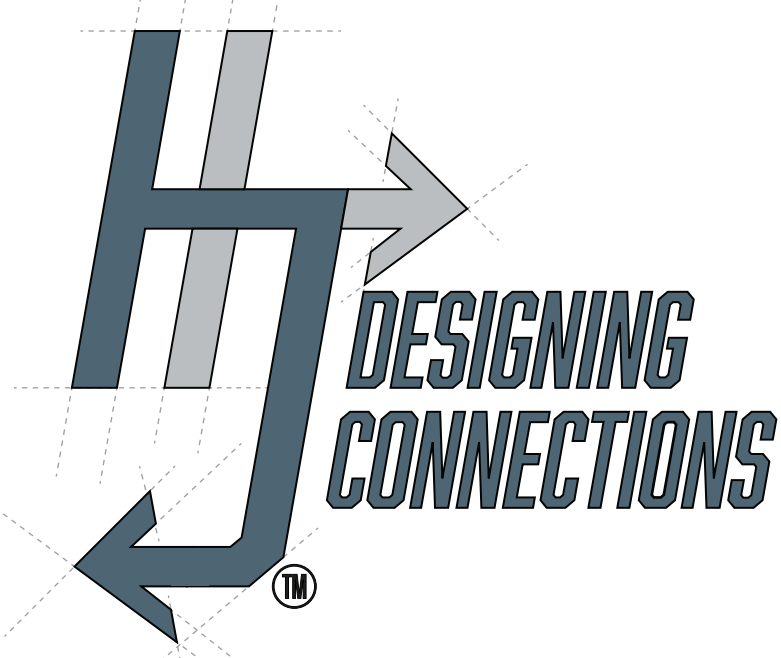


POTTSTOWN CHILDREN'S DISCOVERY CENTER



NARRATIVE

POTTSTOWN—A ROBUST, INDUSTRIAL TOWN FAMED FOR ITS STEEL MANUFACTURING OF THE PAST—NEEDS A DISCOVERY CENTER THAT STRESSES INTERACTIVITY WITH THE ARCHITECTURE ITSELF AND EDUCATIONAL STIMULATION FOR ITS YOUNGER POPULATIONS. WITH AN EMPHASIS ON CATERING TO CHILDREN WITH ADS, IT IS OUR DUTY AS DESIGNERS TO CREATE SPATIAL ZONES, ARCHITECTURAL INSTALLATIONS, AND EDUCATIONALLY-BENEFICIAL EXHIBITS THAT EMPLORES THESE CHILDREN WITH SENSORY DEFICIENCIES TO TOUCH, SEE, AND HEAR THE BUILDING AROUND THEM. WE MUST RESPOND TO AN AUDIENCE WITH A WIDE RANGE OF SOCIAL COMFORTABILITY BY REDUCING THE PHYSICAL SEPARATION BETWEEN PUBLIC EXHIBITION SPACES AND PRIVATE NOOKS FOR SOCIAL REPRIEVE WHILE KEEPING THE CLARITY OF THE TWO SPACES WELL DEFINED WHILE NOT SACRIFICING EFFECTIVENESS.

CAREFUL ATTENTION TO THE SENSORY IMPLICATIONS OF DESIGN CHOICES WITHIN A SPACE—WHICH COLORS OR IMAGERY ARE BENEFICIAL TO UNDERSTANDING, EXPLORING, AND SOCIALIZING AND WHICH HAVE ADVERSE EFFECTS; WHICH LEVELS OF MATERIAL TACTILITY WILL BECKON CHILDREN TO TOUCH, EXPLORE, AND HOPEFULLY, BEGIN TO UNDERSTAND SAID OBJECTS; OR WHAT ARRANGEMENTS OF SPACES WILL PIQUE THE AUTISTIC CHILDREN'S INTEREST AND BE EASILY NAVIGABLE TO AN AUDIENCE THAT PREFERS SENSIBLE LAYOUTS AND THE ABILITY TO TAKE BREAKS TO SOCIALLY RECHARGE AT A MOMENT'S NOTICE—IS KEY TO CREATING A DISCOVERY CENTER THAT ENCOURAGES THESE CHILDREN TO OVERCOME OBSTACLES TO LEARN AND SOCIALIZE.

EXHIBITS AND BASIC SCIENCE APPARATUS ASIDE, THE BUILDING ITSELF SHOULD ENCOURAGE CHILDREN OF ALL AGES AND CAPABILITIES TO DESIRE EDUCATION AND UNDERSTANDING. WHETHER IT BE INSTALLATIONS THAT RESPOND TO AND ENCOURAGE HUMAN TOUCH OR SEQUENCES OF COLORS, IMAGES, OR VIDEOS THAT CATCH ONE'S FULL ATTENTION, THE DISCOVERY CENTER SHOULD BE COMPLETE EQUIPMENT THAT CHILDREN WANT TO EXPLORE AND UNDERSTAND. POTTSTOWN WOULD GREATLY BENEFIT FROM YOUNG GENERATIONS ENJOYING SCIENCE AND LEARNING.

BACKGROUND



DEMOGRAPHICS

12.5%
OF WORKING POPULATION IS EMPLOYED BY MANUFACTURING AND METAL-WORKING BUSINESSES

9.0%
OF THE POPULATION IS NO OLDER THAN 5 YEARS OLD. MEANWHILE, 23.5% IS NO OLDER THAN 17 YEARS OLD.

68.1%
OF THE POPULATION IS CURRENTLY EMPLOYED AND PART OF THE WORK FORCE.

METAL-WORKING HISTORY

80%
OF MANHATTAN'S SKYLINE IS CONSTRUCTED WITH STRUCTURAL STEEL FROM BETHLEHEM STEEL.

9,650
FEET IS THE LENGTH OF THE BEN. FRANKLIN BRIDGE IN PHILADELPHIA, BUILT FROM BETHLEHEM STEEL.

\$135 M
ONE-TIME ORDER FOR MUNITIONS AND WAR SUPPLIES BY THE ALLIES IN WORLD WAR II.

ARCHITECTURE ADAPTED TO AUTISM

STRUCTURE
HOW CAN THE STRUCTURED SPACES GIVE PERSONAL SPACE WHILE MAINTAINING AN EXHIBITION FEEL

VISUALS
HOW CAN INTERACTIVE IMAGERY AND COLOR ENGAGE SENSORY INTERESTS OF CHILDREN VISITING THE EXHIBITIONS

TEXTURE
HOW CAN THE FEEL OF THE SPACE INTERACT WITH AND ENGAGE INDIVIDUALS WHILE IN A GROUP SETTING

PREVAILING WEATHER CONDITIONS

6'
OF AVERAGE RAINFALL DURING SEPTEMBER, THE RAINIEST CALENDAR MONTH.

22°
IS THE AVERAGE LOW TEMPERATURE DURING JANUARY THE COLDEST CALENDAR MONTH.

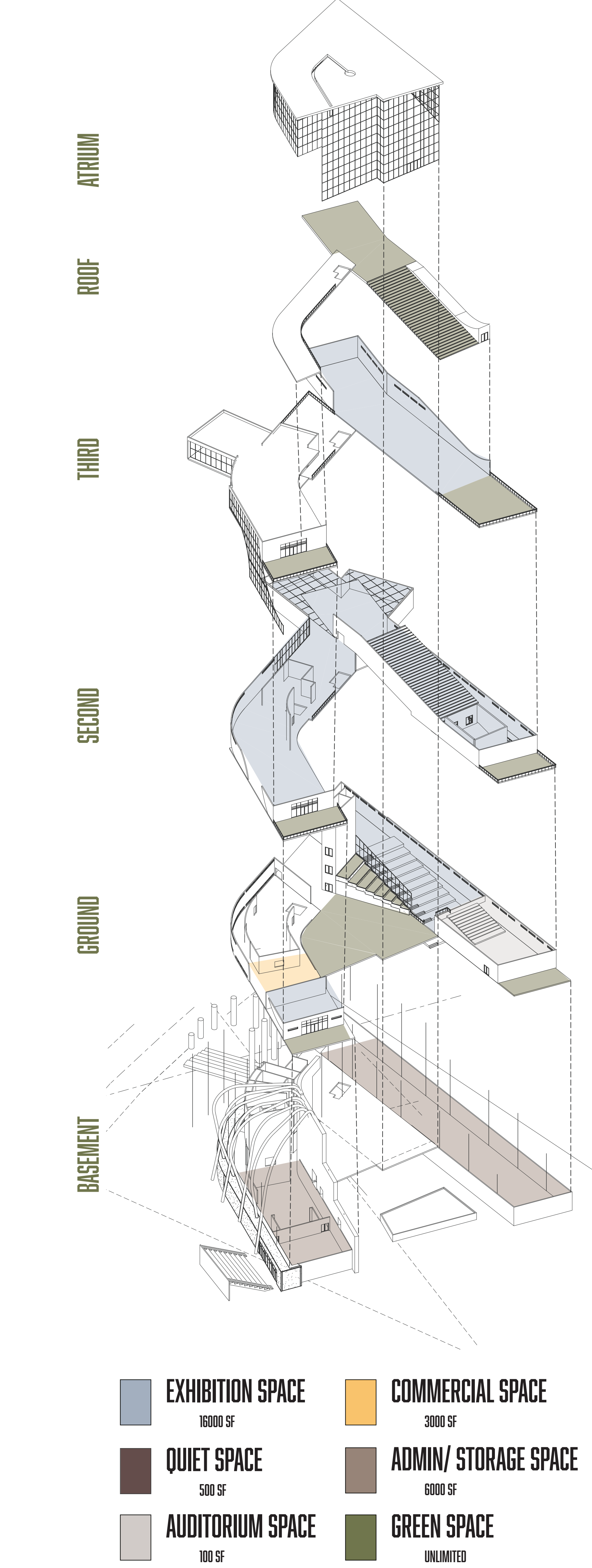
7.2
MPH WINDS FROM THE WEST DURING FEBRUARY, THE WINDIEST MONTH. SOUTHERN WINDS ARE OCCASIONAL.

3.9"
OF AVERAGE RAINFALL DURING SEPTEMBER, THE RAINIEST CALENDAR MONTH.

85°
IS THE AVERAGE HIGH TEMPERATURE DURING JULY, THE HOTTEST CALENDAR MONTH.

15
HOURS OF SUNLIGHT ON AVERAGE DURING JUNE 21ST, THE LONGEST SUNLIT DAY OF THE YEAR.

PROGRAM STRATEGIES- CONNECTIONS



AUTISM DESIGN CONSIDERATIONS

RESPONSIVE FACADES
WITH A FACADE FACING THE STREET, THIS SEMI-OPEN WALL GIVES VISUAL ACCESS TO THE EXTERIOR WHILE DETERRING UNPREDICTABLE CHILDREN FROM RUNNING OUT DIRECTLY INTO THE STREET. THIS SKIN BREATHES MUCH LIKE FISH GILLS, OPENING AND CLOSING IN RESPONSE WITH WEATHER CONDITIONS.

STUDIES SHOW THAT CERTAIN COLORS, NAMELY BLUE AND GREEN, AND IMAGERY CAN BE CONDUCTIVE TO GREATER CREATIVITY AND FOCUS IN AUTISTIC CHILDREN. SPECIFIC IMAGES AND COLORS CAN BE SUPERIMPOSED BEHIND THE GRILL-LIKE EXTERIOR TO GENERATE A BETTER LEARNING ENVIRONMENT.

VISUAL CUES AND ORDER
STUDIES SHOW THAT AUTISTIC CHILDREN RESPOND BEST TO SIMPLISTIC CIRCULATION AND ORDERLY LAYOUTS. COUPLED WITH CAREFUL COLOR DESIGN, THESE VISUAL GUIDES WILL MAKE TRAVERSING THROUGH SPACES MORE INTRIGUING AND EASIER TO FOLLOW.

TACTILITY
STUDIES SHOW THAT MANY AUTISTIC CHILDREN EXPERIENCE SENSORY HYPERSENSITIVITY, MEANING THEY EXPERIENCE STRONG URGES TO TOUCH AND EXPLORE OBJECTS TO GAIN AN UNDERSTANDING ON THEM. A HAND IS RUN ALONG A PANEL OF HEXAGONAL LIGHTS WHICH ARE TRIGGERED ON/OFF BY TOUCH.

PRIVATE RECHARGE STATIONS
AUTISTIC CHILDREN STRUGGLE WITH SOCIAL INTERACTION AND, MUCH LIKE INTROVERTS, FIND THEMSELVES CRAVING PRIVACY AND QUIET FOLLOWING EXTENDED SOCIALIZATION. IN THESE PRIVATE PODS, CHILDREN RECHARGE THEIR SOCIAL BATTERY BEFORE RETURNING TO THE EXHIBITS.

SUBDIVISIONED SPACES
AUTISTIC CHILDREN OFTEN FIND THAT LARGE, OPEN SPACES DENSE WITH STIMULI TO BE OVERWHELMING AND THAT IF PARTITIONED INTO SMALLER SUB-AREAS, THEY CAN FOCUS ON FEWER TASKS AT ONCE AND ARE ABLE TO LEARN EFFECTIVELY AND BECOME MORE CREATIVE.

PRECEDENTS

Ring Celestial Bliss, Taiwan
An outdoor media space allows for exhibits, presentations, movies, or activities to break from the interior confines during the warm periods of the year.

Water Gardens, Fort Worth, Texas
Water running down these terraces would create unique smells, sounds, and sights to activate the senses of hypo-sensitive autistic children and viewers.

Het Mori Digital Art Museum, Tokyo, Japan
Seemless images cast up onto the surfaces of walls and floor creates a room where the structure itself can be the media. Exhibits and videos can be shown on all surfaces.

Deep Sea Installation, Takahiro Matsuo
These interactive walls which respond to the touch and motion of onlookers double as a quiet space and sensory room to increase the experience of the autistic population.

Taishan College, Tianjin, China
A quiet, studious, and relaxing lounge space doubling as building circulation is perfect for children and parents looking to socially recharge or wait on others.

Al-Gharafa Stadium, Doha, Qatar
Ribbons around the envelope of the stadium filter the winds hitting the facade, warming the winter winds and cooling the summer breeze that pass through.

