panels vary in depth and form depending on their location. The parametric process became the tool to incorporate various ceiling fixtures, including the lighting and the sprinkler system.

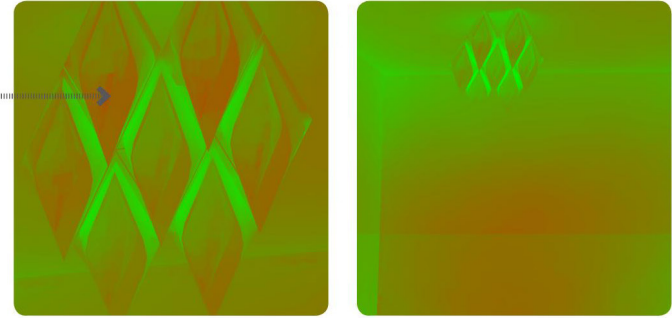
3.0 EXHIBIT 6 4 Times Square Lobby Renovation



Enhances visibility from street view

Ceiling Panel Scalloping - understanding luminance (visibility) of panels from outside lobby glazing

- 400 - 500 cd/m² on panel surface



Luminance study of ceiling panels to understand visual impact

To understand visual impact of the panels, the team simulated luminance analysis to study contrasting light and shadows in each panel. The higher the contrast in deeper panels, the more pronounced they will be, and visible to pedestrians outside the lobby.

Upon completion of design, the ceiling panel fabricators used the final 3-dimensional model created by the design team to digitally fabricate molds that were used to form the GFRG ceiling panels. Each panel was individually labeled, shipped and put into place with great ease.

The Impact

The dynamic ceiling is a visible feature from outside the lobby even with dazzling lights of Times Square area, while all other surfaces are kept minimal.

While the design outcome is well received by the client and occupants alike, Varun's focus was in adapting an environmental analytics design process, following a more scientific or measurable approach to design that culminates in a unique aesthetic product.



GFRG panels being installed on site

3.0 EXHIBIT 6 4 Times Square Lobby Renovation



3.0 EXHIBIT 7 LG North American Headquarters



Location:
Englewood Cliffs, NJ

Completed 2020

Role
Sustainable Design Lead

Certifications
LEED NC Platinum

Size
350,000 sf

Project Awards
USGBC Leadership Award
– Mid-Atlantic & Northeast
Region

AIA Pennsylvania –
Architectural Excellence COTE
Award

AIA New Jersey – Built
Sustainability

Declaration of Responsibility

I have personal knowledge of the nominee's responsibility for the exhibit listed above. That responsibility included:

- sustainable design under direction of the nominee

Kenneth Drucker, FAIA
Design Director
HOK
Design Oversight

Varun led the sustainability team to deliver a high-performance, LEED Platinum rated, technology company HQ building situated in a very sensitive natural surrounding of the Palisades Park in New Jersey.

The Challenge

LG, a global technology company, while building their new headquarters building in the US, also to demonstrate its commitment to environmental sustainability as much as feasible, using its own technology. Additionally, the building is located in the cherished 'Palisades Park,' which is visible even from northern edges of Manhattan. It was important to prevent any visibility of the building above the Palisades tree line.

The Process

Without an integrated design approach, it would be nearly impossible to achieve the varying targets of the project. Varun and his team worked with the lighting designers to ensure all exterior and interior fixtures retained all night-light within the project boundary to retain the darkness in Palisades Park. On the technology front, Varun worked with the engineers to integrate LG split-unit systems and solar panels to achieve EUI reduction for the project.

The Impact

Through an integrated process, the project was successful in achieving multiple goals for design and sustainability. While a suburban office building, it has broken the solid box model and created multiple outdoor terraces, gardens and green-roofs, applying biophilic design strategies for the office staff and workers of the building.

In yet another office building, Varun improved occupants' indoor environment through a successful analysis and design of the building skin.

3.0 EXHIBIT 8 Penn State University Chemical & Biomedical Engineering



Location
University Park, PA

Status
Completed 2021

Applicant's Role
Sustainable Design Lead

Size
193,000 sf

Certifications
LEED NC Gold

Awards
AIA Philadelphia – Sustainability Award

Science & Technology facilities can be complicated for planning, and their building systems are notorious energy hogs. Creating healthy and inspiring internal spaces for researchers while minimizing energy use is a challenge Varun took on for this project at Penn State.

The Challenge

Penn State University is dedicated to sustainability and creating high-performance projects on their campus. This new lab facility for multi-engineering programs (Chemical and Biomedical) was also required to minimize energy use. This is a particular challenge in such buildings which often consist of high air intake and exhaust equipments such as fume-exhausts.

The Process

Working with both architects and building engineers, Varun's team hatched strategies that combine lab-planning priorities with indoor environmental requirements as well as equipment and building systems needs. Application of strategies such as placing lab spaces on south-side of the building with deeper brick facade systems, countered by office spaces on the north-side with a glazed curtain-wall system, balances out both energy transfer and daylighting of the building.

The Impact

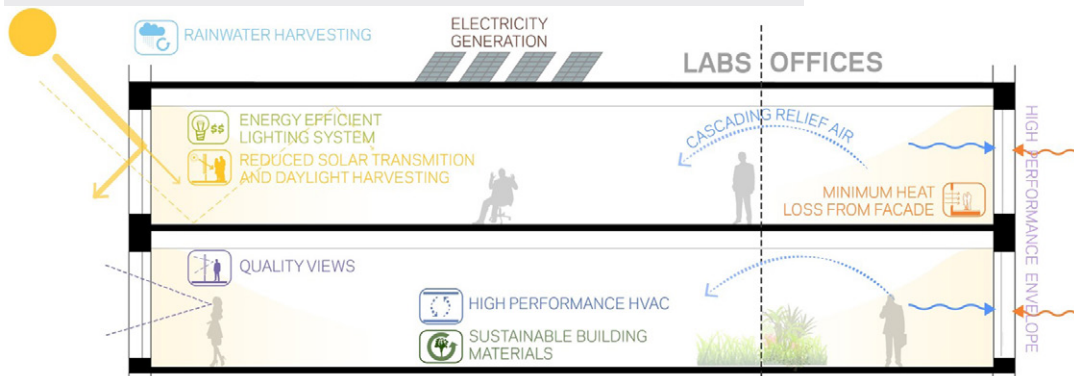
While it is easier to achieve high-performance and sustainability in many other building typologies, in S&T building facilities the challenge is much greater. Working to find solutions in such facilities is what is necessary to reduce energy consumption and hence carbon emissions. More importantly, integrating space-planning, architectural expression, lab equipment needs, building systems and efficiency is a process that needs continual refinement to achieve high-performance labs.

Declaration of Responsibility

I have personal knowledge of the nominee's responsibility for the exhibit listed above. That responsibility included:

- sustainable design under direction of the nominee

Kenneth Drucker, FAIA
Design Director
HOK
Design Oversight



Sustainable design strategies

3.0 EXHIBIT 9 Edelman Fossil Park & Museum - Rowan University



Location
Glassboro, NJ

Status
Under Construction

Applicant's Role
Sustainability Team Lead

Size
44,000 sf

Certifications
ILFI Zero Energy Certification
(Target)

Key Design Team
Ennead - Design Architect
KSS Architects - Architect of
Record

Varun led the Buro Happold sustainability team to provide sustainability and performance design support for the largest Net-Zero Energy building certified by ILFI in New Jersey.

"Varun's expertise helped shape a robust and inclusive approach to the primary design performance targets. With an emphasis on decarbonization, Varun helped the project team bridge from aspiration to integration when it came to holistic consideration of strategies and opportunities. His diligence in helping the maintenance team gain confidence in new systems was critical to the success of the project."

Stefan Knust, AIA
Director of Sustainability
Ennead



Declaration of Responsibility

I have personal knowledge of the nominee's responsibility for the exhibit listed above. That responsibility included:

- sustainable design under direction of the nominee

Sarah Sachs
Partner
Buro Happold
Project Director

The Challenge

The leadership of Rowan University's Edelman Fossil Park defined an aspirational goal to achieve Net-Zero Energy, which requires the building to generate energy on-site to meet all building operational energy needs. Beyond this, the building must also reduce embodied energy in its materials and be fully electrified, with no combustion on site. This particular requirement brought a challenge to help the facilities teams adopt new fully electric building system technologies, not commonly used especially in buildings of this size.

A Systems Plan

Varun led the Buro Happold sustainability team, who worked with Ennead and other design teams to assess and analyze both operational and embodied energy of the building. The building's structure is hybrid mass timber, which helps reduce embodied carbon. Operational energy use is reduced via a ground geothermal exchange system coupled with electric heating and cooling systems, with no combustion on site. Solar panels in parking area mitigate all energy loads of the building.

3.0 EXHIBIT 9 Edelman Fossil Park & Museum - Rowan University

The Impact

A museum facility typically has higher lighting and equipment loads. To achieve net-zero energy for such a program and building size is not an easy feat.

The sustainability team, in constant coordination with internal engineering team and the architectural design team, overcame design challenges and adopted new building technologies such as the air-source heat pumps (ASHP) to ultimately deliver the largest net-zero energy building in New Jersey.

The building, which invites younger children to explore fossils found in central New Jersey, also demonstrates a functioning net zero energy building. The pedagogical impact of such physical environments on young minds will have a lasting impact on them.

LIVING BUILDING CHALLENGE™

NO FOSSIL FUELS AT FOSSIL PARK
NO FOSSIL FUELS WILL BE COMBUSTED FOR MUSEUM OPERATIONS, AND NO GREENHOUSE GASES WILL BE RELEASED INTO THE ATMOSPHERE. IN ADDITION, THE SURROUNDING GROUNDS WILL REDUCE CARBON AND INCREASE AIR QUALITY BY RESTORING PLANT AND ANIMAL HABITATS.

ACTIVE DISCOVERY PATHWAYS
NO FOSSIL FUELS ARE COMBUSTED FOR MUSEUM OPERATIONS, AND NO GREENHOUSE GASES ARE BEING RELEASED INTO THE ATMOSPHERE. IN ADDITION, THE SURROUNDING GROUNDS WILL REDUCE CARBON INCREASING AIR QUALITY THROUGH THE RESTORATION OF PLANT AND ANIMAL HABITATS.

TRANSPORTATION CARBON REDUCTION
SITE CONNECTION TO PEDESTRIAN AND NEIGHBORHOOD LEVEL ACCESSIBILITY ENCOURAGES REDUCED USE OF FOSSIL FUEL-BASED VEHICLES BY PROVIDING SPACE FOR GUEST BIKE STATIONS IN ADDITION TO ELECTRIC CAR CHARGING STATIONS.

GEOTHERMAL SYSTEMS
THE PROJECT INCLUDES GROUND-COUPLED GEO-EXCHANGE TO HELP HEAT AND COOL THE BUILDING VIA THE ENERGY STORED IN THE EARTH.

PREDICTED ENERGY USE INTENSITY
PREDICTED ENERGY USE INTENSITY OF 67 KBTU/YR WILL BE OFFSET BY ON-SITE RENEWABLE ENERGY SOURCES TO ACHIEVE NET ZERO OPERATIONS.

LEARNING FROM PAST
THE MUSEUM WILL SERVE AS A PLATFORM FOR RESEARCHERS, STUDENTS, AND FOSSIL PARK VISITORS TO ENGAGE IN DISCOVERY. HANDS ON LEARNING STATIONS AND IMMERSIVE GALLERIES ENCOURAGE VISITORS TO LEARN HOW TO PRESERVE THE PAST AND BUILD A BETTER FUTURE.

COMMUNITY GARDENS
ACCESS TO HEALTHY FOODS FROM PARK COMMUNITY GARDEN SUPPORTS COMMUNITY WELLNESS AND INTEGRATES EDUCATION COMPONENTS THAT INTEGRATE RESOURCES FOR LOCAL FARMING.

REGENERATIVE LANDSCAPE
THE SITE DESIGN REVITALIZES PLANT AND ANIMAL HABITATS WHILE PRESERVING LOCAL BIODIVERSITY.

LIVING FOSSILS
THE LANDSCAPE DESIGN FEATURES SEVERAL LIVING FOSSILS, PLANT SPECIES AS OLD AS THE FINDINGS IN THE QUARRY. THIS CREATES A UNIQUE WAY OF BRING THE PAST INTO THE FUTURE AND PROVIDES AN OPPORTUNITY TO EDUCATE THE COMMUNITY NOT JUST ABOUT THE FAUNA BUT ALSO THE FLORA OF THIS SITE.

STORM WATER MANAGEMENT
STORM WATER IS CAPTURED AND MANAGED ON SITE.

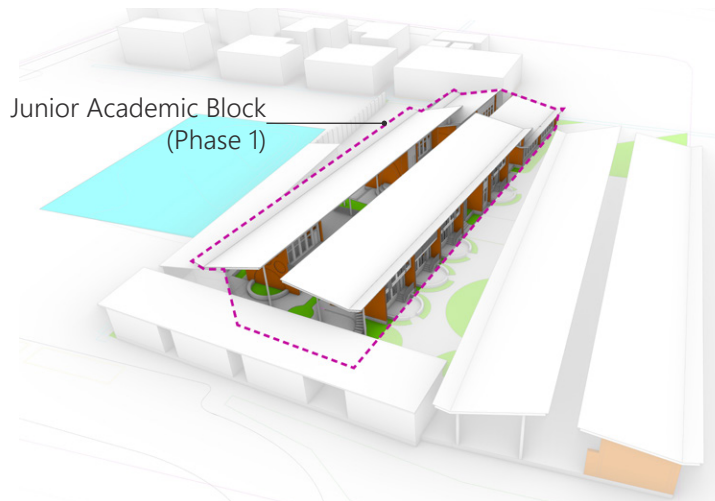
DROUGHT TOLERANT PLANTS
INCORPORATION OF NATIVE LANDSCAPING REQUIRING MINIMAL IRRIGATION.

enneed KSS

3.0 EXHIBIT 10 Pokhrama Foundation Academy (Pro bono)



Varun has brought together a team of global design professionals to deliver pro bono, a net-zero school design that will provide free and subsidized primary education to the children of Pokhrama, a remote village in Northern India, facilitated through Pokhrama Foundation.



Location
Pokhrama Village, India

Status
Phase 1 - Under Construction

Role
Design Lead/ Pokhrama
Foundation Board Member

Size
7 Acre Site/ ~60,000 sf Built-Up
Area; Phase 1 ~35,000 sf

Performance Targets
Net-Zero Energy

Key Collaborators
AEON Consultants (New Delhi)

predicted Energy Use Index ~

9 kBtu/sf/yr

Declaration of Responsibility

I have personal knowledge of the nominee's responsibility for the exhibit listed above. That responsibility included:

- nominee's firm executed project

Nishtha Singh
Founding Board Member
Pokhrama Foundation
Client

The Challenge

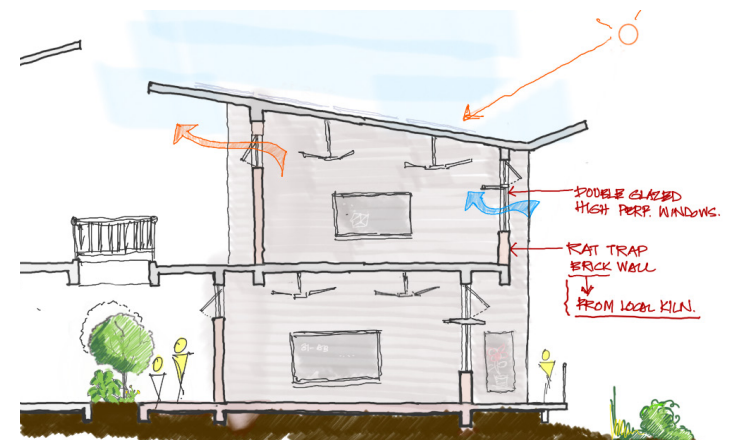
Varun was called upon to design a school for up to 400 students, many of whom currently do not have access to a basic education. The social infrastructure and physical constraints intentionally discourage girls and children of lower castes from accessing schools.

A relatively young NGO, the Pokhrama Foundation, was compelled to create an exceptional education program for these children and needed a home in Pokhrama village in northern India. With no prior experience in designing and building, the foundation board reached out to Varun.

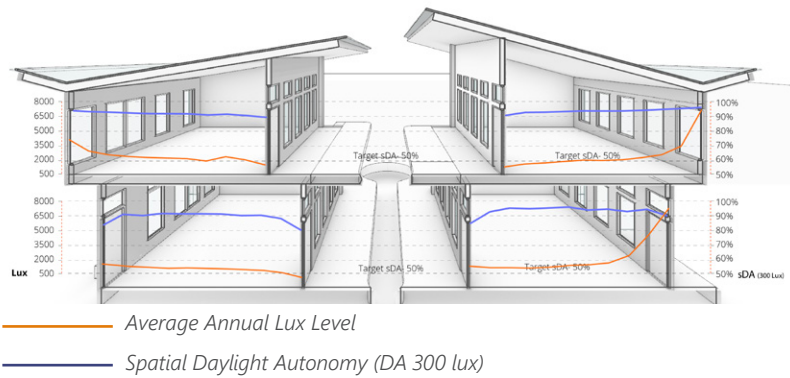
Call to Action

Varun pulled together a team of designers between US and India, many of whom offered services at cost or pro bono. Under his leadership, a site master-plan was developed along with Phase 1 buildings including the Junior Academic Block and a Staff housing block.

From the onset of the project, Varun established clear design and sustainability goals. The academic buildings will inherit the free spirit of its students and break down hard barriers between inside and outside. There is no active heating or cooling system, yet the spaces are designed to maximize comfort through passive design strategies.



3.0 EXHIBIT 10 Pokhrama Foundation Academy (Pro bono)



Daylight studies for classrooms



"We were in Pokhrama this summer, moving our classrooms to the new campus Varun designed for us. The temperatures were routinely over 110 degrees, it was humid, and electricity supply was erratic. The only respite in this oppressive, relentless heat was the academic block Varun has designed for our school. Though the building was incomplete and still under construction, it provided welcome shade from the sun and breezy corridors all over where one could stand and literally breathe oneself back to life. We actually got to test the success of the design for ourselves in the most brutally hot conditions."

Nishtha Singh
Founding Board Member
Pokhrama Foundation

The Impact

What began as a design project turned into a larger management project for Varun. In 2021, the Pokhrama Foundation invited Varun to join the board. He is now working the project management team to complete Phase 1.

In Pokhrama, architecture has fulfilled its fundamental purpose for being, by creating a home for education in a place where it is desperately needed. The pedagogical impact of an environmentally sensitive design further broadens the impact of architecture. The building breaks the bounds between built and natural environments and embraces the ethos of biophilic design where students can interact with and grow gardens that flow through the building.

The long term impact of the work is immeasurable. Once exposed to knowledge these children will infect the world around them and change future generations to come.



Phase 1, Junior Academic Block Under Construction- June 24, 2022



Phase 1, Junior Academic Block Under Construction- September 9, 2022

4



The Junior Cluster of the Academic Block rises in the remote village of Pokhrama in northern India - Sep. 24, 2022

4.0 REFERENCE PROVIDERS

1. Carl Galioto, FAIA

*President, HOK
New York, NY*

Mentor, Colleague

2. Julie Hiromoto, FAIA

*Director of Integration & Principal, HKS
Dallas, TX*

Colleague, Collaborator

3. Elizabeth Heider, FAIA

*Founder & CEO, Heider Sustainability Advisors
Vice-Chair, International Living Future Institute Board of
Directors
Alexandria, VA*

Collaborator, Client

4. Carl Elefante, FAIA

*Principal Emeritus, Quinn Evans
Senior Fellow, Architecture 2030
Past President, AIA (2018)
Takoma Park, MD*

Collaborator

5. Mahadev Raman

*Arup Trustee
Past Chair, Arup Americas
Visiting Lecturer, School of Architecture, Princeton University
Princeton, NJ*

Mentor, Collaborator

6. Colin Koop, AIA

*Partner, Skidmore, Owings & Merrill
New York, NY*

Colleague

7. Apoorv Goyal

*Sr. Project Manager - Sustainability Data Management, Amazon
Toronto, ON*

Colleague, Collaborator
